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Education on the Utilization of Family Medicinal Plants to Support Promotive and Preventive Family Health in Rawang Subdistrict

Dian Ayu Juwita*, Hansen Nasif, Wira Sanjaya, Rahmah

Department of Pharmacology and Clinical Pharmacy, Faculty of Pharmacy, Universitas Andalas, Padang, Indonesia

*Corresponding author: **dianayujuwita@phar.unand.ac.id**

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ABSTRACT

Family Medicinal Plants (Tanaman Obat Keluarga/TOGA) have considerable potential to support promotive and preventive family health. However, limited community knowledge regarding their benefits, proper utilization, and safety often hinders optimal use at the household level. This community service activity aimed to provide education on the utilization of TOGA to support family health. A community-based educational program with a one-group pre-test and post-test design was conducted in Rawang Subdistrict on 17 August 2024, involving 30 participants. Educational sessions were delivered through interactive lectures and discussions covering the benefits, methods of use, and safety aspects of TOGA. Participants' knowledge was assessed using a structured questionnaire administered before and after the intervention, and data were analyzed descriptively. The pre-test results indicated moderate to low baseline knowledge. Following the intervention, participants' knowledge improved significantly, with mean scores increasing from 56.3% to 82.1% (an increase of 25.8 percentage points). The greatest improvements were observed in understanding preparation methods and safety considerations. These findings demonstrate that TOGA-based education effectively enhances community knowledge in supporting promotive and preventive family health. Integrating such educational programs into community health initiatives is essential to strengthen family-level health promotion and disease prevention.

Keywords: community education, family medicinal plants, knowledge improvement, promotive and preventive health, Tanaman Obat Keluarga (TOGA)

INTRODUCTION

Family health represents a fundamental pillar in the advancement of public health. As the smallest social unit, families play a central role in shaping health-related behaviors, making decisions regarding health care, and implementing daily practices aimed at maintaining health and preventing disease (Apsari, 2022). Consequently, strengthening promotive and preventive efforts at the family level is a strategic approach to achieving sustainable improvements in community health (Aminuddin, 2022).

One local resource with considerable potential to support such efforts is Family Medicinal Plants, commonly known in Indonesia as Tanaman Obat Keluarga (TOGA). TOGA encompasses a wide range of medicinal plants that are readily available and easily cultivated within household environments (Fitri, 2023). Traditionally, these plants have been utilized to promote general well being, enhance immune function, and manage minor health conditions. Their use aligns well with family centered and community-based health

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approaches, particularly in settings where accessibility and affordability of health resources are important considerations (Misfa, 2023).

Despite their availability, the utilization of TOGA at the household level remains suboptimal. In many communities, families cultivate medicinal plants without sufficient knowledge of their specific therapeutic benefits, appropriate preparation methods, or safe usage (Agustina, 2023). Limited health literacy related to medicinal plants may lead to underutilization or inappropriate practices, thereby diminishing the potential contribution of TOGA to family health promotion and disease prevention (Kelutur, 2025; Wahyuningsih, 2025).

Health education plays a crucial role in addressing this gap. Systematic educational interventions can enhance community knowledge, attitudes, and skills regarding the rational and safe use of medicinal plants (Octavia, 2024). Through education, families are expected to become more empowered in managing their health independently and in adopting promotive and preventive behaviors as part of their daily routines (Sari, 2023).

This community service program aims to provide education on the utilization of TOGA to support family health through promotive and preventive approaches. The program is expected to improve community knowledge and awareness of TOGA and to encourage its integration into routine family health practices, thereby contributing to disease prevention and improved quality of life.

METHOD

Community Study Design and Setting

This community service activity adopted a one-group pre-test and post-test educational design to assess changes in participants knowledge regarding the utilization of Family Medicinal Plants (Tanaman Obat Keluarga/TOGA) for family health. The activity was conducted in Rawang Subdistrict on 17 August 2024. The setting was selected based on the presence of household medicinal plants and the need for promotive and preventive health education at the community level.

Participants

Participants were community members residing in Rawang Subdistrict who were involved in managing family health. Recruitment was carried out through coordination with local community leaders. Participation was voluntary, and verbal informed consent was obtained prior to involvement in the program.

Educational Intervention

The educational intervention aimed to improve participants knowledge of TOGA, including its health benefits, appropriate preparation methods, and safe use for promotive and preventive purposes. Educational materials were delivered through an interactive lecture, supported by discussion and question-and-answer sessions to encourage participant engagement and knowledge exchange.

Data Collection

Participants knowledge was assessed using a structured questionnaire administered before (pre-test) and after (post-test) the educational session. The questionnaire consisted of items designed to evaluate participants understanding of the benefits, utilization, and safety aspects of TOGA. The same instrument was used for both assessments to allow comparison of knowledge levels before and after the intervention.

Data Analysis

Data from the pre-test and post-test were analyzed descriptively to identify changes in participants knowledge following the educational intervention. Results were presented in the form of frequency distributions and percentage increases in knowledge levels.

