

## The Relationship between Health Workers' Support and Frequency of Visual Inspection with Acetic Acid for Cervical Cancer Early Detection among Childbearing Age Women at Pasir Mulya Health Center

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### Abstract

**Background:** Cervical cancer could be prevented through early detection method. Visual Inspection with Acetic Acid (VIA) is one of common and simple procedures to screen early stage of cervical cancer. Health workers play a role in helping and encouraging women of childbearing age to be involved in preventing cervical cancer and thus improving the life quality of women generally. This study was aimed to determine the relationship between health workers' support and frequency of visual inspection with acetic acid (VIA) for cervical cancer early detection among childbearing age women at Pasir Mulya Health Center.

**Materials and Methods:** The study design used was analytical research. Participants in this study were 287 childbearing age women who regularly visited Pasir Mulya Health Center. The sampling method used was purposive sampling. The instrument in this study was questionnaire and the research data was analyzed using the Chi-square test.

**Results:** Out of 287 participants, 211 participants (73.5%) received support from the health workers while 76 participants (26.5%) did not receive support from the health workers. The number of childbearing age women who had done the VIA test was 146 participants, whilst 141 participants never had IVA test previously. A total of 131 childbearing age women received support and had undergone VIA test. The statistical test obtained *P-value* = 0.00.

**Conclusion:** There was significant relationship between health workers' support and frequency of visual inspection with acetic acid (VIA) in childbearing age women at Pasir Mulya Health Center.

**Keywords:** Cervical cancer; Childbearing age women; Health workers' support; Visual inspection with acetic acid.

### Introduction

Cervical cancer is a major public health problem and become the second most common cancer among

women worldwide.<sup>1</sup> Based on the data from World Health Organization (2018), cervical cancer was the second most common cancer in Indonesia, with 9.3%

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incidence rate and 8.8% mortality rate. The Global Burden of Cancer (GLOBOCAN) estimated there were 20,928 new cases and 9,928 deaths found in Indonesia in 2012. About 70% of cervical cancer cases were already at an advanced stage upon diagnosis.<sup>2</sup> The associated risk factors of cervical cancer include young age at first intercourse less than 16 years old, multiple sexual partners, cigarette smoking, race, high parity, and lower socioeconomic status.<sup>3</sup>

The main cause of cervical cancer is the HPV virus (human papillomavirus) particularly HPV-16 and 18.<sup>4</sup> These viruses are mainly transmitted through sexual contact and most people are infected with HPV shortly after the onset of sexual activity. Women who have sex with multiple partners also seem to be at higher risk to develop cervical cancer.<sup>5</sup>

Cervical cancer is very disturbing for sufferers both physically and psychologically. Therefore, early detection is highly recommended for all married or sexually active women.<sup>5</sup>

One alternative examination for detecting cervical cancer at a relatively low-cost procedure is visual inspection with acetic acid (VIA). Visual inspection with acetic acid is a direct cervical examination without using any enlargement tools. VIA is performed by washing the cervix with 3% - 5% acetic acid and waiting approximately 1 minute to check for any aceto-white areas. The result is positive when there is aceto-white area present.

The VIA screening method is relatively easy and can be done by general practitioners, midwives or nurses who have been trained to do this method. VIA also has high sensitivity and specificity to screen early stage of cervical cancer.

The high incidence of mortality rate of cervical cancer indicates that the health workers should participate actively in preventing the cervical cancer. Health workers' support toward cervical cancer prevention is essential in reducing the cervical cancer incidence rate. The aim of this study is to determine the relationship between health workers' support and frequency of visual inspection with acetic acid (VIA) for cervical cancer early detection among childbearing age women at Pasir Mulya Health Center.

## Materials and Methods

The design of this study was correlational research that examined the relationship between two variables without influencing any of the variables.

