

ARTICLE INFORMATION

Received: October, 29, 2023

Revised: December, 09, 2023

Available online: December, 11, 2023

at : <http://ejournalmalahayati.ac.id/index.php/nursing/index>

Cervical cancer screening utilization among women aged 30-49 years in Lampung, Indonesia

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Abstract

Background: Cervical cancer ranks second with a total of 36,633 cases or 9.2% of the total cancer cases in Indonesia. Cervical cancer patients in Indonesia have reached 23.4 per 100,000 population with an average death rate of 13.9 per 100,000 population.

Purpose: To determine the relationship between perceptions of benefits, threats, and barriers to the interest in undergoing cervical cancer screening using the VIA method in women aged 30-49 years in Gedung Rejo Sakti Tulang Bawang Health Center in 2023.

Method: Using a quantitative analytical method with a cross-sectional design. The total sample size was 70 people. The sampling method used was accidental sampling. Data analysis was performed using the chi-square test and multivariate analysis using multiple logistic regression.

Results: There is a significant relationship between the perception of benefits and the interest in undergoing cervical cancer screening using the VIA method (P-value = 0.000; OR = 0.099), there is a significant relationship between the perception of threats and the interest in undergoing cervical cancer screening using the VIA method (P-value = 0.000; OR = 0.012), there is a significant relationship between the perception of barriers and the interest in undergoing cervical cancer screening using the VIA method (P-value = 0.000; OR = 0.108), the perception of threats is the dominant factor in determining the interest in undergoing cervical cancer screening using the VIA method (P-value = 0.000; OR = 95.782).

Conclusion: All variables (perception of benefits, perception of threats, perception of barriers) are closely related to the interest in undergoing cervical cancer screening using the VIA method.

Suggestion: Health center management should be more active in health promotion to increase the interest in undergoing cervical cancer screening using the VIA method in women aged 30-49 years.

Keywords: Cervical Cancer; Perception; VIA Method.

INTRODUCTION

Cervical cancer is the fourth most common cancer in women, with an estimated 604,000 new cases in 2020. Of the estimated 342,000 deaths due to cervical cancer in 2020, approximately 90% occurred in low- and middle-income countries. The high global mortality rate due to cervical cancer (age-standardized rate among women: 13.3 per 100,000 in 2020) can be reduced with effective interventions at various stages of life (World Health Organization,

2022).

The burden of cancer worldwide is increasing, with 18.1 million new cases and 9.6 million deaths in 2018, where 1 in 5 men and 1 in 6 women worldwide experience cancer, and 1 in 8 men and 1 in 11 women die from cancer. In Indonesia, there were 36.663 cases of cervical cancer, with a death rate of 21.003 (Bray, Ferlay, Soerjomataram, Siegel, Torre, & Jemal, 2018). Cervical cancer ranks second with

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36,633 cases or 9.2% of total cancer cases. Meanwhile, the number of cervical cancer patients in Indonesia has reached 23.4 per 100.000 population with an average death rate of 13.9 per 100.000 population (Putri, 2022).

However, VIA screening coverage in Indonesia is still very low and below the target of 50% (Suwignjo, Hayati, & Irawan, 2021). In its implementation, this method still faces obstacles such as women's reluctance to be examined due to embarrassment. Other reasons include doubts about the importance of screening, lack of knowledge, and fear of pain during the examination. In addition to these issues, inconvenience, doubts about the importance of the examination, fear of facing the examination results, fear of pain during the examination, reluctance to be examined by male doctors or midwives, and lack of family support, especially from husbands, are factors. Many patient-related problems can be addressed through patient education and a good doctor or midwife-patient relationship (Nasution, Sitohang, & Adela, 2018).

The disease process begins with the early stages of carcinogenesis until morphological changes occur and develop into invasive cancer. This disease generally affects women between the ages of 30-50 years (Sawicki, Ruszkowska, Danielewicz, Niedźwiedzka, Arłukowicz, & Przybyłowicz, 2021). Regular cervical cancer screening using the VIA test can reduce the mortality rate in advanced-stage cervical cancer (Citra, & Ismarwati, 2019).

Reproductive-age women who undergo VIA examinations differ in their knowledge, vulnerability perceptions, and threat perceptions of cervical cancer from those who do not undergo VIA examinations (Taghizadeh Asl, Van, Osch, De Vries, Zendehdel, Shams, Zarei, & De Vries, 2020). Barrier perceptions among those who do not undergo VIA examinations are believed to be greater than benefit perceptions. This is related to the knowledge acquired by reproductive-age women. Family and healthcare provider encouragement have a greater influence than social media on undergoing VIA examinations (Apriany, & Martha, 2023).

