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# Health and Counseling Service of Reproductive Health "I am Empowered Over my Body"

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**ABSTRACT**

Reproductive health is a crucial aspect of improving the quality of life, especially for women of reproductive age. However, knowledge about reproductive health, including early detection of breast and cervical cancer, remains low in many communities. Limited access to reproductive health services, particularly in remote and economically disadvantaged areas, exacerbates this issue. This community service program aimed to enhance public awareness and provide direct health services through the Reproductive Health Service and Counseling under the theme "I Am Empowered Over My Body." This initiative included essential health screenings such as blood pressure measurement, BMI calculation, cholesterol, uric acid, and glucose level tests, along with reproductive health counseling and early detection services for breast and cervical cancer through SADARI (Breast Self-Examination) and IVA (Visual Inspection with Acetic Acid) tests. The program was conducted on September 29, 2024, at STIK Sint Carolus Graduate Building, Jakarta, in collaboration with Ipas Indonesia, Jakarta Feminist, and Doctors Without Stigma. A total of 81 participants attended, with 38 undergoing basic health screenings, 9 receiving reproductive health counseling, and 34 participating in SADARI and IVA test. The results showed that 97.05% of IVA screening participants had normal results, while 2.74% tested positive and were referred for further examination. Awareness of breast cancer detection through SADARI was significantly improved, and all participants could repeat the procedure independently. Additionally, among participants in basic health screenings, 11.53% were identified with mild hypertension, 40.54% had high uric acid levels, and 77.78% had glucose levels exceeding the normal range, indicating a need for continuous health monitoring and intervention. This program successfully enhanced participants' knowledge of reproductive health and increased access to essential screening services. Future initiatives should focus on sustaining these efforts through continuous education, destigmatization of reproductive health examinations, and strengthening community-based healthcare support.



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## INTRODUCTION

Reproductive health is a vital aspect of improving the quality of life for women, especially those of reproductive age. According to the World Health Organization (WHO), reproductive health encompasses physical, mental, and social well-being in all matters related to the reproductive system at all stages of life (1). Therefore, efforts to maintain and improve reproductive health are an integral part of overall health development.

In Indonesia, breast cancer and cervical cancer remain the leading causes of death among women. Data from the Global Cancer Observatory (GLOBOCAN, 2020) shows that Indonesia records more than 36,000 new cases of cervical cancer and 21,000 deaths related to cervical cancer annually, placing Indonesia in a concerning global position regarding cervical cancer incidence (2). Meanwhile, breast cancer ranks highest in cancer incidence among women, with more than 65,000 new cases in the same year (2).

Early detection efforts through SADARI (Breast Self-Examination) and IVA (Visual Inspection with Acetic Acid) tests have proven effective in reducing mortality rates from breast and cervical cancer (3). SADARI is a simple method that women can perform independently to recognize changes in their breasts, while IVA is an affordable cervical cancer screening method that can be conducted by healthcare providers in primary health facilities. However, access to these examinations remains very limited, particularly in rural and remote areas (4).

The lack of knowledge among the public, especially women of reproductive age, about the importance of SADARI and IVA examinations remains a major barrier to early detection (2). A 2022 survey by the Indonesian Ministry of Health revealed that more than 50% of women in rural areas had never undergone routine reproductive health check-ups (4). Additionally, cultural stigma and lack of family support exacerbate the situation. Many women hesitate to undergo examinations due to taboos, fear of diagnosis, or embarrassment (3).

Meanwhile, basic health services, including reproductive health counseling and contraceptive provision, remain suboptimal in certain areas. Data from the National Population and Family Planning Board (BKKBN) indicates that the use of modern contraceptive methods in Indonesia is only around 57%, falling short of the national target (5). This is largely due to misinformation about contraception and the prevalence of myths regarding its negative effects.

