

Screening And Education For Prevention Of Cervical Cancer At Kupu Health Center, Tegal District

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ABSTRACT: Cervical cancer, or what is often referred to as cervical cancer, is one of the most common types of cancer in the gynecological cancer category throughout the world. Education about cervical cancer and the implementation of VIA examinations have a very important role in increasing public awareness of the importance of maintaining cervical health and encouraging early detection of cervical cancer disorders. This outreach activity provides accurate information about cervical cancer, how important it is to maintain cervical health, as well as factors that can influence the risk of developing cervical cancer. In addition, examination using the IVA method makes it possible to carry out an objective evaluation of the condition of each individual's cervix. By increasing public knowledge and understanding of the importance of cervical health, it can encourage the implementation of appropriate preventive measures, such as undergoing regular VIA examinations, avoiding risk factors that can increase the risk of cervical cancer, and supporting early detection efforts. Early detection of cervical cancer through IVA examination allows early identification of cervical disease, so that treatment can be started early to control and slow the progression of the disease. VIA counseling and examination in the context of cervical cancer prevention is a long-term investment in improving people's quality of life and reducing the burden of cervical cancer in society as a whole.

Keywords: Cervical Cancer, VIA Examination, Public Health, Community Education.



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INTRODUCTION

Cervical cancer(Harami et al., 2014) or also known as cervical cancer is one of the most common types of cancer in the gynecological cancer category throughout the world. According to WHO data, cervical cancer(Garcia-Becerra et al., 2023; Lindsay et al., 2022) is ranked fourteenth of all types of cancer and is ranked fourth for cancer in women throughout the world. (Fowler, Maani, Dunton, & Jack, 2022; World Health Organization, 2022) Based on data from the Organization World Health (World Health Organization / WHO) in 2020, there were around 604,000 new cases of cervical cancer(Laios et al., 2022; Yuan et al., 2023) from all over the world and around 342,000 deaths due to cervical cancer where around 90% of these deaths occurred in low to middle income

countries. (World Health Organization , 2022) Meanwhile for the Asian continent, cervical cancer(Boyce-Fappiano et al., 2021; le Guyader et al., 2022; Li et al., 2021) is the third most common type of cancer found in women and is the main cause of cancer deaths in women in low to middle income countries. According to data from Global Cancer Statistics in 2018, there were 315,346 new cases and 168,411 deaths for cervical cancer in Asia. (Aoki et al., 2020) In the Southeast Asia region itself, cervical cancer(Castellano et al., 2023; Olawaiye et al., 2021; Purwoto et al., 2022; Tao et al., 2022) is the cancer with the second highest number of cases. (The Lancet Regional Health – Southeast Asia, 2023) According to data from the Global Burden of Cancer Study (Globocan) from WHO in 2020, the number of new cases of cervical cancer in Southeast Asia was around 68,623 new cases in women. (Global Burden of Cancer Study (Globocan) , 2020) In Indonesia alone, cervical cancer occurs in 24.5 per 100,000 women per year. (Aoki et al., 2020; Bray et al., 2018) Based on data from Basic Health Research (Riskesdas) in 2018, cervical cancer is in second place with the highest number of cancers in Indonesia with 36,633 cases or around 9.2% of total cancer cases. (Basic Health Research (Riskesdas), 2018)

Cervical cancer(Collarino et al., 2023; Eide et al., 2023; Raj et al., 2023) often occurs in young people under 25 years of age, where most cervical cancer will heal itself in women under 25 years of age. The highest death rate for cervical cancer is between the ages of 40 and 50 years. (Fowler et al., 2022) There are various risk factors for cervical cancer, such as:

1. Weak immune system: Weak immunity can reduce the body's ability to fight HPV infection, so that HPV infection can become persistent and develop into cancer, especially in immunocompromised individuals, such as individuals with HIV or in individuals who are taking suppressive drugs. immune system such as autoimmune drugs or cancer drugs. (American Cancer Society, 2020b)
2. Sexual history: The risk of (Nishimura et al., 2023) will increase if an individual has a sexual history such as having more than one sexual partner or changing sexual partners, having sexual intercourse for the first time or being sexually active at a young age, namely under 18 years, and if having one partner who is suspected of being at high risk or someone with HPV infection or who has many sexual partners. (Ministry of Health of the Republic of Indonesia, 2021a; Zhang, Xu, Zhang, & Qiao, 2020)
3. Smoking: Individuals who smoke either actively or passively have a higher risk of developing cervical cancer. This risk will increase if the individual smokes more or is exposed to more cigarette smoke. (Fowler et al., 2022; Ministry of Health of the Republic of Indonesia, 2021a; Zhang et al., 2020)
4. Sexually transmitted infections: HPV is the main cause of cervical cancer. Some HPV infections can heal on their own. However, most cervical cancer(Chen et al., 2021) occurs due to infection from HPV with a high risk, namely HPV 16 and 18 which can develop into cancer. HPV infection is usually transmitted through sexual contact. Apart from HPV, HIV is a sexually transmitted infection that can increase the risk of cervical cancer, where the risk of cervical cancer(Ye et al., 2023) will increase in women who are infected with HIV. Herpes

simplex infection or co-infection with infections in other genital areas can also increase the risk of cervical cancer. (American Cancer Society, 2020b; Zhang et al., 2020)