Perception of threat is an individual's motivation to take preventive or curative action against a disease based on vulnerability and severity. Perception of benefit is the effectiveness of

strategies to reduce the threat of a disease aimed at improving an individual's quality of life. Perception of barriers refers to the negative consequences that arise when taking action, whether physical, psychological, or financial (Nugrahani, Budihastuti, & Pamungkasari, 2017).

Perception of benefit, perception of threat, and perception of barriers are determinants directly related to the behavior of reproductive-age women in early detection of cervical cancer (Byrne-Davis, Turner, Amatya, Ashton, Bull, Chater, & Hart, 2022; Feyisa, & Temesgen, 2019). Perceived benefits are one of the predictors of behavioral change for screening (Miri, Moodi, Sharif-Zadeh, Moghadam, Miri, & Norozi, 2018). Common barriers experienced by individuals in utilizing healthcare services are largely dominated by barriers originating from within themselves. Common reasons for not undergoing screening include emotional barriers such as fear of painful procedures, embarrassment, and fear of test results (Bayu, Berhe, Mulat, & Alemu, 2016; Orang'o, Wachira, Asirwa, Busakhala, Naanyu, Kisuya, & Inui, 2016; Kerrison, Travis, Dobson, Whitaker, Rees, Duffy, & Von Wagner, 2022).

There is a relationship between Reproductive-Age Women's Perceptions of VIA Early Detection of Cervical Cancer Examination Using the Health Belief Model Approach at the Sudiang Raya Health Center in Makassar City (p-value=0.000) (Sudir, 2022). Based on the report from the Lampung Provincial Health Office in 2020, the coverage of early detection of cervical and breast cancer in women aged 30-49 years was highest in West Pesisir Regency at 22.0%, followed by Bandar Lampung City at 17.1%, and Way Kanan at 14.9%. Meanwhile, Tulang Bawang Regency had a coverage of 1.7%, ranking 8th among regencies/cities in 2020 (Health office of Lampung Province, 2021). Based on the indicator achievement, the number of regencies/cities that conducted early detection of cancer among 80% of the female population aged 30-50 years in Lampung Province in 2020 was only 4% of the total population. Therefore, the target of 8 regencies/cities or about 55% for conducting early detection of cancer has not yet been achieved. Based on the results of early detection of cervical and breast cancer examinations in Lampung Province, 131 VIA-positive cases were found in

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2020, along with 58 suspected cancer cases and 228 tumors/lumps, indicating a decrease in VIA-positive cases, suspected cancer cases, and tumor/lump cases compared to the previous year (Ministry of Health of the Republic of Indonesia, 2018).

Based on a preliminary study conducted with the health center staff and 10 reproductive-age women (30-50 years) in Gedong Rejo Sakti Health Center through interviews with VIA program holders, it was found that 6 out of 10 respondents (60%) had not heard of cervical cancer, and 8 out of 10 respondents (80%) were unaware of cervical cancer screening conducted at the Health Center. This is because the spread of information through health promotion about the VIA test is still limited. It is essential to understand the perceptions of reproductive-age women regarding VIA examinations.

METHOD

This research used a quantitative descriptive method. The research design employed a cross-sectional approach, and data analysis included univariate, bivariate, and multivariate analyses. Multivariate analysis used multiple logistic regression analysis to identify factors influencing the interest in undergoing cervical cancer screening using the VIA method.

The research subjects were 70 women aged 30-49 years residing in the Gedong Rejo Sakti Health Center's area. Respondents also met several criteria,

including being married, having physical and mental health, and possessing reading and writing abilities.

In the research, the initial stage involved data collection from respondents regarding their interest (desire) to undergo cervical cancer screening using the VIA method. Subsequently, grouping was carried out, consisting of groups interested and not interested in undergoing cervical cancer screening using the VIA method. Respondent grouping was determined by having each respondent fill out a questionnaire consisting of 10 questions with 4 columns, resulting in a score range of 10 to 40. Next, the mean and median values were determined from the accumulated scores of respondents. The group with scores \leq the mean was categorized as not interested, while the group with scores \geq the mean was categorized as having an interest.

Other variables (perceived benefits, perceived threats, and perceived barriers) were determined by having each respondent fill out a questionnaire consisting of 10 questions with 4 indicator columns, resulting in a score range of 10 to 40. The mean and median values were then determined from the accumulated scores of respondents. The group with a total score \leq the mean was categorized as the negative group, while the group with a total score \geq the mean was categorized as the positive group.

