

## STRENGTHENING KNOWLEDGE ON REPRODUCTIVE HEALTH AND BREAST CANCER PREVENTION

Nur Hayati<sup>1\*</sup>, Najmi Hafizhah Ananta Nur<sup>2</sup>

<sup>1</sup>Department of Radiology, Universitas Muhammadiyah Yogyakarta, Indonesia

<sup>2</sup>Medical Study Program, Universitas Muhammadiyah Yogyakarta, Yogyakarta  
[nur.hayati@umy.ac.id](mailto:nur.hayati@umy.ac.id)

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### ABSTRACT

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**Abstrak:** Kanker payudara merupakan salah satu masalah kesehatan yang memerlukan perhatian serius karena prevalensinya yang terus meningkat serta pentingnya deteksi dini untuk mencegah keterlambatan diagnosis. Kegiatan pengabdian ini dilaksanakan untuk meningkatkan pengetahuan dan kesadaran tentang kesehatan reproduksi serta deteksi dini kanker payudara pada 48 guru dan tenaga kependidikan perempuan di SD Unggulan 'Aisyiyah Bantul. Mitra dalam kegiatan ini adalah Majelis Kesehatan Pimpinan Daerah (PDA) 'Aisyiyah Bantul. Metode yang digunakan berupa penyuluhan, diskusi interaktif, dan evaluasi pre-test dan post-test sebanyak 10 soal untuk mengukur peningkatan pengetahuan. Evaluasi menunjukkan peningkatan pengetahuan peserta dari 46% pada pre-test menjadi 54% pada post-test, yang menunjukkan peningkatan hard skill sebesar 8 poin persentase. Selain itu, diskusi interaktif memperlihatkan peningkatan soft skill peserta dalam komunikasi dan kesadaran kesehatan. Hasil ini menunjukkan bahwa kegiatan pengabdian berhasil meningkatkan pemahaman dan kesiapan peserta untuk melakukan deteksi dini kanker payudara serta menyebarluaskan informasi kepada masyarakat sekitar. Program ini diharapkan dapat diperluas dan diterapkan pada komunitas perempuan lainnya.

**Kata Kunci:** Kesehatan Reproduksi; Deteksi Dini; Kanker Payudara; Konseling.

***Abstract:** Breast cancer is a significant health concern that requires serious attention due to its increasing prevalence and the critical importance of early detection in preventing delayed diagnosis. This community service activity aimed to improve knowledge and awareness of reproductive health and early breast cancer detection among 48 female teachers and educational staff at SD Unggulan 'Aisyiyah Bantul. The partner in this activity was the Regional Leadership Health Council (PDA) 'Aisyiyah Bantul. The methods used included counseling, interactive discussions, and pre-test and post-test evaluations. A total of 10 questions were administered to measure knowledge improvement. Evaluation results showed an increase in participants' knowledge from 46% in the pre-test to 54% in the post-test, indicating an 8-percentage point improvement in hard skills. Additionally, interactive discussions improved participants' soft skills, including communication and health awareness. These results demonstrate that the activity successfully enhanced participants' understanding and readiness to conduct early breast cancer detection and spread the information to the surrounding community. The program is expected to be expanded and applied to other women's communities.*

***Keywords:** Reproductive Health; Early Detection; Breast Cancer; Counseling.*



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## A. INTRODUCTION

Reproductive health is an essential part of women's overall health. It is vital for maintaining women's overall health because it is related to quality of life, productivity, and the prevention of various diseases, including reproductive organ cancers (Irwanti, & Chairiyah, 2024). One of the women's health problems that remains a significant challenge is breast cancer, which to date is the type of cancer with the highest prevalence in women in Indonesia (Qurrotaayun et al., 2025). The risk of breast cancer is known to be closely related to reproductive factors, such as age at menarche, age at first birth, use of hormonal contraception, and breastfeeding practices (Ling & Hang, 2026). Therefore, strengthening the understanding of reproductive health is an essential step in promotive and preventive efforts, especially to increase awareness of early detection of breast cancer in women in the community (Oktaria et al., 2025).

Nationally, the burden of breast cancer remains high and has a significant impact on women's health (Ulya & Realita, 2026). A study entitled "Breast Cancer in Indonesia in 2022: 30 Years of Marching in Place," stated that breast cancer is the most prevalent type of cancer in Indonesia. Based on data collected from several referral centers and major hospitals in Indonesia, the proportion of breast cancer cases reached approximately 19.2 % of all reported cancer cases. This indicates that breast cancer is a very significant health problem in Indonesia, with a significant impact on women (Gautama, 2022). In the Special Region of Yogyakarta, the rising number of cancer cases indicates that this problem requires greater attention. This is based on previous research data showing that breast cancer is a growing problem in the Yogyakarta region, with a continuously increasing incidence and a tendency for diagnosis at an older age (Id et al., 2023). This condition demonstrates the importance of community-based interventions that can reach women more widely by strengthening health literacy.

