

Literature Review: Factor Associated with Visual Inspection with Acetic Acid Screening among Women of Childbearing Age

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| Article Info                                                                              | Abstract                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
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| Article History<br>Submitted, 2026-04-29<br>Accepted, 2026-05-18<br>Published, 2026-06-30 | Cervical cancer is a malignancy originating from the cervix. In Indonesia, the number of cervical cancer patients ranks second highest after breast cancer, with a high mortality rate. To reduce this mortality rate, early detection is performed on women of childbearing age using the Visual Inspection with Acetic Acid method. However, the participation rate for Visual Inspection with Acetic Acid testing remains low. The method used in this study is a Systematic Literature Review (SLR) derived from two databases: Google Scholar and Semantic Scholar. The selected articles were in English or Indonesian, accessible in full text, and published between 2020 and 2024. Out of 15 identified articles, 7 met the criteria. The results of this study show that four articles mention individual factors such as good knowledge, attitude, and motivation influence participation in Visual Inspection with Acetic Acid testing, while three articles mention that health service and social factors, specifically counseling and decision-making support, are also required for participation. The findings indicate that factors related to Visual Inspection with Acetic Acid testing include individual, social, and health service factors. Visual Inspection with Acetic Acid testing is influenced by interrelated multidimensional factors. Therefore, comprehensive interventions are needed through increased health education, strengthening family support (especially from husbands), and improving the access and quality of health services to increase the coverage of Visual Inspection with Acetic Acid testing among women of childbearing age. |
| Keywords: Visual Inspection with Acetic Acid, Cervical Cancer, Women of Childbearing Age  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

Introduction

Cervical cancer is one of the leading causes of death among women in developing countries. According to the World Health Organization (2025), nearly 12% of new cancer cases in women are diagnosed globally, with approximately 85% occurring in low- and middle-income populations. In 2018, it was estimated that 570,000 women suffered from cervical cancer and around 311,000 women died from the disease (HPV Centre, 2018). Meanwhile, in 2020, there were 604,000 women diagnosed with cervical cancer and 342,000 deaths caused by the disease (World Health Organization, 2025). In Indonesia, cervical cancer ranks second as the most common malignancy among women, following breast cancer. The recorded incidence reached 36,633 cases, representing approximately 9.2% of the total national cancer burden. Despite the high disease burden, the coverage of early cervical cancer detection using the Visual Inspection with Acetic Acid method among the target population of middle-aged women (30–50 years) remains very low. Data from the Ministry of Health (2021) showed that only 6.83% of the total target population underwent screening, with extreme regional variations, such as South Sumatra, which recorded a coverage rate of 20.9%, still far below the ideal target (Kementerian Kesehatan RI, 2022) (Handayani, 2022). Problems related to women’s reproductive health are becoming increasingly complex, including malignant diseases such as cervical cancer and breast cancer, HIV/AIDS infections, cases of violence

against women, and family planning issues that for many years have primarily targeted women. Field phenomena show that only a small number of women visit healthcare providers to undertake promotive or preventive efforts. In addition, there is limited information regarding how women of reproductive age maintain their health and prevent diseases (Klevina & Villasari, 2022). Based on this background, this study is important to comprehensively and simultaneously analyze which predisposing factors most dominantly influence the participation of women of childbearing age in undergoing Visual Inspection with Acetic Acid examinations. The results of this analysis are expected to provide evidence-based recommendations for Community Health Centers (Puskesmas) in formulating more effective and focused intervention strategies to improve the coverage of early cervical cancer detection. In line with these findings, the authors are interested in reviewing the factors associated with Visual Inspection with Acetic Acid examinations among women of reproductive age.

Methods

This study employed a literature review method with a systematic approach to identify, evaluate, and synthesize research findings related to factors associated with Visual Inspection with Acetic Acid examinations among women of childbearing age. The literature search process was conducted through several databases covering publications from 2020–2025, resulting in 15 articles. The keywords used in the literature search included: “Visual Inspection with Acetic Acid,” “women of childbearing age,” “Visual Inspection with Acetic Acid screening,” “cervical cancer screening,” and “factors associated.” The search was carried out using the databases Google Scholar and Semantic Scholar.