5. Use of oral contraceptives: Oral contraceptives in the form of pills are known to increase the risk of cervical cancer. There is a study that shows that using oral contraceptives for five years can double the risk of cervical cancer. (American Cancer Society, 2020b; Zhang et al., 2020)
6. Recurrent infections in the genitals: Lack of hygiene in maintaining the cleanliness of the genitals can be one of the causes of recurrent infections in the genital area, which can increase the risk of cervical cancer. (Ministry of Health of the Republic of Indonesia, 2021a)
7. Having a family history of cancer: If a woman has a mother or sister who suffers from cancer, especially cervical cancer, then that woman will have a higher risk of developing cervical cancer when compared to women who do not have a family history of cervical cancer. Some researchers suspect that this tends to occur due to congenital or genetic conditions that make some women less able to fight HPV infection compared to other women. (American Cancer Society, 2020b; Ministry of Health of the Republic of Indonesia, 2021a)

Basically, cervical (Kibaara & Degu, 2023; Takimoto et al., 2023) is a sexually transmitted infection, so this disease can be prevented. (Fowler et al., 2022) Prevention can be done in several ways, one of which is by conducting outreach to increase public knowledge about cervical cancer, screening to detect early risk of cervical cancer, carrying out HPV immunization, and carrying out interventions. (Zhang et al., 2020) Screening needs to be done because according to research data, cervical cancer mortality was found to be higher in women who had not been screened in the last five years and in women with positive precancerous lesions that do not receive further intervention. (Fowler et al., 2022) Public knowledge about cervical cancer and early examination with IVA are important in preventing cervical cancer. Therefore, in order to increase public knowledge about cervical cancer, outreach is carried out with the hope of increasing public knowledge of cervical cancer, causes, risk factors, and increasing public awareness regarding screening programs for early detection of cervical cancer. (Aga, Yasmeen, & Khan, 2022)

METHOD

The following are the stages of PDCA activities and series for cervical health education activities in the community and initial examination with IVA:

1. Planning (Plan):
 - a. Identify objectives: Determine the objectives of educational activities regarding cervical cancer in the community, such as increasing understanding about early detection of cervical cancer and prevention of this disease.
 - b. Target identification: Determine the target of the activity, such as the number of people who will attend counseling and the number of women who will undergo VIA examinations for early detection of cervical cancer.

- c. Design an outreach program: Create an outreach program that covers topics such as information about cervical cancer, techniques for carrying out VIA, the importance of prevention, and steps to maintain cervical health and prevent cervical cancer.
 - d. Plan the IVA examination: Determine the location, schedule and procedures for carrying out the IVA examination. Make sure the necessary equipment is available, and that trained personnel are ready to carry out the inspection thoroughly and safely.
2. Implementation (Do):
 - a. Socialization of activities: Socialize activities to the community by providing clear information about education regarding cervical cancer and VIA examinations. Make sure the public understands the purpose, benefits and procedures of this activity.
 - b. Extension: Organize outreach according to previously planned programs. Use interactive methods and encourage community participation. Use extension materials that are relevant and easy to understand.
 - c. IVA examination: Perform an IVA examination by trained personnel. Guide the public through the examination process, explain the steps, and provide support to undergo this examination comfortably and safely.
3. Checking (Check):
 - a. Data analysis: Review and evaluate data obtained from VIA examinations. Analyze IVA results to identify any suspicious signs or changes in the cervix.
 - b. Compare results with standards: Check whether the IVA examination results comply with established medical standards. Identify individuals who may require further follow-up or further health care.
 - c. Evaluation of the effectiveness of education: Evaluate whether education is successful in increasing their understanding and awareness of the importance of early detection of cervical cancer.
4. Action (Act):
 - a. Identify corrective actions: If there are VIA examination results that indicate a potential problem or risk of cervical cancer, identify the corrective actions needed. For example, providing recommendations for further examination or appropriate medical treatment, as well as providing further education about preventing cervical cancer.
 - b. Plan corrective action: Create a detailed action plan to address the identified problem or risk. Determine concrete steps that must be taken, including arranging appropriate visits to health services and increasing public awareness about the importance of early detection.

- c. Implement corrective actions: Carry out corrective actions according to the plan that has been made. Ensure that these measures are integrated into available and sustainable health services for the community.
- d. Monitor and evaluate: Monitor the implementation of corrective actions that have been implemented. Evaluate whether the changes have been successful and according to plan or if any adjustments are needed to increase their effectiveness in preventing cervical cancer.

