



Factors that influence the participation among women in Inspection Visual Acetic acid (IVA) test

Kartika Adyani^{1*)}; Friska Realita²

^{1*)2} Universitas Islam Sultan Agung (UNISSULA) Semarang

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ABSTRACT

Cervical cancer is one of the main causes of death for women in the world, so an IVA examination is needed as an early detection to reduce the incidence. Low participation in IVA examinations is one of the causes of cervical cancer development and hinders early treatment. The purpose of this study is to analyze the factors that influence the participation of women of childbearing age in the IVA examination. This research is quantitative research with a cross-sectional design conducted in the working area of Puskesmas Cepiring Kendal (Public Health Center of Cepiring Kendal). The subjects of this study are 236 women of childbearing age who were married for more than five years. The research instrument used is a questionnaire. The factors that were significantly associated with the exclusion of fertile women in the IVA examination were access to information (0.007), family support (0.001), support from medical officers (0.007), and support from relatives (0.066). The multivariable analysis shows that family support is a significant factor. Women of childbearing age who do not get family support have a 46.9 times risk of not taking IVA examinations.

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Faktor-Faktor Yang Mempengaruhi Ke Ikutsertaan Wanita Dalam Pemeriksaan Inspeksi Visual Asam Asetat (IVA)

ABSTRAK

Kanker serviks merupakan salah satu penyebab utama kematian wanita di dunia sehingga diperlukan pemeriksaan IVA sebagai deteksi dini untuk menurunkan angka kejadian kanker serviks pada wanita. Rendahnya keikutsertaan dalam pemeriksaan IVA menjadi salah satu penyebab berkembangnya kanker serviks dan menghambat pengobatan sejak dini. Tujuan dari penelitian ini adalah menganalisis faktor yang mempengaruhi keikutsertaan wanita usia subur dalam pemeriksaan IVA. Penelitian ini merupakan penelitian kuantitatif dengan desain cross-sectional yang dilakukan di wilayah kerja Puskesmas Cepiring Kendal. Subyek penelitian ini adalah 236 wanita usia subur yang sudah menikah lebih dari 5 tahun. Instrumen penelitian menggunakan kuesioner. Faktor yang berhubungan secara signifikan dengan ketidakikutsertaan Wanita Usia Subur dalam pemeriksaan IVA adalah akses informasi (0,007), dukungan keluarga (0,001), dukungan petugas (0,007), dan dukungan teman (0,066). Analisis multivariabel menunjukkan dukungan keluarga merupakan faktor yang berpengaruh signifikan. Wanita usia subur yang tidak mendapatkan dukungan keluarga memiliki risiko 46,9 kali untuk tidak ikut pemeriksaan IVA.

Kata kunci:

Kanker Serviks
Perempuan
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*) corresponding author

Universitas Islam Sultan Agung Semarang; Jl.
Raya Kaligawe KM. 04 Semarang

Email: kartika.adyani@unissula.ac.id

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Introduction

Cervical cancer is one of the leading causes of death for women worldwide, as the highest in developing countries and 10th in developed countries. It is the first rank of most cancers found in 13 anatomical pathology laboratories in Indonesia (Kementrian Kesehatan RI, 2015). About 85% of the global burden of cervical cancer occurs in less developed areas and cervical cancer accounts for nearly 12% of all cancers in women (Ferlay et al., 2015).

In 2015, there were 490,000 cases of cervical cancer worldwide which resulted in 240,000 deaths each year, and 80% occurred in Asia. Every two minutes, there is a death in the world, and every an hour, there is one death in Indonesia due to cervical cancer (World Health Organization, 2013). Deaths from cervical cancer will continue to increase to 25% within 10 years if proper preventive and management measures are not taken (Ministry of Health, 2015).

The majority of causes of death due to cervical cancer occur in women who have never been screened, received no treatment, early sexual intercourse, have multiple sexual partners, and high parity (Chelimo, Wouldes, Cameron, & Elwood, 2013). Awareness and participation of malignancy screening are lower in low- and middle-income countries due to a lack of national screening programs (Anwar et al., 2018., Putri, A. 2020). Methods for early detection of cervical cancer are pap smears, visual inspection of acetic acid (IVA), enlargement of the IVA with kinoscope, colposcopy, Cervicography, thin prep, and HPV testing. However, with the condition of Indonesia as a developing country, the appropriate examination is IVA because the technique is easy and simple, low cost, high sensitivity, fast and accurate enough to find abnormalities at the stage of cell abnormalities or pre-cancer. However, there are still many women who are reluctant to do so (Hanifah & Fauziyah, 2019).

