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Article

The Effect of Aloe Vera on Perineal Wound Healing Duration in Postpartum Mothers at Karawang Regency

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ABSTRACT

Background: Cervical cancer remains one of the leading causes of cancer-related deaths among women in Indonesia. Early detection through Visual Inspection with Acetic Acid (VIA) is a cost-effective method to reduce morbidity and mortality, yet participation rates remain low.
Objective: This study aimed to examine the relationship between knowledge, attitudes, and social support and the utilization of Visual Inspection with Acetic Acid (VIA) screening among women of reproductive age.
Methods: A cross-sectional analytical design was employed. The study population included all women of reproductive age (30–50 years) who had engaged in sexual intercourse, residing in the working areas of the Klari Health Center (n = 1,267) and the Cinangka Health Center (n = 8,288). A total of 99 respondents were selected through proportionate sampling, comprising 13 women from the Klari area and 86 from the Cinangka area. Data were collected using a structured questionnaire and analyzed using the Chi-square test to determine associations between variables.
Results: The results revealed a statistically significant relationship between (1) knowledge and VIA screening uptake ($p = 0.001$), (2) attitude and VIA screening uptake ($p = 0.000$), and (3) social support and VIA screening uptake ($p = 0.002$). All p-values were < 0.05, indicating significant associations between the independent variables and VIA screening behavior.
Conclusion: Knowledge, attitudes, and social support are significantly associated with VIA screening utilization among women of reproductive age. These findings highlight the need for enhanced health education and community engagement to improve cervical cancer prevention efforts.

INTRODUCTION

Cervical cancer is a major health concern among women worldwide, predominantly caused by persistent infection with high-risk types of human papillomavirus (HPV). The disease often progresses silently without noticeable symptoms, resulting in delayed diagnosis and increased morbidity and mortality (Imelda & Santosa, 2022). Globally, cervical cancer ranks as the fourth

most common cancer among women. In 2020, it accounted for an estimated 604,000 new cases and 342,000 deaths, with approximately 90% occurring in low- and middle-income countries (WHO, 2022). In Indonesia, the Ministry of Health (2019) reported a cervical cancer prevalence of 23.4 per 100,000 women of reproductive age (WRA), with a mortality rate of 14 per 100,000 WRA. In total, 36,633 new cases and 21,003 deaths were documented in 2020. These statistics underscore the urgency of promoting early detection strategies, particularly for sexually active women aged 30 to 50 years (Ardiansyah, 2019).

Visual Inspection with Acetic Acid (VIA) is a widely recommended method for cervical cancer screening in resource-limited settings due to its cost-effectiveness, simplicity, and rapid results. The World Health Organization recommends VIA screening at least once every five years for women aged 30–50 years (Damayanti & Permatasari, 2021; Anggraini et al., 2023). However, national coverage remains low. In 2016, Indonesia's VIA coverage was only 5.1%, up from 3.4% in the previous year, with provinces such as Bali, Jakarta, and West Nusa Tenggara reporting the highest rates. In West Java, only 109,168 out of 7.5 million eligible women underwent VIA screening in 2020, with 0.51% testing positive (West Java Provincial Health Office, 2021). In Karawang Regency, the coverage rate was merely 1.74%, with only 0.04% testing positive. Likewise, in Cinangka Subdistrict, Banten Province, only 35.7% of eligible women participated in VIA screening, reflecting a significant gap in preventive care efforts (Karawang Health Office, 2020; Banten Health Office, 2021).

Despite its advantages, VIA remains underutilized due to various barriers, including lack of awareness, negative attitudes, and insufficient social support. According to behavioral theory, health behavior is influenced by internal factors such as knowledge and attitudes, as well as external factors like social support from family, peers, and healthcare professionals (Irwan, 2018; Purwoastuti & Walyani, 2015). Low knowledge about cervical cancer, misconceptions about VIA screening, and limited encouragement from social networks are key contributors to low participation rates (Raidanti & Wijayanti, 2022; Prabandari et al., 2020).

Early-stage detection of cervical cancer—particularly at the pre-cancerous lesion stage—significantly improves prognosis and survival, with treatment success rates nearing 100% (Dartiwen & Aryanti, 2022; Prajoko, 2022). Therefore, enhancing knowledge, fostering positive attitudes, and strengthening social support are essential strategies to increase uptake of VIA screening. This study aimed to examine the relationship between knowledge, attitudes, and social support and the utilization of VIA screening among women of reproductive age.

