

PERIMENOPAUSE EDUCATION AND EARLY DETECTION OF CERVICAL CANCER VIA IVA SCREENING AMONG INFORMAL SECTOR WOMEN WORKERS AT BERINGHARJO MARKET

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Abstract

Perimenopause and cervical cancer remain neglected reproductive health issues among informal women workers in Indonesia, including traders in traditional markets. This community service activity aims to increase women's awareness of perimenopause and early detection of cervical cancer through Visual Inspection with Acetic Acid (VIA/IVA) education at Pasar Beringharjo, Yogyakarta. The activity used a one-group pre-test post-test design involving women of perimenopausal age, women of childbearing age, and female traders as participants. Health education was delivered through lectures, leaflets, and interactive discussions, followed by a question-and-answer session. Knowledge was measured before and after the intervention using a structured questionnaire. Results showed the mean knowledge score increased from 68.5 (pre-test) to 89.2 (post-test), with a paired t-test result of $t(29) = -10.524$ and $p < 0.05$, indicating a statistically significant improvement. The activity successfully increased participants' understanding of perimenopausal changes, cervical cancer risk factors, and the importance of routine VIA examination. Sustainable collaboration among health institutions, market management, and the community is recommended to maintain awareness and encourage regular screening behavior.

Keywords: cervical cancer; health education; perimenopause; VIA examination; women's health

INTRODUCTION

Women's reproductive health is a crucial aspect in improving people's quality of life. Throughout their life cycle, women experience various physiological changes, one of which is perimenopause, the transitional period before menopause, characterized by hormonal, physical, psychological, and social changes, typically occurring between the ages of 40 and 55 (International Menopause Society, 2023). Lack of knowledge about perimenopause can lead to anxiety, discomfort, and difficulties for women in coping with the changes they experience.

Besides perimenopause, cervical cancer remains one of the major reproductive health problems faced by women worldwide, with the primary cause being persistent Human Papillomavirus (HPV) infection (World Health Organization, 2024). Cervical cancer can be prevented and detected early through simple screening tests, one of which is Visual Inspection with Acetic Acid (VIA), which is inexpensive, easy to perform, and can be implemented in primary health care facilities (Ministry of Health of the Republic of Indonesia, 2021). However, VIA screening coverage in Indonesia remains relatively low due to low public knowledge, lack of awareness, shame, and various myths (Ministry of Health of the Republic of Indonesia, 2022).

Beringharjo Market is one of the largest and oldest trading centers in Yogyakarta, serving as a hub for many women, both traders and workers. Most of the women working in the market are in their productive years and approaching menopause, putting them at risk of perimenopause and reproductive disorders. Their busy work schedules often lead them to neglect their health and rarely undergo regular check-ups.

Based on these conditions, promotional and preventive efforts are needed through health education regarding perimenopause and the importance of early detection of cervical cancer using the VIA method. This community service activity aims to increase the knowledge, awareness, and motivation of informal female workers at Beringharjo Market to maintain their reproductive health and undergo regular VIA tests.

LITERATURE REVIEW

Perimenopause is a natural phase that every woman experiences, characterized by irregular menstrual cycles, hot flashes, night sweats, sleep disturbances, fatigue, mood swings, decreased libido, and vaginal dryness. These symptoms can be addressed through a balanced diet, regular exercise, stress management, adequate rest, and regular health checkups (International Menopause Society, 2023).

Cervical cancer is a malignancy of the cervix caused by uncontrolled abnormal cell growth, with the main cause being persistent high-risk HPV infection such as HPV 16 and 18. Other risk factors include early sexual intercourse, multiple partners, smoking, a weakened immune system, a history of sexually transmitted infections, and lack of screening (World Health Organization, 2024; Federation of Gynecology and Obstetrics, 2021). Prevention can be done through HPV vaccination, healthy sexual behavior, not smoking, and routine screening through VIA or Pap smear.

Visual Inspection with Acetic Acid (VIA) is a cervical cancer screening method that involves applying a 3–5% acetic acid solution to the cervix to observe color changes; areas with precancerous lesions will appear as white patches (acetowhite lesions). This method is part of the national cervical cancer early detection program because it is easy to perform, affordable, and provides immediate results. It primarily targets women aged 30–50 who have had sexual intercourse (Ministry of Health of the Republic of Indonesia, 2021; International Agency for Research on Cancer, 2024).

