



Health Education of Visual Inspection Using Acetic Acid (VIA) as Cervical Cancer Screening

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Abstract

Cervical Cancer (CC) is the fourth most frequently diagnosed malignancy and the greatest cause of cancer death in women, with 24 out of every 100.000 women years (approximately 15/100.000) in Indonesia. Human Papilloma Virus is a cause that triggers the development of a pre/ invasive lesion 15-20 years after the initial infection. An Alternative screening technique that's easily carried out by healthcare, such as Visual Inspection of Acetic Acid (VIA) was needed. The community service aims to address the community's ignorance and concern around VIA as CC screening, which will increase the community's (women) willingness and knowledge to assess reproductive health. Lecturers at Prima Nusantara Bukittinggi University collaborated with the Public Health Office in Bukittinggi and Mandiangian Koto Selayan District with questionnaires (20 questions as pre-test and post-test) in Forum Group Discussion in January 2021. The participants are married women. The result was the majority of participants were estimated 36-45 years old (46%), 18 participants were at university/ college educational level (36%), and the majority of the participants were housewives (50%). There was a significant difference (p -value = 0.000). Community service provides good benefits to increase the knowledge of married women. We hope the participants will want to participate in the VIA held at Prima Nusantara Bukittinggi University.

Keywords: VIA, Cervical Cancer, Screening.

Abstrak

Kanker Serviks adalah Kanker keganasan keempat yang paling sering didiagnosis dan penyebab terbesar kematian pada wanita. Insidens di Indonesia 24 dari setiap 100.000 wanita per tahunnya (kurang lebih 15/100.000 wanita per tahun). Human Papilloma Virus (HPV) adalah penyebab yang memicu perkembangan lesi pra atau invasif 15 - 20 tahun setelah infeksi awal. Diperlukan teknik skrining alternatif yang mudah dilakukan oleh tenaga kesehatan, seperti Inspeksi Visual Asam Asetat (IVA). Tujuannya kegiatan ini untuk menjawab ketidaktahuan dan kepedulian masyarakat seputar pemeriksaan IVA sehingga dapat meningkatkan kemauan dan pengetahuan masyarakat (wanita) untuk memeriksakan kesehatan reproduksinya. Dilakukan oleh dosen Universitas Prima Nusantara Bukittinggi bekerjasama dengan Dinas Kesehatan Kota Bukittinggi dan Kecamatan Mandiangian Koto Selayan dengan kuisioner sebanyak 20 soal sebagai pre-test dan post-test dalam Forum Group Discussion. Pelaksanaannya pada bulan Januari 2021 di Kantor Kecamatan Mandiangin Koto Selayan. Pesertanya adalah wanita yang sudah menikah. Hasilnya mayoritas peserta diperkirakan berusia 36-45 tahun (46%), 18 peserta berpendidikan universitas/perguruan tinggi (36%) dan mayoritas peserta adalah ibu rumah tangga (50%). Ada perbedaan yang signifikan antara pengetahuan sebelum dan sesudah ($nilai-p = 0,000$). Pengabdian kepada masyarakat memberikan manfaat yang baik dalam upaya peningkatan pengetahuan wanita menikah. Rencana tindak lanjut dari kegiatan ini diharapkan para peserta mau mengikuti VIA yang dilaksanakan di Universitas Prima Nusantara Bukittinggi.

Kata Kunci: IVA, Kanker Serviks, Pendidikan Kesehatan.

A. INTRODUCTION

Worldwide, Cervical Cancer (CC) is the fourth most frequently diagnosed malignancy and the fourth greatest cause of cancer death in women, after breast cancer (2.1 million cases), colorectal cancer (0.8 million cases) and lung cancer (0.7 million cases) (Buskwofie et al., 2020). Usually, CC found in countries with middle to low income. The predicted *Global Burden Of Cancer Study* (GLOBOCAN) reported that 342.000 women died from the disease, and 604.000 women were diagnosed with cervical cancer in 2020. Commonly, the age-standardized incidence rate of cervical cancer was estimated to be 13.1/100.000 women, and it varied by country (from less than 2 to 75/100.000 women) (Wilailak et al., 2021).