To address these issues, direct community interventions are necessary, including reproductive health counseling, basic health services, and regular SADARI and IVA screenings (1). Reproductive health is a crucial aspect of improving community well-being, particularly for women of reproductive age. Data from various sources indicate that public knowledge about reproductive health, including early detection of breast and cervical cancer, remains low (4). This is further compounded by limited access to reproductive health services, especially in remote areas or those with low economic status (2). Many women, particularly in rural areas, lack adequate understanding of reproductive health, as evidenced by low awareness of contraception use, the risks of sexually transmitted infections (STIs), and the importance of family planning (5). Awareness of breast and cervical cancer risks is also very limited. Early detection through SADARI and IVA examinations is essential to prevent deaths from breast and cervical cancer. Unfortunately, public awareness of routine screenings remains low, with many women unaware of how to perform SADARI or the importance of IVA examinations (3).

Several misconceptions and stigma related to reproductive health examinations continue to pose significant barriers (4). Many women avoid IVA screenings due to embarrassment, fear, or cultural taboos (3). This hampers prevention efforts and early intervention for reproductive cancers. In some communities, decisions about reproductive health check-ups often rest with husbands or extended families, who may lack support or awareness of the importance of these examinations (5).

The community requires comprehensive reproductive health education programs, covering early cancer detection, contraception use, and STI prevention (1). This information should be delivered in an accessible manner and through culturally sensitive approaches.

This community service program plays a crucial role in providing accurate education on reproductive health and offering direct SADARI and IVA screening services within communities (2).

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The goal of this community service initiative is to provide comprehensive reproductive health education to the public, particularly women of reproductive age, while also ensuring direct access to essential health services. By doing so, it is expected that public awareness and participation in early breast and cervical cancer detection will increase, along with optimal utilization of modern contraceptive methods(5).

## METHOD

This community service program was conducted as a structured initiative to enhance reproductive health awareness and provide direct healthcare services. The intervention included basic health screenings, reproductive health counseling, and early cancer detection services through SADARI (Breast Self-Examination) and IVA (Visual Inspection with Acetic Acid) tests. The program targeted women and adolescent girls, aiming to address common barriers such as limited access, lack of awareness, and social stigma related to reproductive health services.

The program took place on September 29, 2024, in Jakarta. The activities were conducted in-person, combining educational sessions, counseling, and direct medical services. A total of 81 participants attended the program, with 38 undergoing basic health screenings, 9 receiving reproductive health and family planning counseling, and 34 participating in SADARI and IVA tests for early detection of breast and cervical cancer.

The basic health screening included blood pressure measurement, BMI calculation, and testing for glucose, cholesterol, and uric acid levels. Participants received immediate results and were advised on necessary follow-up actions based on their health status. The reproductive health and family planning counseling focused on increasing awareness about menstrual hygiene, STI prevention, and contraceptive options, including pills, injectables, and condoms. Educational tools such as anatomical models and contraceptive samples were used to facilitate the counseling sessions.

For early detection of breast and cervical cancer, participants were trained in SADARI using breast phantoms to improve self-examination skills. Additionally, IVA screening was provided as a low-cost, non-invasive method for detecting precancerous cervical lesions using 3–5% acetic acid application. The examination was performed by trained healthcare professionals using medical instruments such as speculums, cotton swabs, disposable gloves, and examination lamps.

Data collection included recording participant demographics such as age, education level, and reproductive history, as well as documenting health screening results and IVA tests findings. Post-intervention surveys assessed the participants' knowledge and confidence in performing SADARI and undergoing reproductive health screenings. Participants provided informed consent before health screenings and examinations, and those with positive IVA results were referred for further medical evaluation at a designated healthcare facility.

This structured approach ensured that the program effectively raised awareness, provided essential health services, and encouraged early detection practices among women and adolescent girls in the community.

## RESULTS

The community service activities were carried out smoothly on 29 September 2024 starting from 13.00 - 18.00 WIB. The number of participants who attended was 81 people, divided into 38 participants who conducted basic health checks, 9 participants who conducted counselling on reproductive health and family planning, and 34 participants who conducted IVA tests and SADARI examinations.

