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Empowering Women of Reproductive Age (WUS) through Implementation of the 'AYU CARE' Model in Independent Early Breast Cancer Screening at Puskesmas Rambah

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ABSTRACT

Breast health promotion in primary care requires cadres who are able to convey warning signs, support breast awareness, and connect women with health workers. This community service activity involved 23 female cadres in Rambah Tengah Utara, Rokan Hulu, in July 2026. The series of activities included participant registration, distribution of breast-health leaflets, interactive education, visual demonstration, guided breast self-examination (BSE) practice, use of supporting digital media, mentoring, discussion, and a final evaluation. Evaluation was carried out through questions and answers, facilitator observation of practice, and participant feedback. The activity report recorded improved understanding, self-efficacy, practical skills, and independence in performing breast self-examination, along with active cadre participation and strengthened coordination with primary-care workers. Outputs of the activity included reusable educational media, strengthened cadre roles, and a follow-up plan through periodic education, reminders, monitoring, and referral. The source document did not contain verifiable quantitative pre-post scores, so the results are presented descriptively.

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INTRODUCTION

Breast cancer remains a women's health problem with a high burden of cases and deaths. In resource-limited countries, the challenge lies not only in the availability of therapy, but also in delays in recognizing changes, seeking help, obtaining examinations, and completing referrals (Bray et al., 2024; Hutajulu et al., 2022). Studies in Indonesia show that barriers in knowledge, access, and continuity of care contribute to delayed diagnosis, while social characteristics and access to services also influence breast cancer screening practices (Icanervilia et al., 2023; Setyawan et al., 2023; Solikhah et al., 2021). For this reason, community education needs to be consistently linked to the ability to recognize changes and the decision to seek professional examination.

Breast self-examination education activities are valuable primarily as a means of building awareness of breast changes and shaping help-seeking behavior, not as a substitute for clinical examination or diagnosis. Various community-based interventions show that structured education,

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practice, and self-efficacy support can improve women's knowledge and skills (Agide et al., 2025; Kucheki et al., 2024). In the Rokan Hulu context, previous breast self-examination (BSE) counseling was reported to improve the knowledge of women of reproductive age (Handayani et al., 2019). More recent local findings also show that mobile-device-based visual-tactile learning can improve BSE knowledge among women of reproductive age (Wahyuny et al., 2025).

Health cadres hold a strategic position because they interact directly with families, integrated health posts (posyandu), and women's groups. Experience with early-detection education for women of reproductive age at Posyandu Floren, Rokan Hulu, shows that community service networks can be an effective space for strengthening women's health knowledge (Khoirunnisa et al., 2024). Community service activities that empower women of reproductive age as peer educators through counseling, discussion, and BSE practice also show that women can be prepared as education drivers for their peer groups (Hanriko et al., 2022). On this basis, this activity positions cadres not only as recipients of material, but as companions, reminders, and connectors of health information at the community level.

The partner context reinforces the need for a cadre-based approach. The Health Profile of Puskesmas Rambah records a working area of approximately 396.6 km², covering 13 villages and 1 urban ward. In 2024, the working area's population was recorded at 54,583 people, including 27,119 women (UPTD Puskesmas Rambah, 2024). The geographic spread and the large female population make cadre strengthening relevant for expanding the reach of promotional messages and supporting continuity of communication between the community and primary health services.

The focus of this article is the process of strengthening cadres through breast-awareness education combined with hands-on practice and digital media support. The activity's objectives were to describe the implementation of cadre-based education, identify field barriers, document the function of learning media, strengthen the role of peer educators, and formulate follow-up needs and referral pathways in primary care. The discussion is limited to the community service activity and its implementation outcomes in the community.

METHOD

This community service activity used a Participatory Action Research approach combined with community empowerment. Implementation took place in July 2026 in Rambah Tengah Utara Village, within the working area of UPTD Puskesmas Rambah, Rokan Hulu Regency. The target participants were 23 women aged 20-49 years serving as village health cadres. The activity documentation records that all participants took part in the full series of education, practice, mentoring, and evaluation. This article reports only the month of implementation without a specific date, because the source documents contain several date records that are not fully consistent.

Implementation began with coordination and preparation of the target participants and media. In the core session, participants received leaflets on breast cancer and early detection, education on risk factors, signs and symptoms, and the timing and steps of BSE. The education continued with guided demonstration and practice, use of supporting digital media, mentoring, interactive discussion, and a question-and-answer session. After the activity, participants were directed to practice independently, maintain periodic reminders, and contact health workers if they found breast changes that required further assessment.