This research has obtained permission and recommendations from the Research Ethics Commission of Malahayati University with ethical clearance certificate no. 3957/EC/KEP-UNIMAL/VIII/2023.

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RESULT

Table 1. Characteristic of Respondents (N=70)

Variable	Result
Age (Mean \pmSD)(Range)(Year)	(40.8 \pm 0.709)(30-49)
30-39	28/40.0
40-49	42/60.0
Education (n/%)	
Elementary School	27/38.6
Junior High School	16/22.9
Senior High School	19/27.1
University	8/11.4
Husband's occupation (n/%)	
Labor	11/15.7
Farmer	23/32.9
Trader	3/4.3
Driver	6/8.6
Self-employed	16/22.9
Employee	4/5.7
Temporary teacher	3/4.3
Civil servant	4/5.7
Cervical cancer screening (n/%)	
Score (Mean \pm SD)(Range)	(36.99 \pm 0.940)
Not interesting to utilize	22/31.8
Interesting to utilize	48/68.6
Perceived Benefits (n/%)	
Score (Mean \pm SD)(Range)	(36.91 \pm 0.775)
Negative	19/27.1
Positive	51/72.9
Perceived Threats (n/%)	
Score (Mean \pm SD)	(34.11 \pm 0.553)
Negative	25/35.7
Positive	45/64.3
Perceived Barriers (n/%)	
Score (Mean \pm SD)	(26.63 \pm 1.206)
Negative	24/34.3
Positive	46/65.7

In Table 1, the description of respondents regarding the age variable shows a mean age of 40.84 with a standard deviation of 0.709, within the age range of 30-49 years. Furthermore, for respondents' educational

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levels, 38.6% had completed elementary school, 27.1% had completed junior high school, 22.9% had completed high school, and 11.4% had a college education. All respondents in this study were Muslim.

Regarding the employment status of respondents' husbands, 15.7% worked as laborers, 32.9% as farmers, 4.3% as traders, 8.6% as drivers, 22.9% were self-employed, 5.7% as employees, 4.3% as contract teachers, and 5.7% as civil servants. As for the variable of respondents' interest in undergoing cervical cancer screening using the VIA method, the data showed a mean of 36.99, with 31.8% showing no interest and 68.6% showing interest.

For the perceived benefits variable with a mean of 36.91, 27.1% had a negative perception of benefits, while 72.9% had a positive perception of benefits. Furthermore, for the perceived threat variable with a mean of 34.11, 35.7% had a negative perception of threat, while 64.3% had a positive perception of threat. Lastly, for the perceived barriers variable with a mean of 26.63, 34.3% had a negative perception of barriers, while 65.7% had a positive perception of barriers.

Table 2. Variables Related to Cervical Cancer Screening

Variables	Cervical Cancer Screening		p-value	OR (CI 95%)
	Not interesting to utilize (n=22)	Interesting to utilize (n=48)		
Perceived Benefits (n/%)				
Negative	13/59.1	6/12.5	0.000	0.099 (0.030-0.330)
Positive	9/40.9	42/87.5		
Perceived Threats (n/%)				
Negative	20/90.9	5/10.4	0.000	0.012 (0.002-0.065)
Positive	2/9.1	43/89.6		
Perceived Barriers (n/%)				
Negative	15/68.2	9/18.8	0.000	0.108 (0.034-0.341)
Positive	7/31.8	39/81.3		

In Table 2, the results of the Chi-Square statistical test show that respondents with a negative perception of benefits and no interest in undergoing the examination are 59.1%, while those with a negative perception of benefits and an interest in undergoing the examination are 12.5%. Additionally, respondents with a positive perception of benefits and no interest in undergoing the examination are 40.9%, while those with a positive perception of benefits and an interest in undergoing the examination are 87.5%. The relationship between the perception of benefits and the interest in undergoing the examination yielded a p-value of 0.000.

Furthermore, respondents with a negative perception of threat and no interest in undergoing the examination are 90.9%, while those with a negative perception of threat and an interest in undergoing the examination are 10.4%. On the other hand, respondents with a positive perception of threat and no interest in undergoing the examination are 9.1%, while those with a positive perception of threat and an interest in undergoing the examination are 89.6%. The relationship between the perception of threat and the interest in undergoing the examination also resulted in a p-value of 0.000.

