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Empowerment and Education on Family Medicinal Plants to Support Traditional Medicine in Dasa Wisma Gropus RT 31 and RT 33, Sungai Dama Village, Samarinda Ilir District

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Abstract

Urban communities plant more ornamental and vegetable crops than medicinal plants, although medicinal plants are one solution for maintaining health and supporting the treatment of illnesses within the family. There are many types of family medicinal plants useful in curing diseases that can be grown in the home garden or on the terrace. This community service aims to increase the knowledge of Dasa Wisma mothers in RT 31 and RT 33, Sungai Dama Village, about the types of family medicinal plants and to increase their knowledge of how to process and use family medicinal plants. The method applied in this service is lectures to educate about family medicinal plants, their processing, and their use. There were 35 Dasa Wisma participants. Based on the observation results, this service has a positive impact because the mothers actively asked questions during the discussion session after the material was presented. The Dasa Wisma mothers asked for more detailed information about how to process and use family medicinal plants. The average pre-test score obtained was 89.47, while the average post-test score was 93.52. The range of pre-test scores given before the material was presented and the post-test scores given after the presentation increased by 4.05. This indicates an increase in the knowledge of Dasa Wisma mothers regarding the types of medicinal plants in the family, as well as their processing and use. This community service effectively increased the knowledge of Dasa Wisma mothers about medicinal plants, how to process them, and their uses.

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Introduction

Community well-being is reflected in the health of the community itself, as health is an urgency in achieving community well-being (Hidayat, 2018). This is formed from the

awareness of the community in carrying out their lives. Instilling a healthy lifestyle and maintaining cleanliness is a form of habit within the public consciousness (Wati & Ridlo, 2020). Public awareness must be formed about the surrounding environment for the sustainability of life, one of which is recognizing the potential of plants in the environment to build sustainable health. The potential of plant resources in community life can be applied to family medicinal plants.

Family medicinal plants (TOGA) are plants with medicinal properties that are cultivated around the house or yard and are used in strategies to improve health, both for prevention, promotion, and treatment (Erviana et al., 2023). The presence of family medicinal plants is one quick and responsive solution for addressing health issues within the household, as they are easy to care for and do not require significant expense (Faridah et al., 2023) (Yuwana & Adlan, 2021). So far, the use of family medicinal plants is still minimal in both urban and rural communities. Especially in urban communities, it is still limited, as evidenced by previous studies showing that home gardens on the outskirts of the city are mostly dominated by ornamental plants (Irwan et al., 2023) (Irwan & Sarwadi, 2016), and are also dominated by food plants such as vegetables (Sarwadi & Rofiqo, 2018). Referring to data from previous studies, this presents an opportunity for community service in urban areas. The importance of conducting community service on the use of family medicinal plants to empower the community in increasing knowledge of family medicinal plants, as well as their processing and usage methods.

Sungai Dama Village, Samarinda Ilir District, is one of the communities located in the urban area of Samarinda City. Until now, there has been no education provided to the community in Sungai Dama village regarding the potential of plant resources as medicine. Based on this, education about medicinal plants is very important, considering data from the Samarinda City Central Statistics Agency shows that there have been no reports of cultivating and producing medicinal plants in Samarinda Ilir District, such as from the ginger family (Badan Pusat Statistik, 2024). The studies that have been conducted in Sungai Dama village include service activities carried out by Mukti et al. (2017) on legal education regarding environmental pollution in Sungai Dama village and service activities conducted by Herlina et al. (2020) on training for making tote bags for PKK cadres in Sungai Dama village. Specifically, no service activities have been conducted for the Dasa Wisma group in Sungai Dama village, Samarinda Ilir sub-district, RT 31 and RT 33, regarding the use of plant resource potential as medicine. This presents an opportunity for community empowerment to achieve sustainable public health.

This activity introduces a participatory education model focused on the practical use of medicinal plants, which has not yet been implemented in urban Dasa Wisma groups.