The coverage of IVA examinations in Indonesia in 2016 was 4.34% which is still far from the national target of 10% at the end of 2015 (Nonik Ayu Wartini, 2019).

Previous research has shown that there are still many women of childbearing age (WCA) who have not carried out early detection of cervical cancer due to several factors including knowledge, attitudes, husband's support, and peer support for cervical cancer early detection behavior (Wahyuni, 2013). Other studies have shown that the role of cadres is related to low IVA tests due to a lack of health promotion on the importance of early detection of cervical cancer (Susanti, 2011).

The low coverage of early detection of cervical cancer is one of the causes of the development of cervical cancer because based on the fact that more than 50% of women diagnosed with cancer have never had early detection before so that when diagnosed with cancer, cancer is found at an advanced stage and treatment is very late (Suartini, 2013). Prevention and early detection of cervical cancer will provide an opportunity to reduce the incidence of cervical cancer in women (Sari, 2012).

Based on the 2013 Riskesdas results, most cases of cervical cancer in Indonesia are in Central Java Province, and from interviews with midwives at the Public Health Center of Cepiring Kendal, it was found that the coverage of IVA examinations in this area was very minimal. There are still many women who are reluctant to do IVA examinations and the importance of early detection of cervical cancer which is the cause of high female mortality in the world makes the basis for the purpose of this study to determine "the factors that influence the participation of women of childbearing age in early detection of cervical cancer with the Visual

Inspection method of Acetic Acid (IVA) at Public Health Center of Cepiring Kendal".

Method

The design of this research is a quantitative descriptive-analytic using a cross-sectional study. This research was conducted in May-July 2019 in the working area of the Public Health Center of Cepiring Kendal.

The sample in this study amounted to 236 WCA in the working area of the Public Health Center of Cepiring Kendal. The sampling technique used in this study was Accidental Sampling, which is a technique that is done by taking samples who come to the public health center and meet the inclusion criteria. The researcher was assisted by four enumerators. The inclusion criteria in this study were women of childbearing age who were married for more than five years, were in the working area of the Public Health Center of Cepiring Kendal, and were willing to be respondents.

The instrument used in this study was a questionnaire taken from the research questionnaire that had been conducted by Masturoh (Masturoh, 2016). Respondents received an explanation regarding the purpose and objectives of the study before they filled out the questionnaire. Data analysis was performed using a univariable test, bivariable analysis using chi-square, and multivariable analysis using a logistic regression test.

This research has received a code of Ethics approval from the bioethics commission of the Faculty of Medicine, Sultan Agung Islamic University No. 648 / X / 2019 / Bioethics Commission. The design of this research is quantitative descriptive analytic using cross sectional study. This research was conducted in May-July 2019 in the working area of Puskesmas Cepiring Kendal.

Results and Discussion

Table 1 provides an illustration that the participation of respondents in the IVA test is only 2.9% or 7 people. The characteristics of respondents between the groups that did not follow the IVA examination and those who attended the IVA examination were in the same characteristics ($p > 0.05$). This shows that these characteristics do not affect the participation of the IVA examination.

The research data showed that those with poor knowledge (97.5%) did not follow the IVA examination, while those with good knowledge (93.9%) did not follow the IVA examination. There was a tendency for those with poor knowledge to not follow the IVA examination, but the Fisher Exact test results showed that there was an insignificant relationship between knowledge and participation in the IVA examination ($p = 0.254$). The results of the analysis above showed that 198 respondents who did not follow the IVA test had poor knowledge of early detection of cervical cancer (83.9%). The distribution of respondents according to their education level showed that 115 (96.6%) respondents with low education (SD / SMP) did not take the IVA test. The factor that played a role in early detection of cervical cancer is the attitude, where WCA in the Public Health Center of Cepiring Kendal mostly supported the IVA test, 225 people but 218 people did not do the IVA test (96.9%). After the Fisher Exact test, it showed there was an insignificant relationship between attitude and participation in the IVA examination ($p = 1,000$).