Next, for respondents with a negative perception of barriers and no interest in undergoing the examination, the percentage is 68.2%, while those with a negative perception of barriers and an interest in undergoing the examination are 18.8%. Meanwhile, respondents with a positive perception of barriers and no interest in undergoing the examination are 31.8%, and those with a positive perception of barriers and an interest in undergoing the examination are 81.3%. The relationship between the perception of barriers and the interest in undergoing the examination also yielded a p-value of 0.000.

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Table 3. Factors Influencing Cervical Cancer Screening

Variables	B	S.E.	Wald	Df	Sig.	Exp(B)
Perceived Benefits	1.913	1.104	3.000	1	.083	6.771
Perceived Threats	4.562	1.177	15.014	1	.000	95.782
Perceived Barriers	2.730	1.183	5.325	1	.021	15.334
Constant	-4.787	1.213	15.568	1	.000	.008

Based on Table 3, it is shown that all the tested variables have an influence on the interest in undergoing cervical cancer screening using the VIA method. It is also indicated that the perception of threat has the most dominant influence compared to the perception of barriers and perceived benefits on the respondents' interest in undergoing cervical cancer screening using the VIA method.

DISCUSSION

The findings from this study reveal that a total of 48 respondents, or 68.6%, have an interest in undergoing cervical cancer screening using the VIA method, while 22 respondents, or 31.8%, are not interested in undergoing cervical cancer screening using the VIA method. With a p-value of 0.000, it indicates a significant relationship between the perceived benefits and the interest in undergoing cervical cancer screening using the VIA method (Rimande-Joel, & Ekenedo, 2019).

This study also shows that the perceived benefits have a likelihood of 0.099 times to undergo cervical cancer screening using the VIA method. Perceived benefits play a reasonably significant role in influencing the respondents' decisions to undergo cervical cancer screening using the VIA method. Respondents with a positive perception of benefits are also more likely to be interested in undergoing cervical cancer screening using the VIA method. These findings align with the Health Belief Model theory, which suggests that when someone is aware of the benefits of early detection, they are more likely to adopt such behavior to prevent illness (Chin, & Mansori, 2019).

Perceived threats with a p-value of 0.000, it indicates a significant relationship between the perceived threat and the interest in undergoing cervical cancer screening using the VIA method. This study also shows that the perceived threat has a likelihood of 0.012 times to undergo cervical cancer screening using the VIA method. The perceived threat also plays an essential role in

influencing the respondents' decisions to undergo cervical cancer screening using the VIA method.

Respondents with a positive perception of threat are also more likely to be interested in undergoing cervical cancer screening using the VIA method (Chisale Maboŋja, Levin, & Kawonga, 2021).

Perceived barriers with a p-value of 0.000, it indicates a significant relationship between the perceived barriers and the interest in undergoing cervical cancer screening using the VIA method. This study also shows that the perceived barriers have a likelihood of 0.108 times to undergo cervical cancer screening using the VIA method. Perceived barriers also play a reasonably important role in influencing the respondents' decisions to undergo cervical cancer screening using the VIA method. Respondents with a positive perception of barriers are also more likely to be interested in undergoing cervical cancer screening using the VIA method.

REFERENCES

- Bayu, H., Berhe, Y., Mulat, A., & Alemu, A. (2016). Cervical cancer screening service uptake and associated factors among age eligible women in Mekelle Zone, Northern Ethiopia, 2015: a community based study using health belief model. *PloS one*, 11(3), e0149908
- Bray, F., Ferlay, J., Soerjomataram, I., Siegel, R. L., Torre, L. A., & Jemal, A. (2018). Global cancer statistics 2018: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers

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- in 185 countries. *CA: a cancer journal for clinicians*, 68(6), 394-424.. <https://doi.org/10.3322/caac.21492>
- Byrne-Davis, L. M., Turner, R. R., Amatya, S., Ashton, C., Bull, E. R., Chater, A. M., & Hart, J. K. (2022). Using behavioural science in public health settings during the COVID-19 pandemic: The experience of public health practitioners and behavioural scientists. *Acta Psychologica*, 224, 103527.
- Chisale Mabotja, M., Levin, J., & Kawonga, M. (2021). Beliefs and perceptions regarding cervical cancer and screening associated with Pap smear uptake in Johannesburg: A cross-sectional study. *PloS one*, 16(2), e0246574.
- Citra, S. A., & Ismarwati, I. (2019). Hubungan Dukungan Petugas Kesehatan Dengan Perilaku Wus (Wanita Usia Subur) Dalam Pemeriksaan VIA. *Midwifery Journal: Jurnal Kebidanan UM. Mataram*, 4(2), 46-52.
- Feyisa, G. C., & Temesgen, H. (2019). Perceived benefits and barriers toward cervical cancer screening among women \geq 15 years in Arsi Zone, Southeastern Ethiopia: application of the health belief model in a community-based cross-sectional study. *Journal of Cancer Research and Practice*, 6(1), 7-17.
- Glanz, K., & Bishop, D. B. (2010). The role of behavioral science theory in development and implementation of public health interventions. *Annual review of public health*, 31, 399-418.
- Health Office of Lampung Province. (2021). Profil Kesehatan Provinsi Lampung Tahun 2020. Accessed by: <https://dinkes.lampungprov.go.id/download/profil-kesehatan-provinsi-lampung-2020-2/>.
- Kerrison, R. S., Travis, E., Dobson, C., Whitaker, K. L., Rees, C. J., Duffy, S. W., & von Wagner, C. (2022). Barriers and facilitators to colonoscopy following fecal immunochemical test screening for colorectal cancer: A key informant interview study. *Patient Education and Counseling*, 105(6), 1652-1662.
- Ministry of Health of the Republic of Indonesia. (2018). Keputusan Menteri Kesehatan Republik Indonesia Nomor HK.01.07/MENKES/349/2018 Tentang Pedoman Nasional Pelayanan Kedokteran Tata Laksana Kanker Serviks. Accessed by: [https://yankes.kemkes.go.id/unduh/fileunduh_1610415049_651524.pdf](https://yankes.kemkes.go.id/unduh/fileunduh/_1610415049_651524.pdf).
- Miri, M. R., Moodi, M., Sharif-Zadeh, G. R., Malaki Moghadam, H., Miri, M., & Norozi, E. (2018). Cognitive predictors of cervical cancer screening's stages of change among sample of Iranian women health volunteers: A path nalysis. *PloS one*, 13(3), e0193638
- Nasution, D. L., Sitohang, N. A., & Adela, C. A. (2018). Deteksi Dini Kanker Servik Pada Wanita Usia Subur Dengan Inspeksi Visual Asam Asetat (VIA Test) Di Klinik Bersalin Kota Medan. *ABDIMAS TALENTA: Jurnal Pengabdian Kepada Masyarakat*, 3(2), 408-415.
- Nugrahani, R. R., Budihastuti, U. R., & Pamungkasari, E. P. (2017). Health belief model on the factors associated with the use of HPV vaccine for the prevention of cervical cancer among women in Kediri, East Java. *Journal of Epidemiology and Public Health*, 2(1), 70-81..
- Orang'o, E. O., Wachira, J., Asirwa, F. C., Busakhala, N., Naanyu, V., Kisuya, J., ... & Inui, T. (2016). Factors associated with uptake of visual inspection with acetic acid (VIA) for cervical cancer screening in Western Kenya. *PloS one*, 11(6), e0157217.
- Putri, G. (2022). Wanita Beresiko Terkena Kanker Serviks. Kementerian Kesehatan Republik Indonesia. https://yankes.kemkes.go.id/view_artikel/389/wanita-beresiko-terkena-kanker-serviks.
- Rimande-Joel, R., & Ekenedo, G. O. (2019). Knowledge, Belief and practice of cervical cancer

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screening and prevention among women of Taraba, North-East Nigeria. *Asian Pacific journal of cancer prevention: APJCP*, 20(11), 3291.

Sawicki, T., Ruszkowska, M., Danielewicz, A., Niedźwiedzka, E., Arłukowicz, T., & Przybyłowicz, K. E. (2021). A review of colorectal cancer in terms of epidemiology, risk factors, development, symptoms and diagnosis. *Cancers*, 13(9), 2025.

Sudir, Y. (2022). Exploration of women at reproductive age (wra) perception towards via examination for cervical cancer early detection using health belief model approach in sudiang raya community health center makassar city (*Doctoral dissertation, Universitas Hasanuddin*).

Suwignjo, P., Hayati, S., & Irawan, E. (2021). Gambaran pemeriksaan VIA test pada wanita usia subur (WUS) di salah satu puskesmas kota bandung. *Jurnal Keperawatan BSI*, 9(2), 301-307.

Taghizadeh Asl, R., Van Osch, L., De Vries, N., Zendehdel, K., Shams, M., Zarei, F., & De Vries, H. (2020). The role of knowledge, risk perceptions, and cues to action among Iranian women concerning cervical cancer and screening: a qualitative exploration. *BMC public health*, 20, 1-12.

World Health Organization. (2022). Cervical cancer. Accessed by: <https://www.who.int/health-topics/cervical-cancer>

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