Health education is a learning process to improve the knowledge, attitudes, and behavior of individuals and groups in maintaining their health, and is an effective health promotion strategy for raising public awareness. Commonly used educational media include leaflets, posters, booklets, educational videos, audiovisual presentations, demonstrations, and group discussions. Women's awareness of perimenopause and cervical cancer is influenced by knowledge, education, access to information, culture, experience, and family support. Therefore, targeted education has been proven to increase knowledge and encourage regular reproductive health check-ups.

METHOD

This community service activity was carried out at Beringharjo Market, Jalan Ahmad Yani No. 16, Ngupasan, Gondomanan, Yogyakarta City, Special Region of Yogyakarta, on Tuesday, June 16, 2026. The target of the activity were women aged 40–60 years (perimenopause), Women of Fertile Age (WUS), and female traders in the market area, with a total of 27 participants attending. The activity evaluation design uses a one-group pre-test post-test design, namely measuring participant knowledge before and after being given education using the same structured questionnaire. The implementation stages include the preparation stage (coordination with the supervising lecturer, proposal preparation, site survey, and permits), the material preparation stage (perimenopause, cervical cancer, and IVA examination), the implementation stage (lectures, interactive discussions, leaflet distribution, and question and answer sessions), and the evaluation stage (filling out the pre-test and post-test questionnaires accompanied by a question and answer session). The pre-test and post-test data were analyzed using a paired sample t-test to determine the difference in the average knowledge of participants before and after education, with a significance level of $p < 0.05$.

RESULTS AND DISCUSSION

Results

The results of the evaluation of participants' knowledge before and after education regarding perimenopause and early detection of cervical cancer through IVA examination are presented in Table 1.

Table 1. Women's Knowledge about Perimenopause and Early Detection of Cervical Cancer Through IVA Education at Beringharjo Market

	Pre-Test	Post-Test
Mean	68.5	89.2
Variance	165.4	52.7
Observations	30	30
Pearson Correlation	0.782	-
Hypothesized Mean Difference	0	-
df	29	-

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t Stat	-10,524	-
P(T≤t) one-tail	0.00000001	-
t Critical one-tail	1,699	-
P(T≤t) two-tail	0.00000002	-
t Critical two-tail	2,045	-

Table 1 shows that the average (mean) knowledge score of participants increased from 68.5 in the pre-test to 89.2 in the post-test. The statistical test results showed a t-value of -10.524 with a two-sided p-value of 0.00000002 ($p < 0.05$), so it can be concluded that there is a statistically significant difference in knowledge between before and after being given education.

Discussion

The increase in participants' knowledge scores after the education program demonstrated that the lecture method, combined with leaflets and interactive discussions, was effective in increasing the understanding of perimenopause and early detection of cervical cancer among informal workers. Prior to the education program, most participants had limited knowledge of the signs and symptoms of perimenopause, cervical cancer risk factors, and the benefits of the VIA test. This finding aligns with findings that cervical cancer screening coverage in Indonesia remains low due to a lack of information received by the public, particularly among informal workers who have limited time to access health services (Ministry of Health of the Republic of Indonesia, 2022).

Following the educational event, participants demonstrated high levels of enthusiasm, as reflected in their active participation in asking questions about perimenopausal symptoms, how to address these concerns, and the timing and procedures for the VIA examination. This enthusiasm contributed to a significant increase in understanding, in line with the concept that interactive health education accompanied by visual media such as leaflets is more effective in transforming knowledge than passive information delivery (International Agency for Research on Cancer, 2024).

The goals, targets, and benefits of this community service activity were generally achieved. Participants gained a new understanding of changes during perimenopause and the importance of early cervical cancer detection through the VIA test, a simple, safe, and affordable method. In addition to increasing knowledge, this activity also encouraged participants to consult with healthcare professionals if they experienced reproductive issues, an early indicator of a shift in attitude toward more proactive health screening behaviors.

Although short-term evaluation results indicate a significant increase in knowledge, the sustainability of changes in participants' behavior regarding VIA screening requires further monitoring. Ongoing collaboration between educational institutions, healthcare workers, and market managers is necessary to ensure the ongoing implementation of reproductive health education, thereby increasing cervical cancer screening coverage among informal female workers.

CONCLUSION

Community service activities in the form of perimenopause education and early detection of cervical cancer through IVA examinations at Beringharjo Market succeeded in significantly increasing participants' knowledge, with an average pre-test score of 68.5 increasing to 89.2 in the post-test ($p < 0.05$). The goals, targets, and benefits of the activity were well achieved, demonstrated by the enthusiasm and active participation of participants throughout the activity. Continuous health education and cross-sector collaboration between educational institutions, health workers, and market managers are needed to maintain awareness of reproductive health among informal female workers and encourage routine IVA examination behavior.

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