Based on the marketing above, there is an urgent need for community service to be carried out for the Dasa Wisma groups in Sungai Dama Village, Samarinda Ilir District, RT 31 and RT 33. Educational activities on family medicinal plants for Dasa Wisma mothers were conducted to raise awareness about the use and processing of medicinal plants, as there has been no prior socialization regarding medicinal plants. Additionally, this community

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service activity aims to build community thru the role of Dasa Wisma mothers, who often utilize kitchen plants as both food and traditional medicine. Hopefully, the mothers of the Dasa Wisma can spread this information to men and the younger generation. This approach is expected to create synergy that will result in community independence in maintaining health naturally.

The implementation of this service activity not only provides short-term solutions but also builds the community's capacity to manage their environment and health independently and sustainably in the future. The purpose of this community service activity is to increase public knowledge about the types of family medicinal plants and to improve the knowledge of how to process and use family medicinal plants among the mothers of Dasa Wisma, RT 31 and 32, Sungai Dama Village. Hopefully, the Dasa Wisma mothers who frequently use plants for kitchen purposes can spread this information to both men and the younger generation.

Implementation Method

This activity will be held on May 7, 2025, in RT 31 and 32, Sungai Dama Village, Samarinda Ilir District, East Kalimantan. The participants in this activity are the mothers from the Dasa Wisma groups. The timeline for implementing this activity is as follows:

Table 1. Timeline of community service activities

No	Activity	Activity Description	Third week of April	Second week of April	First Week of May	Second Week of May
1.	Preparation	1. Team and partner coordination 2. Site survey and identification of community needs 3. Preparation of materials and activity aids				
2.	Implementation	1. Socialization of activities to the community - Started with a pre-test and ended with a post-test.				
3.	Evaluation	1. Q&A with participants 2. Analysis of results				

The method applied in this service is lectures to educate about family medicinal plants, their processing, and their use. The method applied in this service is an adaptation of the services previously conducted (Leswara et al., 2024; Ramadhani et al., 2024). The

material was presented using a contextual approach, providing examples relevant to the conditions and characteristics of the environment and community in Sungai Dama Village, specifically for the Dasa Wisma groups in RT 31 and RT 33, to make it easier for participants to connect the information with their daily realities. The number of respondents in this community service activity was 35 mothers from the Dasa Wisma group in Sungai Dama Village, Samarinda Ilir District.

2.1 Tools and materials

a) Presentation Equipment: Laptop, projector, projector screen, and sound system (microphone and speakers).
b) Digital Education Material: Informative and engaging presentation slides (using platforms like PowerPoint or Google Slides) that cover key points of waste management and the use of medicinal plants.
c) Stationery: pens and paper for participants to complete pre-tests and post-tests to assess their increased knowledge of medicinal plants and their family's processing and use of medicinal plants.
d) Administration Support: Participant attendance list form.

2.2 There are several sessions conducted in this service, including:

a. Interactive Presentation Education: The material will be presented in a clear and easy-to-understand presentation format, interspersed with active Q&A sessions at the end of each material segment. This aims to encourage participant engagement, clarify doubts, and ensure a deep understanding.
b. Open Discussion and Sharing of Experiences: After the presentation, there was a broader discussion session to explore the perspectives and knowledge of the Dasa Wisma mothers' group from Sungai Dama Village, RT 31 and 32. Tim will act as a facilitator to spark constructive discussions.
c. Evaluation of Initial and Final Knowledge: Pre-test and post-test sheets were used as instruments to evaluate knowledge about family medicinal plants. The pre-test was administered before the material and discussion sessions to assess the level of knowledge about family medicinal plants and their methods of use and processing. The post-test was administered after the material and discussion were completed to determine the increase in knowledge about family medicinal plants and their methods of processing and use. The results of the pretest and posttest will be used as evaluation material for success indicators.