The partner in this community service activity is the Bantul Aisyiyah Regional Leadership Health Council (PDA), which has excellent potential as a strategic partner in community empowerment in the health sector. Aisyiyah Cadres at the community level play an important role as agents of education and health for women. However, based on identification beginning together partners devotion, still there is several problems with partners, namely: (1) knowledge cadre about health reproduction and factors risk cancer breast Still Not yet evenly distributed; (2) skills cadre in convey education health to public Still limited; (3) availability of media and materials simple, structured, and easy education used Still less; and (4) access public to service screening such as breast ultrasound and mammography Still limited, especially in rural areas. The problem is the impact of not yet having an optimally defined role in pushing early detection of breast cancer at the community level.

Various research results and community service have previously shown that health-based education and health-based cadres are effective in

increasing public knowledge, attitudes, and awareness to prevent disease (Faizah et al., 2026; Kusuma et al., 2026; Rosalina et al., 2025). This is proven to be more effective because cadres understand the local public's social, cultural, and linguistic context, so the message of health is more easily accepted and practiced (Andini & Sopiatus, 2025). In the context of detecting early breast cancer, the capacity of the enhancement cadre contributes to increasing public understanding about the risk factors, early warning signs, and the importance of breast cancer inspection in a periodic manner. This shows that strengthening the capacity of the Aisyiyah cadre is appropriate and grounded in proven solutions. The answer needs improvement in literacy, health, and reproductive health for women in Bantul.

Besides being supported by empirical evidence, these activities are also aligned with the direction of policy development in health, which emphasizes strengthening efforts to promote and prevent health through community empowerment. Approach empowerment cadre health is a relevant strategy in controlling non-contagious diseases, including cancer, because it can expand the range of education to the family and community levels. Activities that also support the achievement of Sustainable Development Goal (SDG) 3, mainly targets 3.4 regarding the decline in death and disease consequences from infectious diseases through prevention and early treatment, and 3.1 regarding strengthening health for women. Thus, the community service program has its own strong foundation, good on the side of evidence and science, as well as direction in policy health.

Based on the problems stated, the team devoted to offering a solution in the form of an educational program, health promotion, early detection of breast cancer, and breast surgery, performed in a structured, participant- and data-driven manner. Activities will be implemented at SDU 'Aisyiyah Bantul with the teacher and staff, targeting educated women who serve as cadre Aisyiyah. Educational materials are designed for ease of understanding and applicability and can be used by cadres in activity extension in their respective environments. Approach: This is expected not only to increase participants' individual knowledge but also to strengthen the cadre's capacity as a driving force for literacy and health among women in the community.

Objectives of the activity: devotion to the public. This is to increase the knowledge, awareness, and capacity of the Aisyiyah cadre in Bantul Regency to understand reproductive health in women, as well as to provide education on early cancer detection to society. In general, special activities are expected to strengthen the role of the cadre as agents promotive-preventive, expand the dissemination of health information, and encourage the early detection of cancer in women at the community level. Thus, this program is expected to contribute to improving women's health and to the empowerment efforts to prevent contagious diseases in the Bantul area.

## B. METHODOLOGY

This community service activity was implemented using an educational-participatory approach, positioning participants as active subjects in the learning process through material delivery, discussion, and reflection on field experiences. Lecturer activities in this program included counseling, training, and mentoring on women's reproductive health and early breast cancer detection (Yako et al., 2023). This approach was chosen to increase participant engagement, strengthen contextual understanding, and foster participants' ability to disseminate health information in their respective communities.

The activity partner is the Regional Leadership Health Council (PDA) of 'Aisyiyah Bantul, Bantul Regency, Special Region of Yogyakarta, which acts as a strategic partner in coordinating and facilitating program implementation. The partner supports the participant identification process, technical arrangements for the activity, and strengthening the dissemination network for educational outcomes at the community level. The activity targets teachers and female education personnel at 'Aisyiyah Bantul Elementary Schools who also serve as 'Aisyiyah cadres. This target group was chosen for its strategic position in promoting women's health across school, family, and community environments. The implementation of this community service activity consisted of three stages: the pre-activity stage, the implementation stage, and the evaluation stage. In the pre-activity stage, the community service team conducted initial coordination with the partner to determine the schedule, venue, and technical arrangements for the activity. In addition, the team identified participants' educational needs, prepared the educational materials, and developed evaluation instruments in the form of pre-tests, post-tests with 10 questions, and feedback questionnaires to measure participants' knowledge improvement.