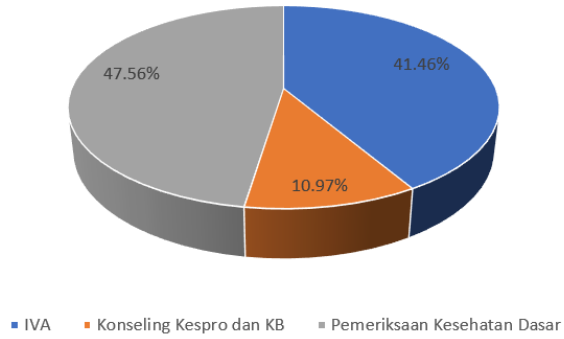


**Figure 1. Number of participants who attended the program**

A total of 47.56% of the participants underwent health checks at the primary health checkpoint, 41.46% underwent reproductive health and family planning counselling, and the remaining 10.97% underwent screening for cervical cancer and breast cancer.

IVA tests and SADARI examinations

Visual Inspection with Acetic Acid (IVA) has been widely adopted as an alternative cervical cancer screening method, particularly in low-resource settings. The World Health Organization (WHO) recognizes IVA as an effective and cost-efficient screening tool, noting its practicality and ability to provide immediate results (6). A demonstration project evaluating IVA and cryotherapy in six countries found that integrating IVA into routine healthcare services was both feasible and effective in reducing cervical cancer cases through early detection and treatment (6).

The performance of IVA in detecting cervical intraepithelial neoplasia (CIN) has been reported to have a sensitivity of approximately 84% and specificity of 82%, making it a valuable tool for early cervical cancer detection (7). These findings align with other research studies that have shown that IVA can effectively detect precancerous lesions, particularly in settings where Pap smear tests and HPV DNA testing are not readily available (7). The accessibility and ease of implementation make IVA an essential screening tool in community-based healthcare programs, such as the initiative conducted in this study.

Regarding breast cancer screening, Breast Self-Examination (BSE), known as SADARI in Indonesia, is recommended as a method for early breast cancer detection. Training programs have been shown to significantly improve women's knowledge and ability to perform SADARI correctly, increasing the likelihood of detecting abnormalities early. However, while SADARI has benefits in increasing awareness, its effectiveness in reducing breast cancer mortality remains debated. Some health organizations do not recommend routine self-examinations due to concerns over false positives and unnecessary anxiety (8). Despite these concerns, SADARI remains a valuable tool for familiarizing women with their breast tissue and encouraging them to seek medical advice if they notice any abnormalities (8). This highlights the importance of combining SADARI with clinical breast exams (CBE) and mammography screenings for comprehensive breast cancer detection strategies.

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**Table 1. Characteristic of participant underwent resproductive counselling, IVA tests, and SADARI examinitions**

| Variable | n | % |
|---|---|---|
| Aged | | |
| 20-35 years old | 25 | 73,52 % |
| >35 years old | 9 | 26,47 % |
| Education | | |
| Associate degree | 12 | 35,29 % |
| Bachelor's degree | 17 | 50 % |
| Master's degree | 5 | 14.70 % |
| Parity | | |
| 0 | 20 | 58.82 % |
| 1-2 | 14 | 41.17 % |

The majority of participants who underwent these examinations were between 20 and 35 years old, indicating that younger women tend to be more aware of the importance of early detection for cervical and breast cancer. This could be attributed to greater access to health information, increased health consciousness, and a proactive approach to disease prevention.Regarding education, half of the participants held a Bachelor's degree, suggesting that higher education levels may contribute to greater awareness of preventive health measures. Women with higher education are likely to have better access to health-related knowledge and a stronger understanding of the benefits of early screening.Additionally, more than half of the participants had never given birth, which may indicate that women without childbirth experience are more conscious or motivated to undergo early detection screenings. This could be linked to their focus on reproductive health before pregnancy or their active engagement in seeking health-related information.