This study also used a cross-sectional approach that collected and analyzed data from a sample population at a specific period.<sup>6</sup>

The study was conducted in December 2019 for 5 days at Pasir Mulya Health Center, Bogor City. The sample was taken using total sampling technique with a total of 287 participants. We only included the participants who gave permissions to participate in this research. The study sample involved women of childbearing age between 20-45 years old, either married women or widows.

The authors asked about the phone numbers list of the participants from Pasir Mulya Health Center's Administration Staff and sent the questionnaire via Google Form link.

The questionnaire gave information regarding the age and marital status of the participants, the number of VIA tests and support level from the health workers.

Statistical analysis was performed using SPSS for Windows. The data regarding health workers' support and visual inspection with acetic acid (VIA) were analyzed and presented as percentage of frequencies and absolute number. The Chi-square test was used to study the relationship between the health workers' support and frequency of visual inspection with acetic acid (VIA).

## Result

Out of 287 participants, 211 participants (73.5%) claimed that they received support from the health workers during their visit to Pasir Mulya Health Center, while 76 participants (26.5%) did not receive support from the health workers.

**Table 1: Frequency of Health Workers' Support**

Support Level of Health Workers	Total (n)	Percentage (%)
Does not Support	76	26.5
Support	211	73.5
Total	287	100

**Table 2: Frequency Distribution of VIA**

VIA Procedure	Total (n)	Percentage (%)
No VIA	141	49.1
Took VIA	146	50.9
Total	287	100

Based on table 2, it can be seen that 141 participants (49.1%) never experienced visual inspection with

acetic acid while 146 participants (50.9%) experienced visual inspection with acetic acid.

**Table 3: Relationship between health workers' support and frequency of VIA**

No.	Health Personnel Support	VIA Test Examination				Total		P-value
		No		Yes		n	%	
		n	%	n	%			
1	Did Not Receive Support	61	80.3	15	19.7	76	100	0.00
2	Receive Support	80	37.9	131	62.1	211	100	
	Total	141		146		287		

Based on the table 3, out of 287 participants, as many as 131 participants (62.1%) childbearing age women received support from health workers and have conducted a VIA test. On the other hand, 15 participants (19.7%) did not receive support from the health workers but experienced visual inspection with acetic acid test. As many as 80 participants (37.9%) received support from the health workers but did not undergo the visual inspection with acetic acid. The data analysis showed *P-value* = 0.00, which means there was significant relationship between support from the health workers and frequency of visual inspection with acetic acid test among childbearing age women in Pasir Mulya Health Center.

### Discussion

Cervical cancer is a preventable disease.<sup>18</sup> An important strategy towards the reduction of its burden in a developing country is by early diagnosis and management of the premalignant lesions of the disease; this would be achieved via screening of women at risk.<sup>19</sup>

Health workers play important role in preventing cervical cancer. The role of health workers is to provide knowledge about cervical cancer and the importance of early detection, as well as to motivate childbearing age women to perform early detection of cervical cancer.<sup>17</sup>

Health workers' support is defined as physical and psychological convenience, attention, appreciation, and assistance in other forms received by individuals from health workers.<sup>7</sup>

Health workers are regarded as influential people and considered important by the community to promote positive attitude toward health aspect.

Based on table 1, out of 287 participants, 211 participants (73.5%) received support from the health

workers. When the health workers are encouraged to provide better health service quality to community, patients especially the childbearing age women would feel that the health workers were supportive toward healthy life preferences and thus promote the childbearing age women to participate in visual inspection with acetic acid test.

Cervical cancer as a preventable disease can be detected by performing regular screening test. There are 2 types of tests to detect cervical cancer: Pap test and HPV test. The VIA (visual inspection with acetic acid) test is one method to detect the presence of HPV in cervix area.

VIA is a visual examination of the uterine cervix after application of 3-5% acetic acid.<sup>2</sup> If the cervical epithelium contains an abnormal load of cellular proteins, the acetic acid coagulates the proteins conferring an opaque and white aspect of the concerned area.<sup>2</sup> A precancerous lesion has higher protein content when compared to normal epithelium. If the area becomes white (acetowhite), it is considered as "VIA positive".<sup>2</sup>

The VIA has gained favor in developing countries due to its low cost, simplicity, safety, and high efficacy properties. This test can be performed by any healthcare professionals, as long as they have received formal and practical VIA training.