The results showed that those who were far from health services (98.1%) did not follow the IVA examination, while

those who had access to health services, 96.1% did not follow the IVA examination. There was a tendency for those who were far from health services not to take IVA examinations. However, the Fisher Exact test results showed that there was an insignificant relationship between access to health services and IVA participation ($p = 0.458$). However, in

contrast to access to information, there was a tendency that those who did not get information tend not to follow the IVA examination, and after being tested by Fisher Exact it showed that there was a significant relationship between access to information and participation in IVA ($p = 0.007$).

Table 1
Characteristics of research subjects according to the participation of the IVA examination

| | Variable | IVA examination participation | | P |
|----------------------|--------------------------------|-------------------------------|---------------|-------|
| | | Not Participating | Participating | |
| Participation | Profession | 229(97,1%) | 7(2,9%) | 0.131 |
| | Unemployment | 123 (95.3%) | 6 (4.7%) | |
| | Employment | 106 (99.1%) | 1 (0.9%) | |
| | Education Level | | | 0.479 |
| | Elementary/ Junior High School | 115 (96.6%) | 4 (3.4%) | |
| Senior High School | 96 (98.0%) | 2 (2.0%) | | |
| | Diploma/ Bachelor /Master | 18 (94.7%) | 1 (5.3%) | |
| Predisposing factors | Knowledge | | | 0.254 |
| | Poor | 198 (97.5%) | 5 (2.5%) | |
| | Good | 31 (93.9%) | 2 (6.1%) | |
| | Attitude | | | 1.000 |
| | Poor Support | 11 (100.0%) | 0 (0.0%) | |
| | Support | 218 (96.9%) | 7 (3.1%) | |
| Enabling factors | Service Access | | | 0.458 |
| | Not available | 106 (98.1%) | 2 (1.9%) | |
| | Available | 123 (96.1%) | 5 (3.9%) | |
| | Information Acces | | | 0.007 |
| | Poor information | 201(98.5%) | 3 (1.5%) | |
| | Full information | 28 (87.5%) | 4 (12.5%) | |
| Reinforcing factors | Family support | | | 0.001 |
| | Poor Support | 211(99.5%) | 1 (0.5%) | |
| | Support | 18 (75.0%) | 6 (25.0%) | |
| | Medical Officer Support | | | 0.007 |
| | Poor Support | 201(98.5%) | 3 (1.5%) | |
| | Support | 28 (87.5%) | 4 (12.5%) | |
| | Peer Support | | | 0.066 |
| Poor Support | 216 (97.7%) | 5 (2.3%) | | |
| | Support | 13 (86.7%) | 2 (13.3%) | |

Judging from the reinforcing factors for participating in the IVA examination, the results of the study showed that those whose families were poor support, 99.5% did not attend the IVA examination, while those whose families support, 75.0 percent did not follow the IVA examination. There was a tendency for those whose families were poor support not to follow the IVA examination, and the Fisher Exact test results showed that there was a significant relationship between family support and participation in the IVA examination ($p < 0.001$). Likewise, medical officials' support, there was a tendency for those who did not have the support of officers not to follow the IVA examination, and the Fisher Exact test results showed that there was a significant relationship between officers' support and participation in the IVA examination ($p = 0.007$). Likewise, peer support, there was a tendency for those who did not have peer support. They did not follow the IVA examination and the Fisher Exact test results showed an almost

significant relationship between peer support and participation in the IVA examination ($p = 0.066$).

Table 2 shows the results of the multivariable analysis among various factors which in the bivariable analysis yielded $p < 0.012$. There are 4 variables in the multivariable analysis as in the table above. Based on the results of the Multiple Logistic Regression analysis, among the four variables analyzed, there was one variable that has a significant effect on participation in the IVA examination, namely family support ($p = 0.001$). Women of childbearing age who got poor family support had a 46.9 times risk of not attending IVA testing compared to women who received family support (95% CI OR: 4.4-499.9).