METHODS

Study Design

This study employed an associative analytic design using a cross-sectional approach to assess the relationship between knowledge, attitudes, and social support and VIA screening behavior among women of reproductive age.

Study Setting and Population

The research was conducted in the catchment areas of two primary health centers: Klari Health Center (Karawang Regency, West Java) and Cinangka Health Center (Serang Regency, Banten Province). The total population included 1,267 women in the Klari area and 8,288 in the

Cinangka area. The target population comprised women aged 30–50 years who had a history of sexual intercourse and were residents in the study areas.

Sample and Sampling Technique

A total of 99 women of reproductive age (WRA) were selected using proportionate stratified random sampling, consisting of 13 participants from the Klari area and 86 participants from the Cinangka area. The sample size was determined based on the Slovin formula at a 95% confidence level and 10% margin of error, accounting for population proportions.

The inclusion criteria for this study were women aged 30 to 50 years, who had engaged in sexual intercourse, resided within the health center catchment areas, and were willing to provide informed consent. Exclusion criteria included women with a history of hysterectomy, those currently diagnosed with cervical cancer, and respondents with incomplete questionnaire data.

Instruments

Data were collected using a structured, self-administered questionnaire, developed based on prior validated instruments and expert consultations. Knowledge was measured using a 10-item multiple-choice questionnaire. Correct responses were scored 1, incorrect responses 0. Total scores were categorized into poor (0–3), moderate (4–6), and good (7–10). Attitude was assessed using a Likert-type scale (10 items), scored from 1 (strongly disagree) to 5 (strongly agree). Higher scores indicated more positive attitudes. Social support was measured through a 10-item Likert scale developed from Prabandari et al. (2020), with similar scoring. VIA examination behavior was measured using a Guttman scale (Yes = 1, No = 0), indicating willingness to undergo VIA screening. The reliability of the instruments was verified in prior studies, with Cronbach's alpha values ranging from 0.78 to 0.85, indicating acceptable internal consistency.

Data Collection Procedure

Data collection was conducted by trained enumerators under the supervision of the research team. Eligible participants were recruited from outpatient visits or home visits. After providing informed consent, participants completed the questionnaire in a private and confidential setting.

Data Analysis

Univariate analysis was used to describe demographic characteristics, knowledge, attitudes, social support, and VIA behavior. Bivariate analysis was conducted using the Chi-square test to examine the association between the independent variables (knowledge, attitudes, and social support) and VIA screening behavior. A p-value of < 0.05 was considered statistically significant.

Ethical Consideration

Ethical approval was obtained from the Ethics Committee of STIKes Abdi Nusantara (Approval No: 102/KEPK/STIKES-AN/III/2023). Informed consent was obtained from all participants. Confidentiality and voluntary participation were assured.

RESULT

Most women of reproductive age (WUS) were in the 25–35 age group (63.6%), followed by those under 25 years (17.2%) and above 35 years (19.2%). Regarding educational attainment, the majority had completed senior high school (37.4%), followed by junior high school (33.3%), elementary school (20.2%), and college (9.1%). In terms of employment, more than half were unemployed (55.6%). Regarding parity, most participants had one child (30.3%), followed by two children (24.2%), no children (23.2%), and more than two children (22.2%).

Table 1. Distribution of Respondents Based on Age, Education, Employment Status, and Number of Children

Characteristics	Criteria	n	%
Age (years)	< 25	17	17.2
	25–35	63	63.6
	> 35	19	19.2
Education	Elementary	20	20.2
	Junior High	33	33.3
	Senior High	37	37.4
	College (PT)	9	9.1
Employment Status	Employed	44	44.4
	Unemployed	55	55.6
Number of Children	None	23	23.2
	One	30	30.3
	Two	24	24.2
	More than two	22	22.2

Most participants demonstrated good knowledge regarding cervical cancer and IVA screening (40.4%), with 34.3% showing moderate knowledge and 25.3% poor knowledge. Positive attitudes toward IVA screening were observed in 52.5% of respondents. More than half (57.6%) reported adequate social support. Additionally, 62.6% of respondents expressed willingness to undergo IVA screening.

