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## **Empowerment of women of fertilizing age regarding health education for early detection of neccical cancer using method visual inspection of acetic acid (Iva Test)**

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**Abstract**--Cervical cancer is cancer that attacks the female reproductive organs in the cervix or cervix, the tip of the vagina, so early detection of cervical cancer is necessary to prevent death. The high death rate due to cervical cancer is caused by a lack of public awareness to carry out early examinations so that in this community service activity we are trying to increase understanding and awareness of carrying out early examinations for cervical cancer using the IVA (Visual Acetic Acid Inspection) method. The aim of this research is to determine the empowerment of women of childbearing age regarding health education for early detection of neccological cancer using the Acetic Acid Visual Inspection Method (Iva Test). The method used was to gather mothers and then provide counseling using the lecture and question and answer method. The mother's level of knowledge can be determined by carrying out a pre-test and post-test. The pre-test is carried out before counseling is given. Meanwhile, the post test is carried out after the counseling is given, to determine the increase in understanding and awareness of carrying out early cervical cancer

screening, it can be determined by comparing the results of the post-test which was completed by the respondent.

**Keywords**---Early Detection, IVA Test, WUS.

## Introduction

Based on WHO 2020 data, it is stated that cervical cancer is the top cancer cause of death in women in Indonesia with 604,000 new cases and 342,000 deaths caused by cervical cancer (Viñals et al., 2023). This is based on the fact that more than 50% of women diagnosed with cervical cancer have never undergone screening. This is very concerning considering that cervical cancer is one of the cancers that can be prevented from an early age (Yuriah et al., 2024).

Cervical cancer is cancer that attacks the female reproductive organs in the cervix or cervix, the tip of the vagina, so early detection of cervical cancer is necessary to prevent death (Longulo et al., 2022). To detect cervical cancer early, one can use the acetic acid visual inspection (IVA) method. This examination is highly recommended for women of childbearing age who are at risk of developing cervical cancer (Muthoharoh et al., 2022).

Acetic Acid Visual Inspection is a cervical cancer screening test using 3-5% acetic acid and using a speculo tool and can be reviewed exclusively. According to the diagnostic test results, the IVA examination has a sensitivity of 84%, specificity of 89%, positive predictive value of 87% and negative predictive value of 88% (Yuriah et al., 2022). Efforts to reduce cervical cancer include early detection of cervical cancer, namely using the Visual Inspection method with Acetic Acid (IVA) and immediate treatment with cryotherapy for positive IVA (positive pre-cancerous cervical lesions) (Yuriah & Kartini, 2022). This method is more feasible because it is cheap, practical, effective and the results can be known immediately. The aim of IVA examination is to reduce the morbidity of the disease by early treatment of cases found to identify abnormalities in the cervix (Liana, 2023).

There are several categories that can be used to find out the results of examinations through the IVA Test, one of the categories that can be used is:

1. Negative IVA = shows a normal cervix
2. Inflammatory IVA = Cervix with inflammation (cervicitis), or other benign abnormalities (polyps cervix).
3. Positive IVA = white spots (aceto white epithelium) were found. This group is became the target of cervical cancer screening findings using the IVA method because of these findings leads to a diagnosis of Cervical pre-cancer (mild-moderate-severe dyspalsia or cancer cervix in situ).
4. IVA-Cervical cancer = Even at this stage, efforts are made to reduce cancer stage findings cervix, will still be beneficial for reducing deaths from cervical cancer if found still in the early invasive stage (stage IB-IIA). (Nofuz et al., 2021)

The requirements for taking the IVA Test include:

1. Have ever had sexual relations
  2. Not having your period/menstruation
  3. Not currently pregnant
  4. 24 hours beforehand do not have sexual relations
- (E. Wahyuni et al., 2023)

The advantages of the screening method are:

1. Easy, practical and very feasible.
  2. Need simple and cheap materials and tools
  3. Sensitivity and specificity are quite high
  4. Can be carried out by health workers who are not gynecologists, can be carried out by midwives at every location for maternal health checks or carried out by all medical personnel trained
  5. The tools needed and inspection techniques are very simple
- (C. Wahyuni, 2023)

IVA services can be carried out at health service places that provide examinations and which can carry out IVA examinations, including by:

1. Trained nurses
  2. Midwife
  3. General Practitioner
  4. Ob-gyn specialist
- (Yuriah, 2024)

From data from the South Sumatra provincial health service, it was found that there was a decrease in maternal prevalence of early detection of cervical cancer with the IVA test. In 2019 and 2020 this decreased to 71,175 (14.78%) mothers and in 2021 there were 95 people who were detected as positive VIA (0.1%), 74 suspected cancer (18.2%) and 315 people with tumors/lumps (0.2%) (South Sumatra Provincial Health Office 2022).

Based on data from East Ogan Komerling Ulu Regency, it was found that mothers' prevalence of early detection of cervical cancer was reduced by the IVA Test. In 2018 it was 1,090 (13.23%) mothers to 7,194 (24.03%) mothers in 2021 and in 2022 there was a decrease of 1,894 (16.83%) mothers (East OKU District Health Office, 2022).