After the action stage is complete, the PDCA cycle can be repeated on an ongoing basis to continue to improve and develop education programs regarding cervical cancer (Akpan et al., 2023; Castañeda et al., 2023; Ginocchi et al., 2023; Jensen et al., 2023; Teka et al., 2023) in the community and VIA examinations on an ongoing basis. In this way, this program can continue to improve its quality and provide greater benefits in efforts to detect and prevent cervical cancer early.

RESULTS AND DISCUSSION

This activity involved the participation of 30 community respondents in the Kupu Community Health Center Working Area, Tegal Regency. This activity took place on August 24 2023. During this activity, all participants received education about cervical cancer and physical examinations related to VIA examinations. Complete information regarding the characteristics of all respondents can be found in Table 1, while a general description of the implementation of these activities can be seen in the attached Figure 1.

Table 1. Participant Characteristics

Parameter	N (%)	Mean (SD)	With (Min – Max)
Age		39,83 (0,62)	39 (28 – 54)
IVA examination			
● Negative	27 (90%)		
● Positive	3 (10%)		



Figure 1. Cervical Cancer Screening Activities

Cervical cancer (Guo et al., 2023; Kallis et al., 2023; Membrilla-Beltran et al., 2023) is a malignancy that occurs in the tissue in the area of the cervix or cervix which connects the uterus to the vagina or birth canal. The causative cause of cervical cancer is infection with the Human papillomavirus (HPV) which is often found in sexually active individuals. There are more than 130 types of HPV that have been identified, of which 20 are associated with cancer. The types of HPV that are most often found in cases of cervical cancer are HPV 16 and 18. Cervical cancer can be transmitted through direct skin-to-skin contact, such as during sexual intercourse, either anally or orally, as well as if there is contact from the hands to the genital organs. Generally, cervical cancer does not cause any symptoms, especially in the early stages (Fowler et al., 2022).

One effort to prevent cervical cancer is by carrying out screening which aims to detect the presence of precancerous lesions, which if not treated immediately can become cervical cancer. Currently, there are several types of examinations that can be used to screen for cervical cancer, such as pap smear cytology and Acetate Visual Inspection (IVA) examination. (Aoki et al., 2020) IVA is an examination by applying acetic acid with a concentration of 3 – 5% directly on the cervix or cervix, then wait for approximately one minute. If white spots are found, then this indicates the presence of precancerous lesions. (Ministry of Health of the Republic of Indonesia, 2021b) IVA itself is a simple, cheap, and widely used examination to detect cervical cancer. Several studies show that there is a significant reduction in mortality rates after IVA screening. (Lohiya et al., 2022) Based on research by David J, Joshi V, et al, IVA has a sensitivity of 94.7% and a specificity of 88% with The overall accuracy percentage of the IVA examination was 93.2% and was found to be superior to the Pap smear which had a sensitivity of 89.5% and a specificity of 65.2% with an overall accuracy percentage of the Pap smear examination of 68%. (David, Joshi, Jebin Aaron, & Baghel, 2022)

According to the United States Preventative Services Task Force (USPTF), it is recommended that screening for cervical cancer begin at age 21. Screening can be done with IVA and pap smear cytology. (Fowler et al., 2022) In Indonesia itself there is also a screening program for cervical cancer which targets married women aged 30 to 50 years. In this program, women will be given counseling regarding cervical cancer and will undergo VIA examinations. According to the guidelines from PERMENKES No. 15 of 2015, women with negative IVA test results must be

re-examined in three to five years. Meanwhile, women with positive IVA test results must undergo cryotherapy. The Ministry of Health of the Republic of Indonesia also recommends cytology examination as a screening tool for cervical cancer. (Aoki et al., 2020)

IVA is included in the program of the Ministry of Health of the Republic of Indonesia (Kemenkes RI) which is covered by the Social Security Administering Agency (BPJS). In 2018, cervical cancer screening coverage in Indonesia only reached 7.3% of the target population, namely around thirty million women aged 30 to 50 years. According to the fifth Indonesian Family Life Survey (IFLS) in 2014 – 2015 which included 5,397 female respondents aged 40 years and over without a history of cancer, only around 20% of women were aware of cervical cancer screening. The lack of sensitivity and participation of the Indonesian people, especially women, regarding cervical cancer requires innovation and better strategies to increase cervical cancer screening coverage. (Aoki et al., 2020) According to data from the Central Java Provincial Health Service in 2021, of all women of childbearing age who carried out IVA examinations, it was found that around 801 individuals (2.4 percent) had positive IVA results. For Tegal Regency, there were around 5.20% of women with positive IVA results and 0.41% in Tegal City in 2021. (Central Java Provincial Health Service, 2021) In 2022, the number of VIA examinations carried out on women aged 30 – 50 year, namely around 1,085 (2.6%) for Tegal Regency & 1,071 (8.4%) for Tegal City. Where positive IVA results were obtained in 40 examinations (3.7%) for Tegal Regency and 16 examinations (1.5%) for Tegal City. A total of 2 examinations (0.2%) out of a total of 40 positive IVAs were suspected of being cervical cancer. (Central Java Provincial Health Service, 2022)