In the implementation stage, the activity was conducted in a structured manner beginning with a pre-test to assess participants' initial level of knowledge. This was followed by the delivery of educational materials covering the basic concepts of women's reproductive health, risk factors of breast cancer, early signs and symptoms, and education on early detection through breast self-examination (BSE/SADARI) and clinical breast examination (CBE/SADANIS). The activity continued with interactive discussions and question-and-answer sessions to deepen participants' understanding and provide opportunities for them to share experiences and concerns related to women's health issues in their communities.

In the evaluation stage, the success of the activity was assessed through process evaluation and outcome evaluation. Process evaluation was conducted through observation of participant attendance, engagement, and active participation during the activity. Meanwhile, outcome evaluation was conducted by comparing pre-test and post-test scores to measure the improvement in participants' knowledge. In addition, feedback

questionnaires were used to assess the relevance of the materials, the effectiveness of the delivery methods, and the overall benefits of the activity.

The materials provided included the basic concepts of women's reproductive health, breast cancer risk factors, early signs and symptoms, and education on early detection through breast self-examination (BSE/SADARI) and clinical breast examination (CBE/SADANIS). The evaluation results served as the basis for program reflection and for developing recommendations to strengthen the role of 'Aisyiyah cadres in promoting reproductive health and early breast cancer detection within the community (Kusuma et al., 2026; Rosalina et al., 2025). To strengthen sustainability, participants are also provided with information about available follow-up examination services.

## **C. RESULTS AND DISCUSSION**

### **1. Pre-activity stage**

Prior to the implementation of the activity, the community service team conducted initial coordination with the partner to establish the schedule, venue, and technical arrangements. The team also assessed the educational needs of the participants, prepared the learning materials, and developed evaluation instruments, including pre-tests, post-tests, and feedback questionnaires, to measure participants' knowledge improvement. These preparations aimed to ensure the activity was conducted effectively and that the learning objectives were achieved.

### **2. Implementation Stage**

Activity devoted to the public. This was held on May 23, 2025, at the 'Aisyiyah Bantul' Superior Elementary School, involving 48 teachers and staff, as well as women who also serve as 'Aisyiyah cadres'. Group target chosen based on role, strategic changes that have the potential to spread information related to health reproduction, and the detection of early breast cancer. Good in the environment, school, and society. Election participant based on criteria. The aim is to increase the role of active they in disseminating health knowledge to wider groups. At the beginning of activities, participants requested a purposeful pre-test to measure their knowledge of reproductive health, breast cancer detection, breast cancer examination (SADARI), and clinical examination. The results of this pre-test are used as the basis for planning the material to be delivered.

Delivery material is delivered through interactive lectures, which allow participants to interact directly with the resource person. Counseling covers main topics, namely: concept-based health reproduction, risk factors for breast cancer, as well as breast self-examination (SADARI) and clinical breast examination (SADANIS) (Kusuma et al., 2026). In addition to lectures, the methods also allow participants to submit questions and discuss them directly with the resource person to deepen their understanding of the

material. Each participant was allowed to participate in the session actively and to ask the question that had been held back during counseling. The session asks for answers. This gives participants a chance to clarify misunderstandings and discuss health-related problems relevant to their lives. Documentation, activity, counseling, and discussion are shown in Figure 1, which depicts enthusiastic participants actively involved in the learning process.

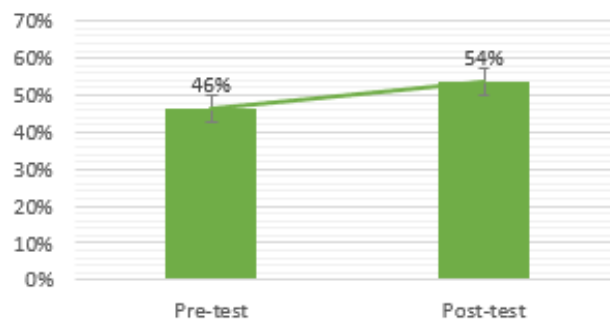


**Figure 1.** Community Service Presentation Activities

As part of the action, during the carry-on activity at the end of the session, counseling participants were given a voucher for a free breast ultrasound examination. This voucher was given to encourage participants to continue the inspection and to implement early breast cancer detection in everyday life. This program not only focuses on improving knowledge but also on actions participants can take to prevent breast cancer. Documentation of the distribution of these vouchers is shown in Figure 2, which shows the distribution of vouchers to participants in the context of educational health implementation.