The World Health Organization (WHO) considers Eastern, Southern, and Middle Africa, Melanesia, and Asia high-risk CC regions (Vu et al., 2018). One of the highest age-standardized incidence and mortality rates for CC in Asia is seen in Indonesia, where it affects about 24 out of every 100.000 women-years (approximately 15/100.000 women-years). In addition, the reported incidence of CC in Indonesia increased from 2012 to 2018 (Robbers et al., 2021). According to the Indonesian Cancer Foundation (ICF), one of the reasons for the high number of cancer cases in Indonesia is environmental conditions that continue to produce carcinogenic substances, such as cigarettes, processed meats and so on. Other causes also affect such as sleep deprivation, lack of exercise and eating too much (Direktorat Jenderal Pelayanan Kesehatan, 2022).

The initiation of coitus at a young age, a history of STDs, having more partners, using contraceptives, a history of smoking, parity, and chronic immunosuppression are risk factors for this cancer (Naz et al., 2018). The cause of CC is the Human Papilloma Virus (HPV), which triggers the development of a pre or invasive lesion 15 to 20 years after the initial infection. Most people are infected soon after starting sexual activity because HPV is mostly transmitted through sexual contact. Skin-to-skin genital contact can potentially spread HPV infection and penetrative sexual activity (Olusola et al., 2019).

The infection of HPV is divided into 10 major histopathologic subtypes of CC: squamous cell carcinoma, adenocarcinoma, clear cell adenocarcinoma, adenosquamous carcinoma, serous carcinoma, glassy cell carcinoma, adenoid basal carcinoma, adenoid cystic carcinoma, undifferentiated carcinoma, and small cell carcinoma. Squamous cell carcinoma, which accounts for 75% of cases, is by far the most prevalent subtype, followed by adenocarcinoma (10–25%). Less than 5% of cases are from other histologic subtypes. The stages of CC start from stage I (I, IA, IA2, IB, IB1, IB2, IB3), stage II (II, IIA, IIA1, IIA2, IIB), stage III (III, IIIA, IIIB, IIIC, IIIC1, IIIC2), and ends in stage IV (IV, IVA, IVB) (Gennigens et al., 2021; Saleh et al., 2020).

Primary prevention through innovative immunization (HPV vaccination) and secondary prevention through cancer screening are urgently needed. As a result of high costs, labour-intensive training requirements for laboratory personnel, and competition across the healthcare setting, cytology-based screening is becoming a challenge to implement in resource-constrained settings. In addition, the shortage of pathologists and cytology technicians made mass Pap smear screening impossible. So, an alternative screening technique is needed that is easily carried out by healthcare, such as Visual Inspection of Acetic Acid (VIA) (Purwoto et al., 2017).

Even when compared to Pap smears, cytology or HPV tests, VIA is an alternative procedure that is acceptable, inexpensive, and safe. After applying acetic acid (common table vinegar) to the cervix, VIA is used to visualize the cervix to discover cervical cancer precursors. Multiple levels of the healthcare context allow for the practice of VIA by health professionals (midwives, nurses, and clinicians). The health professionals will recommend the woman to a more suitable facility for additional treatment if the VIA test results are positive (Azene, 2021; Singh et al., 2021).

Contextual information is readily available and required to modify and deploy evidence-based interventions in settings or populations. Moving clinical interventions down to population and policy-level interventions can depend on contextual information. This health education initiative aims to address the community's ignorance and concern around VIA cervical cancer screening. This initiative is intended to increase the community's (women) willingness and knowledge to assess their reproductive health.

B. METHOD AND IMPLEMENTATION

This is health education conducted by Prima Nusantara Bukittinggi University lecturers collaborated with the Public Health Office in Bukittinggi and Mandiangin Koto Selayan District. The author's involvement is as an educator (health education about VIA as cervical cancer screening). The activities were implemented in January 2021 at the district office of Mandiangin Koto Selayan. The participants are married women as targets of health education.