Table 2 showed that 141 (49.1%) participants never experienced visual inspection with acetic acid while 146 (50.9%) participants experienced the VIA test. This condition indicated that less than half of the population never get themselves checked for early cervical cancer screening. Thus, the health workers need to put more effort in educating and encouraging the childbearing age women about the importance of early detection of cervical cancer. Early detection of cervical cancer could lower the mortality rate and

improve the life expectancy and health quality of childbearing age women.

Based on table 3, out of 287 participants, 131 participants (62.1%) childbearing age women received support from health workers and undergone VIA test. On the other hand, only 15 participants (19.7%) who did not receive support and had VIA. The data analysis showed  $P\text{-value} = 0.00$ , which means there was significant relationship between support from the health workers and frequency of visual inspection with acetic acid test among childbearing age women in Pasir Mulya Health Center. Based on this study, most of the childbearing age women would prefer the supportive health workers who were able to guide and provide answers regarding cervical cancer and the importance of early detection. The results of this study are in line with the research of Dewi (2014) which indicated that there was significant relationship between the support of health workers and the VIA examination.<sup>21</sup>

Health workers as the personnel who operate visual inspection with acetic acid (VIA) should receive thorough training not only in performing the correct procedure but also providing support for the childbearing age women from the beginning of check-up until completion of VIA and follow-up appointments. Knowledge factor is one of the factors that influence health behavior in society; if someone has good knowledge, that person tends to carry out healthy behavior as well. Knowledge is not the only factor that can change a person's behavior, but knowledge can also be one of the determinants of changing one's behaviour.<sup>12</sup> Most of a person's knowledge is obtained through the sense of hearing (ears) and the sense of sight (eyes).<sup>1</sup> Good health support can influence someone's behaviour toward cervical cancer screening using visual inspection with acetic acid (VIA).

### Conclusion

It can be concluded that there was a significant relationship between the support of health workers and the visual inspection with acetic acid (VIA) in childbearing age women at Pasir Mulya Health Center in Bogor City.

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**Conflict of Interest:** There was no conflict of interest in the research.

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### References

1. Kotaniemi-Talonen, L. *et al.* Intensified screening among high risk women within the organized screening programme for cervical cancer in Finland. *Acta Oncol.* 2011;50(1):106-11.
2. WHO/ICO. Information Centre on HPV and Cervical Cancer (HPV Information Centre). Human Papillomavirus and Related Cancers in World. Summary Report 2010. Geneva: WHO; 2010.
3. Harris R.P., *et al.* Current methods of the US Preventive Services Task Force: a review of the process. *Am J Prev Med.* 2001;20(3 Suppl): 21-35.
4. Smith J.S., *et al.* Human papillomavirus type distribution in invasive cervical cancer and high-grade cervical lesions: a meta-analysis update. *Int J Cancer.* 2007;121(3):621-32.
5. Wijaya, D. Pembunuh Ganas Itu Bernama Kanker Serviks,. Yogyakarta: Sinar Kejora; 2010.
6. Kumalasari, Intan & Andhyantoro, Iwan. Kesehatan Reproduksi. Jakarta: Salemba Medika; 2012.
7. Adib, M. Pengetahuan Praktis Ragam Penyakit Mematikan Yang Paling Menyerang Kita. Jogjakarta: Buku biru; 2011.
8. Lailawati, A. Hubungan Dukungan Petugas Kesehatan Dengan Kunjungan PUS Dalam Melakukan Skrining Kanker Serviks Menggunakan Metode IVA di Desa Bojonglor Kabupaten Pekalongan. Available from: <http://www.e-skripsi.stikesmuh-pkj.ac.id/e-skripsi/index.php?p=fstream&fid=1264>.
9. World Health Organization-Cancer Country Profiles; 2018. Available from: [https://www.who.int/cancer/country-profiles/idn\\_en.pdf](https://www.who.int/cancer/country-profiles/idn_en.pdf).
10. Septiyuvita, I. Gambaran Tingkat Pengetahuan Wanita Usia Subur Tentang Pemeriksaan Inspeksi Visual Asam Asetat ((VA) Test. Available from: [http://Repositori.Uin-Alauddin.ac.id/6517/1/INDRY%20SEPTIYUVITA\\_Opt.pdf](http://Repositori.Uin-Alauddin.ac.id/6517/1/INDRY%20SEPTIYUVITA_Opt.pdf).
11. Windari, E.N., Dewi, A.K., Siswanto. Pengaruh Dukungan Tenaga Kesehatan Terhadap Pemberian ASI Eksklusif. Available from: <http://joim.ub.ac.id/index.php/joim/article/view/38>.
12. Anita, *et.al.* Hubungan pengetahuan ibu, fasilitas pelayanan Kesehatan, dukungan keluarga dan dukungan petugas dengan pemberian ASI eksklusif 6 bulan. Available from: <http://repositori.usu.ac.id/bitstream/handle/123456789/28928/151000207.pdf?sequence=1&isAllowed=y>.
13. Notoatmojo, S. Kesehatan Masyarakat Ilmu dan Seni. Jakarta:Rineka Cipta; 2012.