The results of the bivariable analysis showed that there was no significant effect between knowledge and participation of WCA in carrying out the IVA examination. This is not in line with research conducted by Mutik and Estiningtyas which stated that there was a relationship

between maternal knowledge about cervical cancer and the participation of mothers in early detection. ([Mahmudah, 2017](#)). The knowledge of respondents in this study about cervical cancer is poor, this is a finding to emphasize the need to increase women's understanding of cervical cancer.

Knowledge of women in many developing countries about cervical cancer and its prevention is very limited ([Touch & Oh, 2018](#)). Cervical cancer deaths are greater in

those who live in rural areas compared to urban areas. There is a knowledge gap between them ([Blake et al., 2015](#)). The implementation of absorption and the success of early detection of cervical cancer is determined by women's knowledge and awareness of cervical cancer ([Kietpeerakool, Phianmongkhol, Jitvatcharanun, Siriratwatakul, & Srisomboon, 2009](#)).

Table 2
The results of multivariate analysis of various factors that affect the participation of IVA examinations.

| Variable | | B | p | OR | 95% CI OR |
|-------------------------|------------------|-------|-------|------|-----------|
| Information Access | Poor Information | 0.108 | 0.935 | 0.1 | 0.1-14.9 |
| | Full Information | | | | |
| Family Support | Poor Support | 3.850 | 0.001 | 46.9 | 4.4-499.9 |
| | Support | | | | |
| Medical Officer Support | Poor Support | 0.557 | 0.655 | 0.2 | 0.2-20.1 |
| Peer Support | Poor Support | 1.154 | 0.385 | 0.2 | 0.2-42.8 |
| | Support | | | | |

Some of the factors that influence the knowledge of women of childbearing age about cervical cancer early detection are the level of education. The majority of respondents in this study have low education, this condition can affect their low knowledge. A person's education level can affect their ability to understand the information they receive. This condition also can affect their low participation in early detection of cervical cancer.

The results of the analysis showed that there is no relationship between attitudes and participation of WCA. This is in line with research conducted by Hidayati et al which concluded that there was no relationship between maternal attitudes about cervical cancer and IVA examination behavior. ([Lisminawati & Wahtini, 2016](#)). Other studies have shown different things, namely concluding that the factor that most influences the participation of the IVA test are attitude, WCA with a poor supportive attitude have a 9.87 times greater chance of not doing IVA examinations. ([Nisaa, Suryoputro, & Kusumawati, 2019](#)).

The attitude and awareness of a person towards cervical cancer early detection programs is a common thread for turning knowledge into practice ([Emre, Karakus, & Nicole, 2018](#)). Most of the respondents in this study had less knowledge but a supportive attitude towards early detection of cervical cancer, it might happen because attitude is an evaluation response that occurs when a person is exposed to stimulation. Respondents can assess positive IVA examination. Attitudes can be influenced by feelings involving emotional aspects. This is an opportunity for health workers to increase knowledge about early detection of cervical cancer because basically with a supportive attitude there is an intention to do so.

In this study, access to services was not related to the participation of WCA in conducting IVA examinations. It is in line with previous research ([Nisaa et al., 2019](#)). This may occur due to the low knowledge of respondents about the early detection of cervical cancer. The majority of respondents in this study have access to health services as seen from the availability of transportation facilities, relatively close distances, short travel times, but if they do not know about the benefits of the IVA test as a way to detect cervical cancer early and do not know where. can do the inspection, then they will not take advantage of the service.

The progression of cervical cancer to the next stage can be prevented through early screening and treatment. An effective screening program will control the incidence of cervical cancer ([Elfström, Herweijer, Sundström, & Arnheim-Dahlström, 2014](#)). Inequality in the contribution of health workers across the country can lead to inequality in access to health services, especially between urban and rural areas ([Kanchanachitra et al., 2011](#)).

The test results show that there is a significant relationship between access to information and participation in the IVA test, this is in line with Indah's research which shows that women who do not have access to information about early detection of cervical cancer have a 2.2 times greater chance of not doing early detection of cervical cancer. ([Lestari, Yuli Kusumawati, & Werdani, 2016](#)). The more information that comes in, the more knowledge it will get ([Notoatmodjo, 2012](#)).