The selected articles were adjusted according to the inclusion and exclusion criteria. The inclusion criteria were articles written in Indonesian or English, accessible in full-text PDF format, and published between 2020 and 2025. The exclusion criteria included articles written in languages other than Indonesian and English, articles without accessible full-text PDF versions, and secondary articles such as review papers. The search results identified 15 articles, of which 7 articles in Indonesian and English met the criteria and were accessible in full-text PDF format.

The framework used in this study was PICO (Population, Intervention, Comparison, Outcome). The study sample consisted of women of childbearing age undergoing Visual Inspection with Acetic Acid examinations. Furthermore, the selected articles were reviewed, systematically organized, compared with one another, and discussed in relation to other relevant literature to generate appropriate findings.

Results and Discussion

The literature review was conducted on 7 articles published between 2020 and 2025. The results of the journal analysis are presented in Table 1 below:

| Table 1. Article Research |                                                                                                                                                         |                |                        |      |                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|------------------------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| No                        | Research Title                                                                                                                                          | Author(s)      |                        | Year | Method                                                                                                                                                                                         | Results                                                                                                                                                                                                                                                                        |
| 1                         | The Relationship Between Knowledge of Women of Childbearing Age Regarding Cervical Cancer and Visual Inspection with Acetic Acid Testing in Ciumbuleuit | Fifi Wiryadi,  | Citra Fitria Handayani | 2021 | Correlation analysis study using a Cross-Sectional approach on 272 Women of Childbearing Age. Data collected via questionnaires. Chi-square test used for analysis.                            | Chi-square test result was 0.000, indicating a significant relationship between knowledge and Visual Inspection with Acetic Acid screening participation. High knowledge correlates with higher participation.                                                                 |
| 2                         | Level of Knowledge About Cervical Cancer and Visual Inspection with Acetic Acid Testing Among Women of Childbearing Age                                 | Lina Nuryawati | Siti                   | 2020 | Quantitative research with a cross-sectional design at UPTD Puskesmas Waringin. Sample of 90 Women of Childbearing Age (1:1 case-control ratio). Analysis used chi-square and Odds Ratio (OR). | Women of Childbearing Age with low knowledge were more likely (24.4%) not to undergo Visual Inspection with Acetic Acid testing compared to those who did (6.7%). There is a significant relationship between knowledge levels and Visual Inspection with Acetic Acid testing. |

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| 3 | Factors Associated with Early Detection of Cervical Cancer in Married Women of Childbearing Age at Sikumana Health Center                            | Vita Louhenapessy, et al.         | F. 2025 | Analytical survey with a cross-sectional approach. Data collected from Dec 2024 to Jan 2025 using validated questionnaires. Univariate and bivariate analysis (Chi-Square). | P-value = 0.000, showing a significant relationship. Prevalence Ratio (PR) = 2.02, meaning those with low knowledge are 2.02 times more likely to avoid Visual Inspection with Acetic Acid tests. Knowledge, attitude, husband support, and health promotion roles all correlate with screening rates. |
| 4 | Relationship Between Motivation and Attitude Toward Early Detection of Cervical Cancer Using Visual Inspection with Acetic Acid Test                 | Sri Herniyati, et al.             | 2023    | Analytical research with a cross-sectional design at TPMB Bidan Herni. Sample of 95 WUS using accidental sampling. Analyzed using secondary data and checklists.            | Significant relationship between motivation and early detection (p=0.000) and between attitude and early detection (p=0.002). 66.3% of respondents with positive attitudes underwent screening.                                                                                                        |
| 5 | Relationship Between Knowledge and Family Support with the Attitude of Women of Childbearing Age Toward Visual Inspection with Acetic Acid Screening | Sondang Sidabutar, et al.         | 2025    | Quantitative research with an analytical survey and cross-sectional approach. Sample of 96 Women of Childbearing Age at Singosari Health Center (Lemeshow formula).         | Knowledge did not significantly correlate with attitude (p=0.058). However, family support had a very strong relationship with attitude (p=0.000). The main barrier is not lack of information, but lack of family support.                                                                            |
| 6 | Factors Associated with the Utilization of Visual Inspection with Acetic Acid Screening Among Women of Childbearing Age                              | Vania Alda Nabilah, et al.        | 2024    | Cross-sectional study with 143 respondents (Purposive Sampling). Variables: education, knowledge, access, health worker support, and husband support.                       | 81.8% of respondents never used Visual Inspection with Acetic Acid screening. Education, information access, and health worker support were significantly linked to Visual Inspection with Acetic Acid utilization. Knowledge and husband support were not significant in this specific study.         |
| 7 | The Effect of Husband's Support on WUS's Interest in Early Detection of Cervical Cancer via Visual Inspection with Acetic Acid Test                  | Legina Anggraeni, Dinni Randayani | 2023    | Quantitative approach with a cross-sectional design. Sample of 50 people using purposive sampling. Data collected via questionnaires in East Jakarta.                       | Husband's support significantly influences the interest of Women of Childbearing Age to undergo cervical cancer screening via Visual Inspection with Acetic Acid tests (p-value 0.001).                                                                                                                |