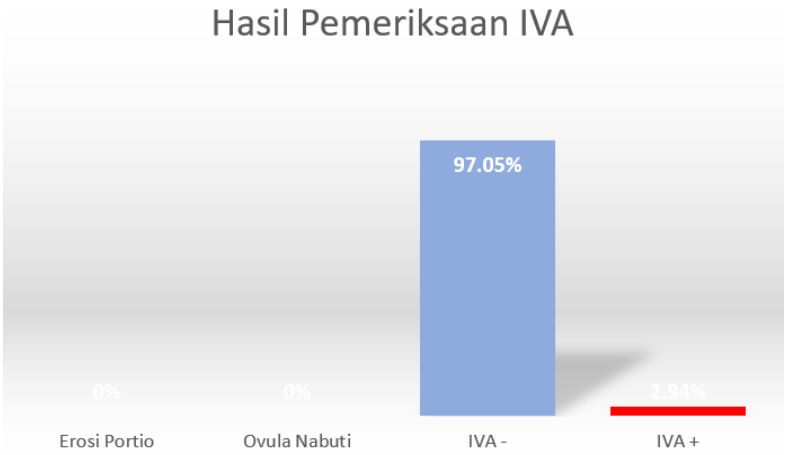


**Figure 2. Result IVA test**

The IVA test was conducted on 34 women of reproductive age. The initial screening results for breast detection and IVA test showed that 97.05% of the participants had no lumps or masses in the breast indicative of tumors or breast cancer and had negative for IVA test, while 2.74% of the participants tested positive for IVA and had breast lumps. Participants who received IVA+ results were referred for further medical examinations at advanced healthcare facilities. All participants were encouraged to repeat the self-breast examination (SADARI). IVA test is one of the early detection methods for cervical cancer that utilizes acetic acid, offering a low-cost, practical, and highly sensitive approach. The IVA test is a cervical cancer screening method using 3–5% acetic acid. Based on diagnostic test results, IVA examination has a sensitivity of 84%, a specificity of 89%, a positive predictive value of 87%, and a negative predictive value of 88% (11,12).