The use of the Public Health Center as a public health information center is influenced by service factors and user factors ([Suharmiati, Handayani, & Kristiana, 2012](#)). This study shows that respondents as health service users can access health services but they have not had adequate access to information related to early detection of cervical cancer.

The number of health workers available at the Public Health Centre has not been able to reach all health service users. The background of the respondents as users who mostly have elementary/ junior high school education can be an obstacle for them in receiving or seeking information.

Health education media about cervical cancer is needed by women. This way can be conveyed through various information media. ([Ministry of Health Cambodia, 2014](#)) Improved health facilities and places of delivery can be an opportunity for providing information about cervical cancer screening ([Touch & Oh, 2018](#)). Provision of basic information about cervical cancer can help planning health education programs about early detection of it. ([Getahun, Mazengia, Abuhay, & Birhanu, 2013](#)).

The ease with which a person can get information is expected to provide new knowledge so that it can change a person's behavior and motivate him to carry out health screening. Women of childbearing age who have never been exposed to information about the IVA test will find it difficult for them to do the IVA examination. Health information can be obtained from many media, one of which is counseling from health workers.

This research is in line with research conducted by Sri and Ratna which concluded that there is a relationship between husband's support and maternal participation in following IVA examinations. (Wahyuni & Adiyasa, 2019). This research is not in line with research conducted by Mitha Ristisuarti which states that there is no relationship between husband's support and IVA examination visits at the Public Health Center of Banguntapan 2. (Kusuma & Utami, 2016., Yunitasari, E., & Suri, S. 2020).

HPV infection is the highest risk factor for cervical cancer which can be transmitted through sexual contact. Other risk factors include early age at first sexual intercourse, multiple sexual partners, poor sexual hygiene, smoking, and a history of cancer. Primary prevention of cervical cancer in the form of vaccination can be done with the permission of the husband or family, vaccination can reduce the prevalence, however, screening is still needed (Acharya Pandey & Saracharya, 2017).

Family support especially is that the husband as a sexual partner has an important role in the decision to make early detection of cervical cancer, namely the IVA test. When the family understands the importance of the IVA test, they will support and strengthen the respondent to carry out the examination. In this study, the majority of respondents had less family support to do the IVA test, this could be influenced by poor information to the respondent and to the family. The family, especially the husband, is the most influential person in providing psychological support in the form of meeting family needs including family health and decision-makers in the family.

This study shows that there is a significant relationship between the support of health workers and the IVA test. This study is not in line with the research conducted by Flora et al which showed that there was no relationship between health workers and IVA examinations (Parapat, Susanto, & Saraswati, 2016).

People around the world usually undergo medical examinations when they experience health problems, therefore the absence of systematic and active promotion of cervical cancer screening programs can be a cause of underutilization of screening services. (Bruni L, 2017). Cervical cancer is one of the cancers in humans that can be

prevented by early treatment at the pre-cancerous lesion stage which makes cancer development almost impossible. (Assoumou et al., 2015).

The absence of recommendations or suggestions from health workers to carry out screening can be an excuse not to do cervical cancer screening (Rezaie, Mohammad, & Kamalifard, 2012). The role of health workers in maintaining women's reproductive health in the form of providing information about disease risk factors, early detection of malignancies, and health counseling. This study shows that there is a relationship between peer support and participation in IVA examinations. It is in line with the research conducted by Flora et al which showed that the invitation of peers was sufficient to influence the mother's decision to do IVA examination, especially if the person inviting was a close-peers. (Parapat et al., 2016). Family and peers can be the main source of information (Shrestha & Dhakal, 2017). Experience from close peers can influence mothers to conduct early detection of cervical cancer. Close-peers can also invite and persuade women of childbearing age to do IVA examinations.

Conclusions and Recommendations

The analysis of the results of research conducted on 236 respondents showed that the factors that influenced the participation of women of childbearing age in IVA examinations were access to information, family support, support from health workers, and support from peers. The factor that most influences women's participation in IVA examinations is family support. Women of childbearing age who did not get family support had 46.9 times the risk of not taking IVA examinations compared to women who received family support.

Practical advice from the results of this research is that it is hoped that further research can carry out research with the same theme as the qualitative method carried out to related parties, especially families to explore the causes of the low participation of women of childbearing age in carrying out IVA examinations.

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