2.3. Stages of Activity Implementation

The stages of activity implementation are as follows:

a. Meeting on the Strategy for Implementing Community Service: The meeting is held before carrying out the community service activities, for preparation, objectives, and strategies for implementing the activities. In the meeting, the division of tasks

for smooth execution on the day of the event was discussed, with the final outcome being the agreement on activity goals and implementation strategies.

b. Location Survey: A location survey is conducted to review the site where the service activity will take place. During the survey implementation, permission was obtained by bringing a permit letter from the faculty to the heads of RT 31 and 33 in the village. After that, a discussion was held with the community to reach an agreement. The result of this stage was an agreement on the time, location, and implementation of the activities. The target group for this service is the Dasa Wisma mothers' group in RT 31 and 33, Sungai Dama Village.
c. Implementation of service: In the implementation of the service, pre-test and post-test questions were given. The pre-test questions were used to assess the respondents' knowledge before the material was presented, while the post-test questions were used to determine the level of understanding regarding the material that had been delivered, namely about family medicinal plants and how to process and use them. The total number of questions is 6, with a completion time of 5 minutes. The scores from the pre-test and post-test will be averaged and used as an evaluation tool to improve understanding of family medicinal plants and how to process and use them.
d. Discussion and closing session: The discussion session is mandatory after the presentation of the material. The discussion session was held with the aim of deepening the knowledge of Dasa Wisma mothers about family medicinal plants, especially their processing and use. Dasa Wisma mothers were welcome to ask questions directly to the speaker. The conclusion of the material presentation is the sharing of impressions and messages during the service activity.
e. Activity Evaluation: Activity evaluation is conducted to review the implementation of the service that has been carried out. In this evaluation, there was a presentation regarding the results of the pre-test and post-test answered by the Dasa Wisma mothers' group. The averaged values were communicated to the mothers as the first foundation, regarding the knowledge they had gained that could be applied on a household scale.

Results and Discussion

The material was presented to 35 Dasa Wisma members in Sungai Dama Village, RT 31 and 33, for 20 minutes (Figure 1). The material presented covers the types of easily cultivated family medicinal plants (TOGA) in the home environment or those commonly used for kitchen needs, including processing and usage methods. This material is designed to empower communities to utilize the plant resources around them as a natural and economical means of promoting and preventing health. The evaluation conducted after providing material on family medicinal plants, including their processing and handling

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methods, to the community of Sungai Dama Village, Dasa Wisma groups, RT 31 and 33 in Samarinda Ilir District, was in the form of pre-test and post-test questions (Figure 2).

Figure 1. Material presentation to Dasa Wisma

Figure 2. Dasa Wisma completing the pre-test

Administering pre-test questions to assess knowledge about family medicinal plants before delivering the material, and post-test questions to evaluate the increase in knowledge and understanding after the material on family medicinal plants has been presented. The pre-test questions consisted of 5 questions with true/false answer choices about commonly found and used medicinal plants by Dasa Wisma mothers for kitchen needs. The post-test included 6 questions with true/false answer choices regarding the material that had been presented. The results of the average pre-test and post-test scores administered before and after the material was shared with 35 people from the Dasa Wisma group in Sungai Dama Village, Samarinda Ilir District, are as follows:

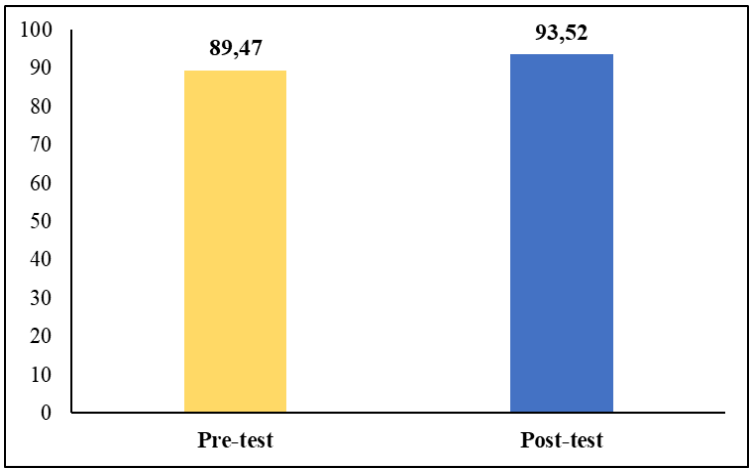

Figure 3. Average pre-test and post-test scores of participants on educational material about the use of family medicinal plants