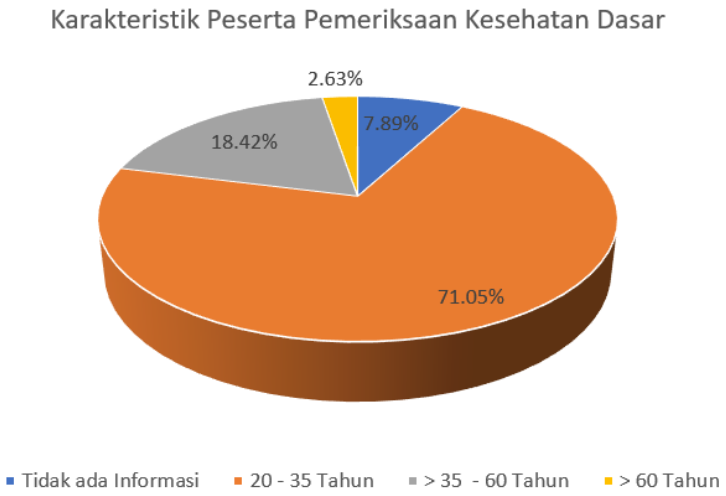


**Figure 3. Age Characteristics of Basic Health Check Participants**

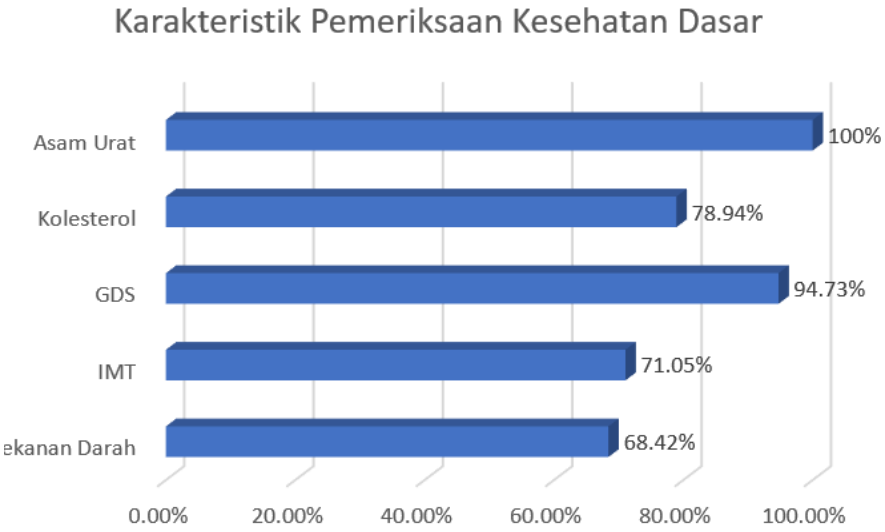


**Figure 4. Test results by basic health check type**

Participants who performed basic health checks totalled 38 participants. Most of the participants aged 20-35 years totalled 27 people (71.05%). The findings indicate a high level of participation in uric acid (100%) and random blood glucose (94.73%) testing, suggesting a strong awareness of metabolic health concerns among the participants. However, the lower rates of BMI measurement (71.05%) and cholesterol testing (78.94%) may indicate that some participants are less attentive to overall weight management and cardiovascular risk factors.

This pattern may be linked to lifestyle factors such as diet, physical activity, and overall health awareness. The high participation in uric acid and glucose testing suggests concerns about conditions like gout and diabetes, which are often associated with dietary habits high in sugar and purine-rich foods. Meanwhile, the relatively lower engagement in BMI and cholesterol checks may suggest that participants do not perceive weight and lipid profiles as immediate health concerns, despite their significant role in preventing chronic diseases such as hypertension, cardiovascular disease, and metabolic syndrome.

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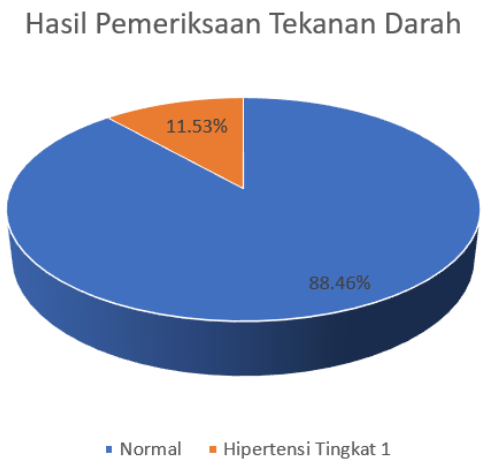


**Figure 5. Blood pressure test result**

A total of 26 participants underwent blood pressure examinations. The results showed that the majority had normal blood pressure (23 participants, 88.46%), while 3 participants (11.53%) were classified as having mild hypertension.

Hypertension, commonly known as high blood pressure, is a chronic condition caused by excessive and often inconsistent pressure exerted on the arteries. This pressure results from the force of the heart pumping blood. Hypertension is associated with a continuous increase in systemic arterial pressure, both diastolic and systolic. The symptoms of hypertension are difficult to detect, as it often does not present specific signs. However, common observable symptoms include dizziness, restlessness, facial flushing, ringing in the ears, shortness of breath, fatigue, and blurred vision (13).

There are two main risk factors for hypertension, Non-modifiable risk factors, including age, gender, and genetics. Modifiable risk factors, which are lifestyle-related and can be changed, such as smoking, low-fiber diet, high-fat intake, excessive sodium consumption, dyslipidemia, excessive salt intake, lack of physical activity, stress, overweight/obesity, and alcohol consumption (14).