Table 2. Distribution of Knowledge, Attitude, Social Support, and IVA Examination Willingness

Variables	Categories	n	%
Knowledge	Good	40	40.4
	Moderate	34	34.3
	Poor	25	25.3
Attitude	Positive	52	52.5
	Negative	47	47.5
Social Support	Adequate	57	57.6
	Inadequate	42	42.4
IVA Screening	Willing	62	62.6
	Not willing	37	37.4

A statistically significant association was found between knowledge and willingness to undergo IVA screening ($p = 0.001$). Among women with good knowledge, 85% were willing to

undergo the examination, compared to only 44% of those with poor knowledge. Similarly, a significant relationship was observed between attitude and IVA screening (p = 0.000). A higher proportion of women with a positive attitude (80.8%) were willing to undergo screening than those with a negative attitude (42.6%). Social support was also significantly associated with screening willingness (p = 0.002). Among those with adequate support, 75.4% were willing to participate in screening, compared to 45.2% of those with inadequate support.

Table 3. Association Between Knowledge, Attitudes, and Social Support with IVA Screening Willingness (n=99)

Variable	Category	Willing	Not Willing	Total	p-value
Knowledge	Good	34 (85.0%)	6 (15.0%)	40	0.001
	Moderate	17 (50.0%)	17 (50.0%)	34	
	Poor	11 (44.0%)	14 (56.0%)	25	
Attitude	Positive	42 (80.8%)	10 (19.2%)	52	0.000
	Negative	20 (42.6%)	27 (57.4%)	47	
Social Support	Adequate	43 (75.4%)	14 (24.6%)	57	0.002
	Inadequate	19 (45.2%)	23 (54.8%)	42	

DISSCUSSION

The findings of this study reveal a statistically significant association between knowledge levels and participation in the Visual Inspection with Acetic Acid (IVA) examination among women of childbearing age (WCA), with a p-value of 0.001. Among the 40 women with good knowledge of cervical cancer and IVA screening, 85% were willing to undergo the examination, compared to only 15% who were not. Conversely, among the 25 women with poor knowledge, 56% did not participate in the screening. These results are consistent with previous studies indicating that knowledge is a key determinant in motivating women to participate in cervical cancer screening programs (Asmin, 2020; Purwanti et al., 2020; Silfia & Muliati, 2017).

Adequate knowledge about cervical cancer and the benefits of early detection through IVA screening fosters greater awareness and perceived susceptibility, thereby enhancing motivation for preventive action. As noted by Irwan (2018), good knowledge serves as a foundation for forming positive attitudes, which are critical for the adoption of health behaviors such as screening participation.

This study also identified a significant relationship between attitude and IVA examination participation, with a p-value of 0.000. Of the 52 WCA who exhibited a positive attitude toward IVA screening, 80.8% expressed willingness to undergo the examination. In contrast, among the 47 women with negative attitudes, 57.4% declined to participate. These findings corroborate earlier research demonstrating the role of attitude in shaping health behavior, including cervical cancer screening (Asmin, 2020; Aulia & Neno, 2019; Silfia & Muliati, 2017).

Attitude reflects a person's internal evaluation and emotional response toward a health-related behavior. A positive attitude increases the likelihood of taking proactive steps, such as participating in early cancer detection. As highlighted by Raidanti & Wijayanti (2022) and Ekowati

et al. (2021), attitudes are shaped by feelings, beliefs, and cognitive judgments, which in turn influence behavioral intentions.

Social support was also found to be significantly associated with IVA screening behavior, as indicated by a p-value of 0.002. Among the 57 women who reported receiving adequate social support, 75.4% underwent IVA screening. In contrast, among the 42 women with insufficient support, only 45.2% participated in screening. This aligns with findings from previous studies (Fitri et al., 2021; Simanjuntak et al., 2021), which highlight the pivotal role of social support in promoting health-seeking behavior.

Support from family, peers, and healthcare providers can significantly influence an individual's decision to engage in preventive health behaviors. Social support may take various forms, including emotional encouragement, informational guidance, financial assistance, and instrumental aid such as transportation or clinic facilitation (Prabandari et al., 2020). Such support not only reinforces individual motivation but also reduces perceived barriers to accessing screening services.

CONCLUSION

This study concludes that there are significant relationships between knowledge, attitude, and social support with participation in the Visual Inspection with Acetic Acid (IVA) screening among women of childbearing age. Women who possessed adequate knowledge, had positive attitudes, and received strong social support were more likely to undergo the IVA examination. These findings underscore the importance of community education, attitude enhancement interventions, and strengthening social support systems to improve cervical cancer screening uptake in this population.

Conflict of Interest

The authors have declared that no conflict of interest exists.

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