Forum Group Discussion (FGD) was a method for evaluated the knowledge of the participants. Before the educator explains the theory, the questionnaire is distributed to the participants to be answered (pre-test) and after being given the theory, the questionnaire is given again with the same questions as the previous questionnaire (post-test). The questionnaire consists of 20 questions in the form of multiple choice with a correct answer = 1 score and a wrong answer = 0 score. Mean of pre-test score will be compared with the mean post-test score and the difference will be tested statistically. Mean of pre-test and Mean of post-test expressed means \pm Standard Deviation (SD) and 95% Confidence Intervals (CI).

C. RESULT AND DISCUSSION

Mandiangin Koto Selayan district is one of the districts in Bukittinggi, West Sumatera. The area of Mandiangin Koto Selayan District is 12.156 Km². There are nine sub-districts, namely Pulai Anak Air, Koto Selayan, Garegeh, Manggis Ganting, Campago Ipuh, Puhun Tembok, Puhun Pintu Kabun, Kubu Gulai Bancah, and Campago Guguk Bulek.



Figure 1. Map of the district in Bukittinggi

The activities were attended by 50 women aged 18 - 55 years old. The Pre-test was given before Forum Group Discussion (FGD) started. During, the FGD, the educator explained clearly about cervical cancer and early detection of Cervical Cancer with Visual Inspection Using Acetic Acid (VIA). The existence of questions and answers made the discussion progress better. At the end the discussion, the educator gave post-test and the results obtained were that the average knowledge of the participants was good.

Table 1. Characteristics of participants (N = 50)

Characteristics	n	%
Age (years)		
<25	3	6
26-35	17	34
36-45	23	46
≥46	7	14
Educational Level		
Illiterate	-	-
Primary School	8	16
Junior High School	8	16
Vocational/ Senior High School	16	32
University/ College	18	36
Woman Occupation		
House Wife	25	50
Government	18	36
Private	7	14

Table 1 showed, Majority of participants estimated 36-45 years old (46%), and additional 18 participants were in university/ college educational level (36%). Besides that, majority the participants were house wife (50%).

Table 2. The Mean of knowledge participants

Groups	N	Mean ± SD	Min-Max	p-value
Pre-test	50	9.82 ± 2.32	4-15	0.000*
Post-test	50	17.80 ± 2.88	8-20	

Based on table 2, there were significant difference between the two groups (p -value = 0.000). The results indicate the knowledge increased (mean 9.82 - mean 17.80). Although our study report better result our finding five women between 50 women did not understanding about sign and symptoms of cervical cancer or cervical cancer screening. The educators realize that to increase the knowledge can't provide the health education only once. Cause it's needs to be given repeatedly to knowledge increased.

**Figure 2.** Health Education in Mandiangin Koto Selayan District

The study of Abu et al., in 2020 reported beside health education, with one-to-one health talk, issuing brochures contributed to increasing knowledge about Cervical cancer and VIA. Print Media or audiovisual media also affect knowledge where when someone is continuously exposed to news about cervical cancer or screening, their knowledge will automatically increase.

In the study, most women were in college/ university as their level education. The women who had high in level education can be a contributing factor in knowledge. The level education can change a person's knowledge, attitudes, and practices in receiving information that is seen or heard. According to Kress et al., in 2015 reported that educated women are more confident in themselves and have easier access to medical resources. These could provide an explanation for the rise in screening rates among educated people.

The different argument from Maree & Kampinda-Banda, in 2020 that studies carried out in industrialized nations found no correlation between educational attainment and cervical cancer screening. This could be the case given that those nations have higher literacy rates than emerging nations, where roughly two-thirds of participants only finished elementary and secondary school. In both categories, housewives made up more than half of the population. Because of this, spreading knowledge about cervical cancer screening can actually increase adoption, especially in communities with low educational levels.

CONCLUSION

Community service with health education about Visual Inspection Using Acetic Acid (VIA) provide good benefits in efforts to increase the knowledge of married women as the targets of this activity in Mandiangin Koto Selayan District. The follow up planning for this activity is that's hoped the participants will want to take part for VIA which will be carried out at Prima Nusantara University as a form of the Screening early detection of servical cancer in Bukittinggi.

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