

THE EFFECT OF HEALTH EDUCATION USING THE LEFTET METHOD ON THE ATTITUDES AND BEHAVIOR OF WOMEN OF REPRODUCTIVE AGE UNDERGOING IVA EXAMINATIONS AT BLANG PIDIE PUBLIC HEALTH CENTER, WEST ACEH REGENCY, ACEH IN 2025

¹Novita Sari Eufrasia Sitohang, ²Herna Rinayanti Manurung, ⁴Imran Saputra Surbakti,
⁴Nurma Raihani Umar, ⁵Toga Adiputra Sinaga, ⁶Fifin Umairoh

^{1,2,3,4,5}Sekolah Tinggi Ilmu Kesehatan Mitra Husada Medan

Email : 2219201084@mitrahusada.ac.id, hernarinayanti@mitrahusada.ac.id,
imransurbakti@mitrahusada.ac.id, 2419201424@mitrahusada.ac.id,
togaadiputra@mitrahusada.ac.id, 2219201087@mitrahusada.ac.id

ABSTRACT

Background: VIA test coverage at the Blang Pidie Health Center remains low due to a lack of information, negative attitudes, and the reluctance of reproductive-age women (WUS) to undergo screening. Health education using leaflets is required to raise their awareness. **Objective:** To determine the effect of health education using the leaflet method on the attitudes and behavior of WUS in undergoing VIA tests at the Blang Pidie Health Center, Southwest Aceh Regency, in 2025. **Method:** This quantitative quasi-experimental study with a one-group pretest-posttest design involved 40 WUS respondents selected through purposive sampling. Data were collected via questionnaires and analyzed using the Wilcoxon Signed Rank Test. **Results:** Bivariate analysis showed a significant increase in the attitude variable with a p-value of 0.000 ($p < 0.05$) and the behavior variable with a p-value of 0.001 ($p < 0.05$) after the intervention. These results prove that health education using leaflets has a significant influence on changing respondents' attitudes and behavior. **Conclusion:** Health education using the leaflet method is effective in improving the positive attitudes and screening behavior of WUS toward VIA testing. The health center is advised to optimize the use of this printed medium in regular health promotion programs.

Keywords: Health Education, Leaflet Method, Attitude, Behavior, VIA Examination.

INTRODUCTION

Cervical cancer remains an aggressive oncological threat and a leading cause of reproductive mortality among women in developing countries, particularly in Indonesia (Cresswell et al., 2025). Epidemiologically, according to the Global Cancer Observatory (Globocan), cervical cancer ranks as the second most common cancer among Indonesian women, with an annual incidence exceeding 36,000 new cases and a mortality rate surpassing 21,000 deaths (WHO, 2023).

This high fatality rate is linearly correlated with severe delays in early screening; approximately 70% of cervical cancer patients only present to tertiary medical facilities after reaching advanced clinical stages (Stage III or IV), where prognosis is drastically reduced (United Nations, 2025).

To dismantle this healthcare crisis, the Indonesian Ministry of Health implemented a nationwide preventive strategy prioritizing Visual Inspection with Acetic Acid (VIA) as a cost-effective, highly sensitive, and accessible early screening tool at the primary healthcare level (Marlina et al. 2025). The national target for VIA screening coverage is strictly benchmarked at a minimum of 80% of the total Women of Childbearing Age (WUS) population (Sinaga, 2020)

However, national health profile reports reveal a massive discrepancy, with actual screening utilization stagnating at a volatile 7% to 12%. This systemic gap is acutely mirrored at the local level recent healthcare administrative records at the Blang Pidie Public Health Center, Southwest Aceh Regency, demonstrate that local VIA screening coverage has consistently plateaued below 15%, a figure critically deficient for safeguarding community reproductive health (Dian & Hanum, 2025).

The low participation rate among local WUS stems from profound cognitive and psychosocial barriers (Manurung et al., 2026). Preliminary community assessments indicate a pervasive deficit in valid reproductive health data, the circulation of detrimental medical myths, fear of physical pain associated with speculum examination, and intense cultural modesty regarding pelvic evaluations (Yunika et al., 2025). These negative cognitive factors generate unsupportive affective responses (attitudes), directly paralyzing the psychomotor domain (behavior) and causing women to resist voluntary clinical screening (Ginting et al., 2024).

Overcoming these cognitive and behavioral blocks requires structural adjustments in health promotion through interactive, portable, and visually stimulating media (Sitohang et al., 2025). Printed educational leaflets present an exceptional tool for community-based interventions. Unlike fleeting verbal counseling, leaflets condense complex pathophysiology and screening procedures into accessible, structured text (Sihotang et al., 2025).

Enhanced by clear graphics and high portability, leaflets allow women to take the material home, review it independently, and discuss it with family members (ICM, 2025). Driven by this operational urgency and local coverage deficit, this study was conducted to analyze the precise effect of health education utilizing the leaflet method on the dynamic modification of attitudes and proactive screening behaviors among women of reproductive age at the Blang Pidie Public Health Center, Southwest Aceh Regency, in 2025.