The service activity's media consisted of breast cancer early-detection leaflets, visual materials, digital media usage guides, presentation devices, and supporting practice materials. Digital media was used as a means of reinforcing messages and reminders following direct explanation. The use of media was not intended as a diagnostic tool; any concerning findings were still directed toward consultation with health workers.

Evaluation was carried out on the process and immediate outcomes of the activity. The process was assessed through the implementation of the activity sequence, cadre attendance and participation, discussion, and media use. Immediate outcomes were assessed through questions and answers, facilitator observation of BSE practice, participant feedback, and implementation records. The service activity report states that there were improvements in participants' knowledge, self-efficacy, skills, and independence. Because the source document does not include verifiable

individual pre-test and post-test scores, this article does not present numerical values or statistical tests.

Table 1. Stages of Community Service Implementation and the Role of Cadres

Stage	Main activity	Cadre's role	Immediate output
Preparation and registration	Partner coordination, data collection, attendance, leaflet distribution, and activity briefing	Taking part in registration and voicing initial needs	Participant and media readiness
Health education	Risk factors, signs/symptoms, the importance of early detection, and the timing and principles of BSE	Actively asking questions and clarifying information	Understanding of core health messages
Demonstration	Facilitator demonstrates the examination steps visually and step by step	Observing the sequence and technique demonstrated	A practice example that can be replicated
Guided practice	Participants practice with facilitator guidance and correction	Practicing the steps and receiving feedback	Strengthened skills and confidence
Media support	Leaflets, visual materials, and digital media used to reinforce the message	Reviewing the material and using reminders	Materials remain accessible after the session
Evaluation and follow-up	Questions and answers, practice observation, reflection, and explanation of consultation/referral	Sharing understanding, difficulties, and plans for independent practice	Activity outcome records and follow-up plan

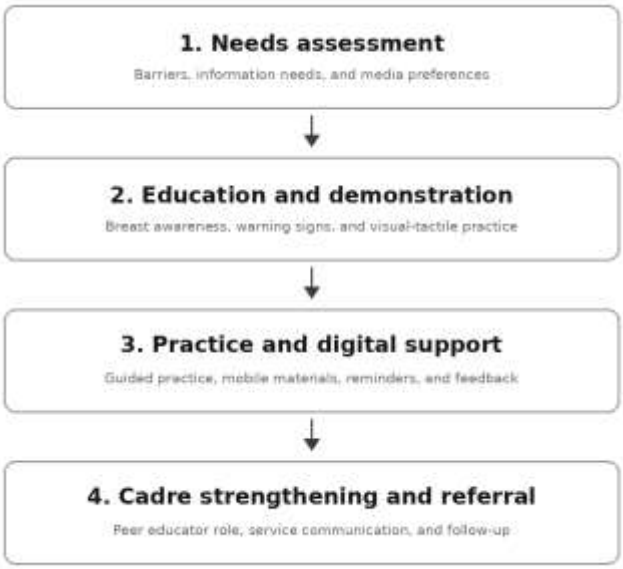

Figure 1. General flow of cadre-based breast-awareness education implementation

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RESULTS AND DISCUSSION

Implementation and Adaptation of the Activity

All 23 cadres recorded in the activity documentation took part in the full service activity. The implementation report states that the counseling and initial use of supporting digital media were carried out well. Participants took part in leaflet distribution, health education, demonstration, practice, mentoring, discussion, and evaluation. Field documentation shows the involvement of cadres, village cadre coordinators, facilitators, and accompanying students throughout the session.

Barriers recorded in the activity report included initial knowledge and awareness that still needed strengthening, participants' limited time, feelings of shyness or low confidence when practicing BSE, and limited monitoring after the activity. These were addressed through repeated explanation, mentoring by facilitators and cadres, interactive discussion, and the provision of media that could be reused outside face-to-face sessions.

Field documentation in the service activity report shows the coordination process with cadre coordinators, participant involvement in groups, delivery of breast-health education, and the participation of midwifery students as activity mentors. Photographs were used as documentation of the service process and as evidence of partner involvement.

Figure 2. Documentation of the service activity: (a) coordination with cadre coordinators; (b) participating cadres; (c) delivery of breast-health education; and (d) involvement of cadres and midwifery students. Source: activity documentation, July 2026

Digital Media Support in Education

Supporting media were used to reinforce the messages that had been delivered directly. Leaflets containing information on breast cancer and early detection were distributed to participants, while visual materials and digital media helped reinforce the information. The activity report states that the initial use of supporting media was carried out well. The function of the media was positioned to support education and serve as a reminder, while BSE skills were still acquired through demonstration and guided practice.