## **Method**

Provide sufficient details to allow the work to be reproduced by an independent researcher. Methods that are already published should be summarized and indicated by a reference. If quoting directly from a previously published method, use quotation marks and also cite the source. Any modifications to existing methods should also be described. Czichos & Saito (2006), Materials and Methods describes how the study was conducted. Explaining the research model, theory, the technique of collecting the data, the technique of analyzing the data, hypothesis. research chronological, including research design, research procedure (in the form of algorithms, Pseudocode or other), how to test, and data acquisition. The description of the course of research should be supported

references, so the explanation can be accepted scientifically (McDonough & Shaw, 2012).

## Results and Discussion

This community service activity is carried out face to face and an explanation of the Iva Test is provided using the lecture and question and answer method. This community service activity was carried out in one day, namely on Wednesday, May 22 2024, at 10.00 WIB.



Figure 1. Counseling about cervical cancer using the IVA test method

This Iva Test education informs mothers about the importance of the Iva Test examination to detect cervical cancer early. Cervical cancer is the second leading cause of death in women in the world after breast cancer. Cervical cancer can be prevented by carrying out the simplest early detection of cervical cancer, namely Visual Inspection with Acetic Acid or IVA Test. The IVA test is a method of early detection of cervical cancer by applying acetic acid (vinegar) to the cervix. If there are cancerous lesions, the color will change to a slightly whitish color on the cervix being examined (Sawitri & Sunarsih, 2018). If there is no color change, it can be assumed that there is no infection in the cervix. The IVA test can be carried out by all married women of childbearing age (WUS), the examination results are obtained within 1-5 minutes. The importance of early detection of cervical cancer using the IVA method must be carried out by every married WUS with the aim of preventing cervical cancer (Rumpiati et al., 2023). If problems with the cervix are found during detection, it can be treated quickly so that there is no risk of a worse situation. In other words, the earlier it is known, the easier it is to handle (Islamyati, 2023).



Figure 2. Question and answer session

This community service activity is carried out face to face, then participants are given an explanation about the Iva Test, then a question and answer session is held according to the subject matter that has been given.

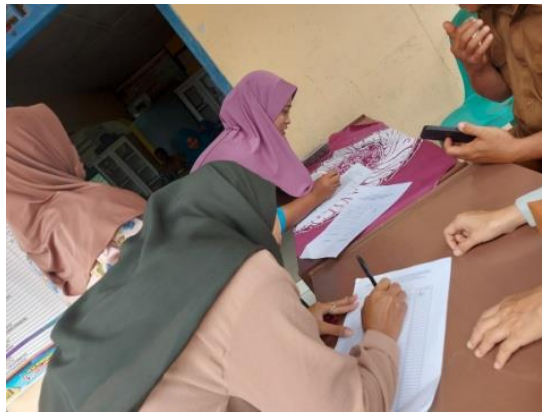


Figure 3 Pre-test and post-test activities

From this community service activity, it is hoped that participants' knowledge about cervical cancer will increase using the IVA method by measuring knowledge through a pretest before counseling and a post-test after counseling (Darwati & Nikmah, 2020). The pretest and posttest questions consist of 15 questions related to cervical cancer with VIA examination (Surbakti et al., 2022).

This outreach activity was attended by 20 participants, to see whether there was an increase in mothers' knowledge and awareness of the importance of carrying out VIA examinations as the first step in early detection of cervical cancer, which can be seen through the pre-test and post-test results obtained, namely as follows:

Table 1. Pre-test and Post Test Knowledge about Socialization of Early Detection of Cervical Cancer using the IVA Method

Pre test				Post test			
Know		Don't know		Know		Don't know	
N	%	N	%	N	%	N	%
5	25	15	75	18	90	2	10

Based on the table above, it can be stated that the pre-test results of participants who knew about early detection of cervical cancer using the IVA method were only 5 people with a percentage (25%), and participants who did not know were 15 people with a percentage (75%). Meanwhile, the post test results of participants who knew about early detection of cervical cancer using the IVA method were 18 people with a percentage of (90%), and participants who did not know were 2 people with a percentage of (10%).

Judging from the pre-test results, most of the mothers did not know about early detection of cervical cancer using the IVA method, but after providing counseling on the post-test results, it was found that almost all mothers understood about early detection of cervical cancer using the IVA method.

## Conclusion

Based on the discussion above, it can be concluded that this IVA TEST counseling informs mothers about the importance of the IVA TEST examination to detect cervical cancer. Early detection of cervical cancer using the Iva test is important for married women of childbearing age (WUS). If problems with the cervix are found during detection, it can be treated quickly so that there is no risk of a worse situation. The role of the community health center is highly expected in the prevention and early detection program for cervical cancer using the IVA test method. To improve the health status of WUS and minimize maternal mortality due to cervical cancer.

Through this service activity method, it is hoped that the community can be more actively involved in maintaining their reproductive health, increase participation in IVA Test examinations, and overall reduce the risk of cervical cancer at the community level. Increasing reproductive health awareness is not only the responsibility of individuals, but also of society as a whole.

By increasing understanding and supporting access to reproductive health information and services, we can create healthier communities, support the building of happy families, and contribute to the well-being of future generations. Reproductive health awareness is not just about oneself, but also about shaping a better future for the community and the country as a whole. Educating people about cervical cancer and conducting IVA tests is one form of effort to increase public knowledge. Where there is still a lack of public knowledge about cervical cancer.

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