In women with precancerous lesions or with positive screening results, further intervention will be carried out. One intervention that can be carried out is cryotherapy or excision of the precancerous lesion. (Fowler et al., 2022) Therefore, it is very important to carry out screening to detect cervical cancer early in order to prevent individuals, especially women, from getting cervical cancer. . Another effort that can be made to prevent cervical cancer is by providing education to the public, especially women. Community involvement in this outreach can play a big role in preventing cervical cancer because it is hoped that the community will be more aware of cervical cancer and aware of the existence of cervical cancer screening programs with IVA. By providing education about cervical cancer and screening examinations with IVA, the public can take several actions in an effort to prevent cervical cancer, namely: (Aga et al., 2022; American Cancer Society, 2020a)

1. Not having sexual relations at an early age: In order to prevent cervical cancer, it is best to avoid having sexual relations at an early age or under the age of 20. It is best if you want to have sexual intercourse until you are in late adolescence or adulthood. (American Society of Clinical Oncology (ASCO), 2022; Ministry of Health of the Republic of Indonesia, 2019)
2. Not changing sexual partners: As previously stated, the risk of HPV infection will increase, especially in individuals with multiple sexual partners, especially if the sexual partner is suspected to be at high risk of HPV infection. Therefore, to prevent cervical cancer and reduce the possibility of being infected with HPV, you should not change sexual partners and

not have sexual relations with partners who have many sexual partners. (American Society of Clinical Oncology (ASCO), 2022; Zhang et al. , 2020)

3. Avoid exposure to cigarettes: Avoiding exposure to cigarettes both actively and passively is one way of prevention that is expected to reduce the risk of cervical cancer. (American Cancer Society, 2020a)
4. Get HPV vaccination: The HPV vaccine functions to provide protection against the type of HPV that often causes cervical cancer. This vaccine is a preventive measure, but not to treat infections that have already occurred. Therefore, this vaccine should be given before the individual is exposed to HPV. This vaccine can be given from the age of 9 years. By carrying out HPV vaccination, it is hoped that the incidence of cervical cancer can be reduced. (American Cancer Society, 2020a; American Society of Clinical Oncology (ASCO), 2022; Ministry of Health of the Republic of Indonesia, 2021a)
5. Using condoms: condoms can provide protection against HPV but cannot completely prevent HPV infection. One of the reasons why condoms cannot completely protect against HPV infection is because condoms do not cover all areas of the body that are likely to be infected with HPV, such as the genital or anal areas of the skin. However, condoms still provide protection against HPV and can protect against other sexually transmitted infections including HIV. (American Cancer Society, 2020a)

The importance of education is not only limited to knowledge about cervical cancer itself, but also includes an understanding of prevention methods, such as HPV (Human Papillomavirus) vaccination and safe sexual behavior. All of these are important aspects in efforts to prevent cervical cancer. Effective education can also help eliminate the stigma and fear that is often associated with cervical cancer screening. By providing accurate and clear information to the public, education can change negative perceptions into a more positive understanding about the importance of screening examinations. (Destra et al., 2023) Therefore, education about cervical cancer and IVA screening examinations is not just about providing information, but also about forming a deep understanding and removing obstacles to prevention efforts. This is why the importance of education in maintaining public health(Ning et al., 2023; Raap et al., 2023; Rod et al., 2023; Siegel & Drulis, 2023) should not be ignored, because with knowledge and appropriate preventive measures, we can play an active role in protecting ourselves and our loved ones from the serious risk of cervical cancer. (Aoki et al., 2020)

CONCLUSION

Cervical cancer is a significant global health problem that can be prevented and detected early through effective screening methods. Visual Inspection with Acetic Acid (IVA) is one such method that has been proven to be efficient in identifying changes in cervical tissue that are precancerous or cancerous. This method involves applying acetic acid to the cervix, followed by a visual inspection for tissue changes. IVA is a relatively simple and affordable screening tool, so it

can be accessed in various health settings, especially in areas with limited resources. However, its effectiveness really depends on socialization efforts in society. Counseling has an important role in increasing awareness about cervical cancer, educating women about the importance of regular screening, and ensuring that health services, including VIA screening, are easily available to women. Community outreach helps address gaps in access to health services, ultimately contributing to the prevention and early detection of cervical cancer, the leading cause of death in women in many regions.

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