The use of print and digital media in this service activity supported a repeated learning pattern, in which participants received explanations, watched demonstrations, practiced the steps, and then

took educational materials home for further review. This approach is consistent with the use of a booklet to improve BSE skills among health cadres (Sumiyati et al., 2024) and community education combining health material with direct demonstration (Cathryne et al., 2024). In terms of technology implementation, previous service activities in Rokan Hulu showed that digital platforms can be used to expand access to materials and support repeated learning (Yanto et al., 2020). The development of Android-based learning media by Zulkarnain and Yanto (2022) also showed that visual-interactive material can be packaged on mobile devices to make it more accessible. In the context of breast health, the use of mobile-based visual-tactile learning in Rokan Hulu showed consistent benefits for strengthening BSE knowledge (Wahyuny et al., 2025).

Figure 3. Breast cancer early-detection education leaflet used as supporting media for the activity. Source: activity documentation, July 2026

Strengthening the Cadre's Role and the Follow-up Pathway

An important change in the activity design is the cadre's position as a follow-up actor, not merely a recipient of material. After the session, the roles emphasized included conveying breast-awareness messages at community activities, helping women access materials, reminding them of periodic practice, and directing consultation when concerning changes are found. This approach extends the reach of education from the individuals present at the session to the network of women who interact with the cadres. Strengthening the cadre's function as a link between the community and primary care is also consistent with experiences of cadre empowerment in the context of community health services in Indonesia (Susanti et al., 2025).

The continuity plan formulated includes reminders through digital media, group communication, embedding material into posyandu activities or health-promotion events, and contact with a midwife or puskesmas nurse for consultation. Cadres are not directed to determine a diagnosis. The core message continues to emphasize that new, persistent, or concerning breast changes require professional examination. This principle is consistent with a resource-stratified early-detection approach that links community education with clinical examination and diagnostic capacity (Ginsburg et al., 2020).

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Outputs, Sustainability, and Limitations

Table 2. Summary of Service Activity Outcomes and Follow-up

Aspect	Documented outcome	Follow-up
Implementation	23 cadres took part in the activity; education, practice, mentoring, media use, and evaluation were all carried out	Periodic implementation through health-promotion and cadre activities
Knowledge	The activity report records improved understanding of risk factors, signs/symptoms, and the importance of early detection	Reinforcement of material through leaflets and repeated education
Self-efficacy	Participants were reported to be more confident in practicing BSE after mentoring	Periodic mentoring and reminders by cadres/health workers
Skills	Facilitator observation records improved BSE practice ability after demonstration and practice	Repeated practice and supervision in subsequent activities
Independence	The report records increased independence in performing BSE and readiness to seek care if an abnormality is found	Monitoring of independent practice and strengthening of consultation/referral pathways
Outputs	Leaflets, educational media, documentation, activity reports, and partnerships with primary care are available	Reuse of media and integration into community activities
Barriers	Limited time, shyness/low confidence, varied initial knowledge, and limited follow-up monitoring	Sustained education, cadre mentoring, monitoring, and routine evaluation

Based on the activity report, the immediate results of the service activity include improved knowledge, self-efficacy, skills, and independence of participants in performing BSE, as well as the availability of educational media and strengthened partnerships among the university, cadres, and health services. The recorded outcome is a strengthening of early-detection behavior through more routine and independent BSE practice, along with increased awareness of seeking health services when an abnormality is found. Because these results are not accompanied by verified numerical scores in the source document, the article reports them as descriptive outcomes of the activity, not as statistical effect estimates.

Limitations of the activity include a target population drawn from only one village, limited face-to-face time, the absence of a comparison group, and the unavailability of medium-term follow-up data. In addition, the source document does not contain individual pre-test and post-test scores that can be verified for publication. Therefore, the results of improved knowledge, self-efficacy, skills, and independence are maintained as descriptive findings based on field evaluation and the activity report.

CONCLUSION

The community service activity for 23 female cadres in Rambah Tengah Utara was carried out through breast-health education, leaflet distribution, demonstration, guided BSE practice, use of supporting media, mentoring, discussion, and evaluation. The activity report records improved understanding, self-efficacy, skills, and independence among participants, as well as the establishment of media support and partnerships with primary care.

Sustaining the activity requires periodic education, strengthening the cadre's role as a companion, use of educational media, monitoring of independent practice, and a clear consultation pathway with health workers. Barriers such as limited time, shyness or low confidence, and limited monitoring need attention in future activities. Further evaluation should use verified quantitative data and a longer follow-up period so that changes in outcomes can be assessed more robustly.

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Use of Artificial Intelligence (AI) Technology

AI-based tools were used in a limited capacity to assist with language editing and manuscript formatting. The substance of the activity, the data, the interpretation, and the final decisions remain the responsibility of the authors. Activity photographs and educational media in the article are drawn from the service documentation available in the activity report and were not created or manipulated using artificial intelligence.

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