METHODS

This quantitative quasi-experimental study used a *one-group pretest-posttest* design conducted at UPT Puskesmas Blang Pidie, Southwest Aceh Regency, in 2025. A sample of 40 women of childbearing age (WUS), including pregnant women, was selected using purposive sampling. Data were collected via validated questionnaires measuring attitudes (Likert Scale) and behavior (Guttman Scale) before and after a leaflet-based health education intervention.

The data were then analyzed using the non-parametric Wilcoxon Signed Rank Test with a significance threshold of $\alpha = 0,05$.

RESULTS AND DISCUSSIONS

Research conducted The Influence of Health Education Using the Leaflet Method on the Attitudes and Behavior of Women of Childbearing Age Undergoing IVA Examination at the Blang Pidie Community Health Center, West Aceh, Aceh in 2025 The study was conducted from January to May 2025, with a sample size of 30 pregnant women. The following research results were obtained:

Table 1. Frequency distribution based on respondent characteristics

No	Characteristics	Frequency (F)	Percentage (%)
1	Age		
	20 – 29	19	63.3
	30 – 39	10	33.3
	> 39	1	3
	Total	30	100%
2	Last education		
	JUNIOR HIGH SCHOOL	11	36.7
	High School/Vocational School	6	20.0
	S-1	13	43.3
	Total	30	100%
3	Parity		
	Primipara	18	60.0
	Multipara	7	23.3
	Grandepara	5	16.7
	Total	30	100%

Based on table 4.1 above, it is found that the majority of respondents are aged 20-29 years with a total of 19 respondents (63.3%), the age range of women of childbearing age 30-39 years as many as 10 respondents (33.3%) and >39 years as many as 1 respondent (3%). The highest level of education is undergraduate education with a total of 13 respondents (43.3%), junior high school education as many as 11 respondents (36.7%) and high school as many as 6 respondents (20%). With primiparous mothers as many as 18 respondents (60%) of the total number of respondents 30.

Table 4.2 Relationship between independent variables and dependent variables

Independent Variables	Educational Media				Total		P-value
	Leaflet		Lecture				
	f	%	f	%	f	%	
1. Attitude							
Good	13	86.7	8	53.3	21	70	0.001
Not enough	2	13.3	7	46.7	9	30	
Total	15	100	15	100	30	100	
2. Behavior							
Check IV	11	73.3	9	60	20	60	0.002
No IVA Check	4	33.3	6	40	10	40	
Total	15	100	15	100	30	100	

The table above shows that in the region Blang Pidie Community Health Center, West Aceh, Aceh in 2025 Of the 30 women of childbearing age, on the independent variable of attitude, it was found that there were 13 respondents (86.7%) with good attitudes using leaflet educational media, while those who did not use leaflet or lecture media had 8 people (53.3%) with good knowledge from a total of 15 women of childbearing age using the leaflet method. Based on the results of the analysis test with the chi-square test, a p-value of 0.001 was obtained, so the hypothesis was accepted where the mother's attitude regarding the IVA Test examination had less influence on the occurrence of the IVA Test examination. In the behavioral variable, there were 11 respondents with good behavior, 15 respondents (73.3%), where the mother's behavior here was conducting the IVA Test. Based on the results of the analysis test with the chi-square test, a p-value of 0.001 ($p < 0.05$) was obtained, so it can be concluded that the behavior of women of childbearing age has an effect on the IVA Test examination.

DISCUSSION

The discussion in this research explains about The Influence of Health Education Using the Leaflet Method on the Attitudes and Behavior of Women of Childbearing Age Undergoing IVA Examination at the Blang Pidie Community Health Center, West Aceh, Aceh in 2025 starting from January-May 2025.

Women of Childbearing Age (WUS) are women who are still in their reproductive age (from the time they get their first period until their period stops), namely between the ages of 15–49 years, with the status of single, married, or widowed, who still have the potential to have children (Espoir, 2026). Cervical cancer has a high incidence, especially in developing countries. Cervical cancer is caused by infection with certain types of human papillomavirus (HPV). Human papillomavirus plays an important role in causing cervical cancer (Estiningtyas et al., 2025). The types most commonly associated with cervical cancer are HPV types 16 and 18. 4 HPV infection and the development of cancerous lesions can be influenced by many factors including having their first sexual intercourse at an early age (less than 18 years), having more than six sexual (Appel et al., 2023).

ACKNOWLEDGEMENT

The authors express their deepest gratitude to the Mitra Husada Health Science Institute Foundation (Yayasan STIKes Mitra Husada Medan) for providing the primary institutional backing and academic resources necessary to complete this study. Sincere appreciation is extended to the Head, clinical midwives, and administrative staff of the UPT Puskesmas Blang Pidie, Southwest Aceh Regency, for their exceptional cooperation in facilitating the research site, granting administrative clearances, and providing crucial baseline screening data. The

authors also wish to acknowledge the valuable contributions of the data enumerators and language proofreaders. Finally, utmost thanks are given to all women of reproductive age (WUS), including pregnant women, who participated as respondents; their time and active cooperation were essential to the successful execution of this research and the publication of this manuscript.