Based on the literature review of the seven research articles, it was found that the participation of Women of Childbearing Age in Visual Inspection with Acetic Acid screening is influenced by a complex interaction between internal and external factors. Broadly, these factors can be categorized into three main dimensions: individual factors, social factors, and health service factors.

**Individual Factors: Knowledge, Attitude, and Motivation**

The majority of the research in this study indicates that knowledge is the primary foundation for health decision-making. Studies by (Wiryadi & Handayani, n.d.)and (Lina Siti Nuryawati, 2020) consistently state a significant relationship between knowledge levels and Visual Inspection with Acetic Acid screening participation. Women with good knowledge tend

to better understand the risks of cervical cancer and the benefits of early detection. Correspondingly, (Bidang et al., n.d.) found that respondents with low knowledge have a 2.02 times higher risk of not undergoing an Visual Inspection with Acetic Acid test compared to those with good knowledge.

However, an interesting finding emerged in the study by (Sidabutar et al., 2025), which stated that high knowledge does not always automatically result in a supportive attitude or readiness to be screened ( $p=0.058$ ). This is reinforced by (Herniyati et al., n.d.), who emphasized that motivation ( $p=0.000$ ) and attitude ( $p=0.002$ ) play more crucial psychological roles. This means that simply "knowing" is not enough; a woman requires internal drive and positive perception to actually undergo the examination.

### **Social Factors: The Role of Husband and Family Support**

External support, especially from husbands and family, was identified as a very powerful determinant. Research by (Anggraeni & Lubis, 2022) shows that husband support significantly influences the interest of Women of Childbearing Age ( $p=0.001$ ). In the Indonesian social context, husbands often serve as the primary decision-makers in the household. The findings of (Sidabutar et al., 2025) confirm that family support has a very strong relationship with the wife's attitude ( $p=0.000$ ). Without a husband's support, women tend to be reluctant to undergo screening even if they know the benefits. This suggests that cervical cancer education interventions should not only target women but must also involve husbands.

### **Health Service Factors and Information Access**

Access to information and the role of health workers serve as vital enabling factors. Nabilah et al. (2024) found that support from health officials and ease of access to information are significantly associated with the utilization of Visual Inspection with Acetic Acid services. The presence of health workers in providing counseling and assistance can bridge the information gap in the community. This aligns with the results of Louhenapessy et al. (2025), which highlight that the role of health promotion personnel contributes to increasing early detection rates within the working area of community health centers.

### **Conclusion and Recommendations**

Based on the literature review of 7 journals published between 2020 and 2025, it can be concluded that Visual Inspection with Acetic Acid screening among women of childbearing age is influenced by various multidimensional and interrelated factors. screening among women of childbearing age is influenced by the interaction of individual, social, and health service factors. Therefore, a comprehensive approach is required to improve Visual Inspection with Acetic Acid screening coverage as an effort for early cervical cancer detection. Suggestion For Women It is recommended to undergo an Visual Inspection with Acetic Acid test at least once a year, Strong support from husbands and families is essential to encourage women to perform the Visual Inspection with Acetic Acid test. For Health Workers: Health professionals, especially midwives, should increase the dissemination of information regarding Visual Inspection with Acetic Acid tests through counseling, education, and various media platforms to improve screening coverage.

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