Hypertension is a degenerative disease that can affect anyone at any time. Regular blood pressure monitoring is essential for early detection of hypertension. Once diagnosed, individuals with hypertension should adopt a healthy lifestyle as part of their blood pressure management and control strategy (15).

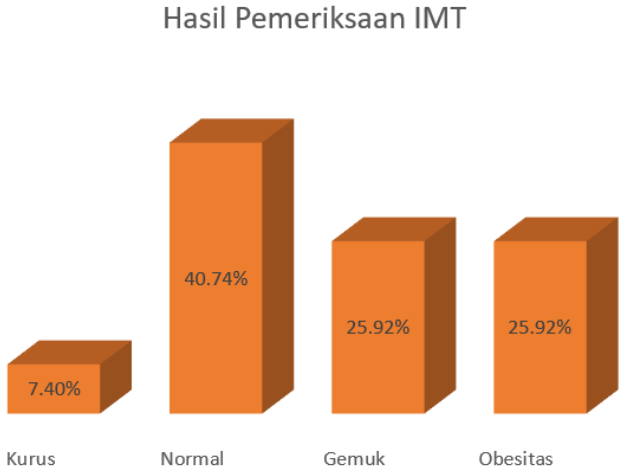


**Figure 6. BMI test results**

A total of 27 participants underwent BMI examinations. The results showed that nearly half of the participants had a normal BMI (11 participants, 40.74%). Meanwhile, 2 participants (7.4%) were classified as underweight, and 7 participants (25.92%) were categorized as overweight and obese.

Nutritional status is an expression of balance in the form of specific variables. It is also the result of the equilibrium between nutrient intake, absorption, and utilization, reflecting the physiological condition of nutrient availability in the body.

Nutritional status is influenced by two main factors: direct and indirect factors. Direct factors include dietary patterns and infectious diseases. Food consumption refers to the intake of food and beverages to meet an individual's daily nutritional needs. Even if someone consumes an adequate diet, frequent episodes of diarrhea or fever can lead to undernutrition (16). Indirect factors influencing dietary patterns include the nutritional content of food, the presence of food assistance programs, eating habits, and family economic conditions. Meanwhile, infectious diseases are influenced by factors such as purchasing power, dietary habits, healthcare maintenance, and the physical and social environment (17).

Body Mass Index (BMI) is a simple tool for monitoring the nutritional status of adults, particularly in relation to underweight and overweight conditions. BMI is defined as a person's weight in kilograms divided by their height in meters squared (kg/m²) (16,17)

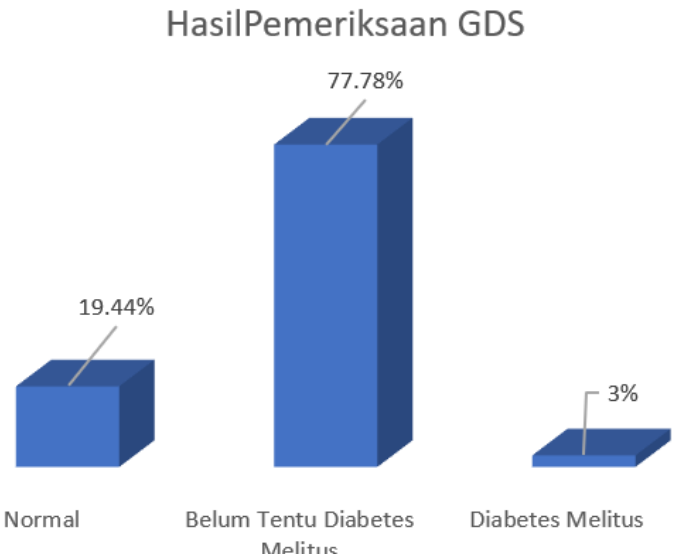


**Figure 7. Random Blood Glucose (RBG) Examination Results**

A total of 36 participants underwent Random Blood Glucose (RBG) testing. Blood glucose levels were measured using capillary blood samples obtained by pricking the fingertip with a lancet. The blood sample was then placed on a glucose test strip inserted into an Easy Touch blood glucose meter, and the reading was displayed on the screen.