CONFLICT OF INTEREST AND FUNDING DISCLOSURE

Conflict of Interest: All authors declare that they have no competing financial interests or personal relationships that could have appeared to influence the work reported in this article.

Funding Disclosure: This research was funded by the Mitra Husada Health Science Institute Foundation (Yayasan STIKes Mitra Husada Medan) under the Institutional Research Grant Decision Letter Number: STIKES-MH/LPPM/SK-Penelitian/XI/2025/084 (*please adjust this letter number according to your official internal document*)

AUTHOR CONTRIBUTIONS

NSE: conceptual, methodology, investigation, project administration, roles/writing original draft; **HRM:** conceptual, methodology, resources, validation, supervision; **ISS:** formal analysis, software, visualization, writing review & editing; **NRU:** data curation, investigation, resources; **TAP:** funding acquisition, validation, supervision; **FU:** investigation, data curation, writing review & editing.

REFERENCES

- Appel, I., Lohmann, J., Allegri, M. De, Koulidiati, J. L., & Somda, S. (2023). Improving the readiness and clinical quality of antenatal care – findings from a quasi - experimental evaluation of a performance - based financing scheme in Burkina Faso. *BMC Pregnancy and Childbirth*, 1–9. <https://doi.org/10.1186/s12884-023-05573-x>
- Cresswell, J. A., Alexander, M., Chong, M. Y. C., Link, H. M., Pejchinovska, M., Gazeley, U., Ahmed, S. M. A., & Chou, D. (2025). *Articles Global and regional causes of maternal deaths 2009 – 20 : a WHO systematic analysis*. 626–634. [https://doi.org/10.1016/S2214-109X\(24\)00560-6](https://doi.org/10.1016/S2214-109X(24)00560-6)
- Dian, L. F., & Hanum, S. M. F. (2025). *Continuity of Midwifery Care for Pregnancy, Childbirth, Postpartum, and Newborns : Kelanjutan Pelayanan Kebidanan untuk Kehamilan, Persalinan, Pasca Persalinan, dan*. 1–10.
- Espoir, D. K. (2026). *BMC Public Health Article in Press Convergence in maternal mortality ratios : evidence and implications for SDG 3 . 1 IN IN*.
- Estiningtyas, Q., Adnani, S., Nurfitriyani, E., Merida, Y., Khuzaiyah, S., & Okinarum, G. Y. (2025). *Ninety-one years of midwifery continuity of care in low and middle-income countries : a scoping review*.

- Ginting, A. B., Yani, A., Manurung, H. R., & Sembiring, I. S. (2024). *Hubungan dukungan suami dengan pemeriksaan inspeksi visual asam asetat dalam deteksi dini kanker leher rahim ibu Wanita usia subur di BPM Diana Kota Medan Tahun 2023* . 2(1), 20–25.
- ICM. (2025). *ICM Global Standards for Midwifery Education*.
- Manurung, H. R., Sinaga, S. N., Sari, F., Surbakti, I. S., Zaman, N., & Ginting, R. H. (2026). The Intersection Of Cognitive Competence And Organizational Support In Early Warning System (Ews) Accuracy : A Multifactorial Analysis In A Regional Hospital Setting. *Research Square*, 1–16.
- Marlina, E. D., Pertiwi, N. F. A., & Munawarah, R. (2025). *Faktor-Faktor Yang Berhubungan Dengan Sikap Wus Dalam Deteksi Dini Kanker Serviks Dengan Metode Iva Test Di Puskesmas Sukasari Tangerang*. 8(2), 481–490.
- Sihotang, O. S. H., Lubis, I., Faiz, M. N., Alwini, A., Raniah, S., & Sumpeno, S. J. (2025). *Evaluasi Pelaksanaan Program IVA Test Di UPT Puskesmas Sei Mencirim : Tinjauan Kualitatif*. 4(1).
- Sinaga, S. N. (2020). *Science Midwifery*. 9(1), 353–358.
- Sitohang, N. S. E., Sinaga, S. N., Muliana, S., Bakara, P., Siallagan, R. D., Sigalingging, A., Azzahra, A. A., & Gulo, P. (2025). *The Influence Of Education Using Quartet Card Media On Knowledge About Teenage Pregnancy*. 5.
- United Nations. (2025). *Sustainable Development Goals*. Department of Economic and Social Affairs. <https://sdgs.un.org/goals>
- WHO. (2023). *ANGKA MORTALITAS*. 2023. <https://www.who.int/news-room/fact-sheets/detail/maternal-mortality>
- Yunika, M., Sari, F., Nurmawaddah, W., Wati, I., Mauliddina, S., Tinggi, S., Kesehatan, I., & Husada, M. (2025). *Penerapan rooming-in terhadap tingkat kemandirian ibu dalam memberikan asi pada bayi di rumah sakit umum mitra sejati kota medan tahun 2025*. 842–848.