### 3. Evaluation Stage

Monitoring activities are carried out through the observation of participants' direct presence, their level of involvement during the counseling session, and their active participation in discussions. The monitoring results show that a large proportion of participants were very enthusiastic about following all the series activities and experiencing improvements in their knowledge. The issue was measured using pre- and post-tests with 10 questions, which showed a change in participants' understanding. This indicates that the intervention education succeeded in achieving the established objectives. Participants' pre-test and post-test scores can be seen in Figure 3 below:



**Figure 3.** Pre-test and Post-test Results of Community Service Activities

Based on Figure 3 above, results evaluation shows significant improvement in participants' knowledge, with an average score increasing from 46% on the pre-test to 54% on the post-test, an 8 percentage-point improvement. In addition to the evaluation, feedback was obtained qualitatively during the session discussion. Many participants stated that the material presented gave them a new and motivating perspective. For better health reproduction. The participants state showed below. "Now I am more aware of the importance of routine health inspections and, in various ways, preventive measures that can be done to guard the body's health." Mrs. Y - Participant in the devotion society. "I get Lots of new knowledge, especially about ways to guard mental and physical health. Activities This makes me better understand the importance of life, health, and how to avoid risks that can influence the quality of life." US Mother - Participant in the devotion society. "After following the activity, I have become more understanding about the importance of nurses from an early age. I also became more attentive to style, life, health, and how small things can influence big health in the long term." Mrs. TW - Participant in the devotion society.

Based on the participants' testimonials, this activity has a cognitive impact by increasing knowledge and an effective one by shaping greater personal concern for health. As a tangible form of support for implementing the educational outcomes, the program concluded by distributing free breast ultrasound vouchers to all participants, as shown in Figure 2. This initiative was a strategic step to encourage participants to understand and apply early detection practices in real life. Moreover, the activity demonstrated a strong synergy between education and concrete action in preventing non-communicable diseases among women of productive age.

#### 4. Obstacles Faced and Solutions

Several challenges were noted during the implementation of the activity. First, although post-test scores increased, the increase was moderate. This suggests that, despite a basic understanding of early detection techniques, some participants may need more time to absorb and implement the material in greater depth. Second, the activity was conducted in a single session, limiting the time available for in-depth study of the material and for

practicing BSE (Breast Self-Examination). Third, differences in participants' background knowledge also affected their comprehension of the material.

In addition, another obstacle that emerged was that some Aisyiyah cadre participants felt afraid or hesitant to undergo breast examinations using ultrasound (Ultrasonography), even though a Free Breast Ultrasonography grant had been provided in this activity. Some participants even chose not to participate in the examination provided. Based on previous research, this was influenced by factors such as a lack of understanding of breast ultrasound procedures and of safety and comfort during the examination (Ewang et al., 2025; Lubis et al., 2025). Misperceptions about the risks or fear of breast ultrasound examinations can prevent participants from undergoing the examination, so it requires structured, ongoing education and understanding (Hasni et al., 2025).

As a solution, it is recommended that similar activities be implemented in a phased (serial) format, with follow-up sessions allowing participants to review the material and engage in more intensive, structured exercises. This approach will provide participants with the opportunity to deepen their understanding of breast cancer early detection techniques and improve their practical skills. Furthermore, to support participant understanding, it is recommended to provide supporting educational materials, such as modules or videos, that participants can access after the activity. This provision of materials will allow participants to learn more independently and to review the material in greater depth outside the face-to-face sessions. With these steps, it is hoped that future community service activities will be more effective in increasing Aisyiyah cadres' understanding, trust, and participation in early breast cancer detection through breast self-examination and ultrasound.

#### **D. CONCLUSIONS**

Community service activities at the 'Aisyiyah Bantul Superior Elementary School have achieved their planned objectives, namely increasing the knowledge, awareness, and capacity of 'Aisyiyah cadres regarding women's reproductive health and early breast cancer detection. Implementing activities through pre-tests, interactive counseling, discussions, and post-tests yielded positive results. Quantitatively, participants' average knowledge increased from 46% in the pre-test to 54% in the post-test, an increase of 8 percentage points (equivalent to a relative increase of approximately 17.4%). These results indicate progress in improving participants' hard skills in the aspect of understanding reproductive health materials and early detection of breast cancer. In addition, during the discussion, question, and answer sessions, participants demonstrated enthusiasm, the courage to ask questions, and the ability to relate the material to conditions in their environment, which indicates a qualitative increase in soft skills, especially in the aspects of communication,

health awareness, and readiness to become educational agents in the community.

As a follow-up, similar activities are recommended to be implemented in stages (serially) to optimize the improvement of participants' knowledge and skills, particularly in the practice of BSE and strengthening understanding of breast cancer risk factors. It is also recommended that follow-up programs include written or digital educational media (leaflets/summary modules) and post-activity mentoring through the 'Aisyiyah cadre network to monitor information dissemination in the community. For future development, program evaluation should not only measure knowledge gains but also assess soft skills more systematically through questionnaires or observation rubrics, enabling the intervention's impact to be documented more comprehensively. This community service activity also has the potential to be replicated in other women's communities or developed into other preventive health fields to expand the promotive and preventive impact at the community level.

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