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Based on the average results of the pre-test and post-test administered to 35 Dasa Wisma members, the average score increased. The pre-test average score was 89.47, while the post-test average score was 93.52. The average score obtained in the pre-test was quite high at 89.47, indicating that knowledge about family medicinal plants was already possessed through inheritance from family or neighbors. The post-test questions given were also about commonly used medicinal plants that are also kitchen spices. The average score on the post-test increased by 93.52, and the range of change between the pre-test and post-test scores was 4.05. This means there is an increase in knowledge not only about the types of family medicinal plants but also about how to process and use them. The types of plants introduced are also wild plants that grow in residential areas, such as gotu kola, because some people are still unaware of its potential as medicine. The success of this service was able to increase the knowledge of the service participants about family medicinal plants. This aligns with the results of the socialization conducted by Rambe et al. (2023), which showed that participants were very active in discussing the use of medicinal plants and experienced an increase in knowledge after being given a post-test with a score of 14.1%. Additionally, the results of Leswara et al.'s (2024) research also showed that participants asked many questions about medicinal plants and experienced an increase in their mastery of medicinal plant knowledge, as indicated by an average score of 80.00%.

The average score increase from pre-test to post-test in this service indicates that the educational session on family medicinal plants delivered was effective in transferring knowledge to the Dasa Wisma group participants in RT 31 and RT 33, Sungai Dama sub-district. This effectiveness is a positive indicator of the success of the PKM activity's goal of increasing community knowledge about TOGA. In addition, the increase in the average post-test score is reflected in the discussion session, where there was a lot of activity and enthusiasm shown by the large number of detailed questions about the types of medicinal plants and simple recipes for processing and use. This means there is an awareness of the potential of plants in their environment, especially plants commonly used in the kitchen, such as turmeric.

The success of this family medicinal plant service serves as a strong foundation for the implementation of sustainability programs. With the increase in basic knowledge, it is hoped that the community will be more motivated and confident to start cultivating and utilizing family medicinal plants in their environment. Although there was no direct demonstration, the clear presentation has sparked residents' interest in starting to cultivate TOGA in their yards and making it part of their independent family health efforts. The limitation of this program lies in the absence of follow-up monitoring to assess behavioral changes in TOGA cultivation.

Conclusion

The knowledge of the Dasa Wisma Group in Sungai Dama Village, RT 31 and 33, regarding the types of family medicinal plants and their processing and use increased at the end of the material session, with an average score of 93.52. Dasa Wisma RT 31 and 32

showed enthusiasm during the discussion session about family medicinal plants, indicating curiosity and awareness of the potential of family medicinal plants, which are often used as kitchen spices and grow easily in residential areas. The solution offered to Dasa Wisma mothers who do not have land or a home garden is to utilize pots for planting family medicinal plants. With this service activity, information about family medicinal plants can be further disseminated to nearby residents. The recommended practices and sustainability of this activity are to conduct training on processing and planting techniques for medicinal plants.

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Author Contribution Statement

LS, IH, and GD contributed to the formulation of ideas, design, and implementation of the community service activities. FC was responsible for data analysis and drafting the manuscript. RR was involved in field coordination and documentation. AS contributed to the preparation of the activity report section. All authors have read and approved the final version of the manuscript.

Ai Disclosure Statement

The authors declare that this research was prepared, researched, written, and edited without the aid of artificial intelligence (AI) techniques.

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