14. Masturoh, E. Faktor-faktor yang Mempengaruhi Wanita Usia Subur (WUS) Dalam melakukan Deteksi Dini Kanker Serviks Metode Inspeksi Visual Asam Asetat (IVA). Available from: <http://lib.unnes.ac.id/26206/1/6411412056.pdf>; 2016.
15. Savitri, A., et al. Kupas tuntas kanker payudara dan leher Rahim. Yogyakarta:PBP; 2015.
16. Susilowati. Pengetahuan Wanita Usia Subur (WUS) Tentang Deteksi Dini Kanker Payudara di Dusun Macanmati Kecamatan Gesi Kabupaten Sragen Tahun 2013. Departemen Kesehatan. Available from: <http://digilib.ukh.ac.id/files/disk1/7/01-gdl-susilowati-332-1-ktisus-2.pdf>.
17. Nazera, F.I., et al. Hubungan Antara Sikap Wanita Usia Subur (Usia 20-35 Tahun) Terhadap Perilaku Pencegahan Servisititis Dengan Pemeriksaan Skrining. Available from: [http://dokupdf.com/download/2-wanita-usia-subur-5a021ce2d64ab2b97f8da\\_pdf](http://dokupdf.com/download/2-wanita-usia-subur-5a021ce2d64ab2b97f8da_pdf).
18. Sundari, Setiawati, E. Pengetahuan dan Dukungan Sosial Mempengaruhi Perilaku Deteksi Dini Kanker Servik metode IVA. *Indonesian Journal of Midwifery*. 2018; Vol 1:No.1
19. Owoeye, I.O.G. and Ibrahim, I.A. Knowledge and attitude towards cervical cancer screening among female students and staff in a tertiary institution in the Niger Delta. *International Journal of Medicine and Biomedical Research*. 2013; vol.2, no.1,pp.48-56.
20. Ifemelumma, C.C., et al. Cervical Cancer Screening: Assessment of Perception and Utilization of Services among Health Workers in Low Resource Setting. *International Journal of Reproductive Medicine*. 2019.
21. Dewi L., Supriati, E., Dewi, A.P. Faktor-faktor yang berhubungan dengan perilaku Wanita usia subur dalam deteksi dini kanker serviks dengan metode pemeriksaan inspeksi visual asam asetat (IVA) di wilayah kerja Puskesmas Tanjung Hulu Pontianak Timur Tahun 2014. *Jurnal Penelitian dan Pengembangan Pelayanan Kesehatan*. 2014; vol. 3, no.2.