The results showed that a small proportion of participants had normal RBG levels (<100 mg/dL), with 7 participants (19.44%). Meanwhile, 28 participants (77.78%) had RBG levels between 100-199 mg/dL, and 1 participant (3%) was classified as having Diabetes Mellitus with an RBG level >200 mg/dL.

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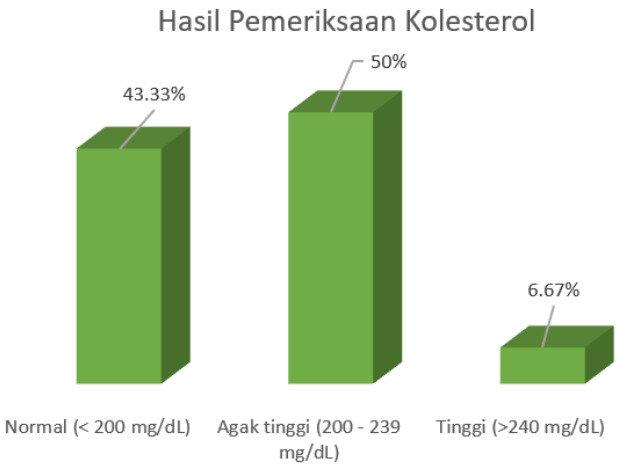


**Figure 8. Cholesterol Examination Results**

Total cholesterol levels measured in this study refer to the cholesterol present in plasma blood. The measurement was conducted by obtaining a capillary blood sample from the fingertip using a lancet. The blood sample was then placed on a cholesterol test strip inserted into an Easy Touch cholesterol meter, and the reading was displayed on the screen.

The results showed that a small proportion of participants had high cholesterol levels, with 2 participants (6.67%). Meanwhile, 15 participants (50%) had cholesterol levels between 200-239 mg/dL, and only 1 participant (3%) was classified as having normal cholesterol levels.

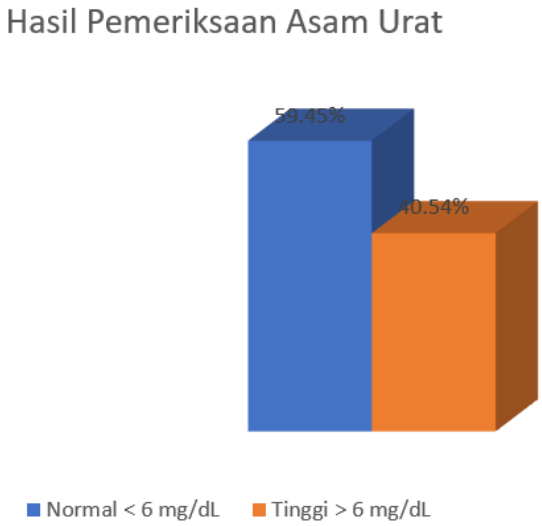


**Figure 9. Uric Acid Examination Results**

The measured uric acid levels represent the total uric acid present in plasma blood. The measurement was conducted by obtaining a capillary blood sample from the fingertip using a lancet. The blood sample was then placed on a uric acid test strip inserted into an Easy Touch uric acid meter, and the reading was displayed on the screen.

The examination results showed that more than half of the participants had normal uric acid levels (22 participants, 59.45%), while nearly half (15 participants, 40.54%) were classified as having high uric acid levels.

**Figure 10. Basic Health Examinations and Reproductive Health Education**

## CONCLUSION

This program successfully improved access to reproductive health services, raised awareness about early cancer detection, and encouraged community participation in health screenings. The findings highlight the importance of continued health education and expansion of reproductive health services, particularly in underserved areas. Future initiatives should focus on strengthening community partnerships, implementing gender-sensitive education strategies, and enhancing policy support to reduce barriers to reproductive healthcare access.

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