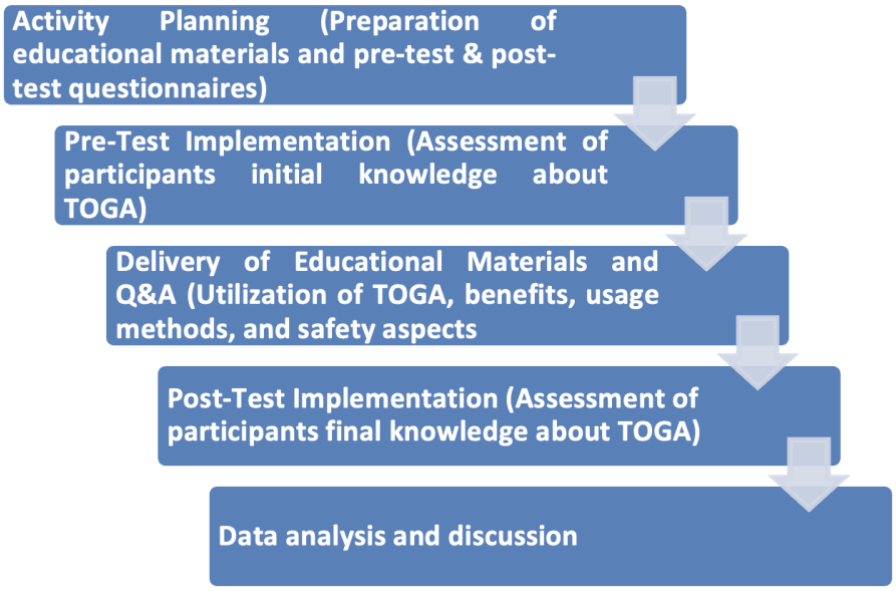


Figure 1. Flowchart illustrating the activity's methodology

RESULTS AND DISCUSSION

A total of 30 participants were involved in the community service activity. Participants knowledge regarding the utilization of TOGA was measured using a structured questionnaire administered before (pre-test) and after (post-test) the educational intervention.

The pre-test results indicated that participants baseline knowledge of TOGA was generally moderate to low. Although most participants recognized several medicinal plants commonly found in their home gardens, their understanding of specific health benefits, appropriate preparation techniques, and safety considerations was limited. Following the educational intervention, post-test scores showed a clear improvement in participants knowledge.

As presented in Table 1, the mean knowledge score increased from 56.3% in the pre-test to 82.1% in the post-test, representing an average increase of 25.8 percentage points. This improvement suggests that the educational intervention had a positive effect on participants understanding of TOGA utilization for family health.

Table 1. Comparison of pre-test and post-test knowledge scores on TOGA utilization (n = 30)

Assessment	Mean Score (%)	Minimum (%)	Maximum (%)
Pre-test	56.3	40.0	70.0
Post-test	82.1	70.0	95.0
Increase	**25.8**	–	–

The figure 2 depicts the delivery of educational materials to participants during a community service program focusing on the utilization of Family Medicinal Plants (TOGA). The session was conducted through a face-to-face interactive approach, allowing the

facilitator to explain the benefits, preparation techniques, and safety considerations associated with TOGA use. Participants were observed to be attentive and actively engaged, reflecting a strong interest in the topic and a supportive learning atmosphere. The use of direct communication and discussion enabled participants to ask questions and clarify their understanding, thereby enhancing the overall effectiveness of the session. This activity demonstrates that community based, interactive education is a practical and effective strategy for improving public knowledge and awareness regarding the use of medicinal plants. Such approaches play an important role in strengthening promotive and preventive efforts at the family level.

The findings of this community service activity demonstrate that structured health education significantly improves community knowledge regarding the utilization of Family Medicinal Plants for promotive and preventive health purposes. The substantial increase in post-test scores compared to pre-test scores indicates that educational interventions can effectively address gaps in health literacy related to medicinal plant use at the family level.



Figure 2. Presentation of educational materials to participants during the community service activity

The relatively low pre-test scores highlight an important issue commonly observed in community settings. Although TOGA is widely available and culturally familiar, its utilization is often based on inherited practices and informal knowledge rather than evidence-based understanding. The questionnaire results revealed that many participants lacked adequate knowledge regarding proper preparation methods, dosage considerations, and safety aspects of medicinal plant use. This condition underscores the risk of ineffective or inappropriate use, which may limit the potential health benefits of TOGA (Fitri, 2023; Wahyuningsih, 2025).

The marked improvement in post-test scores suggests that the educational materials and methods applied in this activity were effective in enhancing participants understanding. The use of simple language, practical examples, and interactive discussions allowed participants to better comprehend the relevance of TOGA to their daily health practices. Improvements were particularly evident in participants knowledge of plant selection, preparation techniques, and the importance of rational and safe use. These findings indicate that community-based education can transform traditional knowledge into more structured and informed health practices (Octavia, 2024).

Furthermore, the results align with the promotive and preventive health approach emphasized in this program. Improved knowledge of TOGA enables families to take proactive steps in maintaining health and preventing minor illnesses using locally available resources. By increasing awareness of appropriate medicinal plant use, the program

supports preventive behaviors that may reduce unnecessary reliance on curative treatments for mild health complaints (Hapsari, 2022).

From a broader perspective, the findings demonstrate the role of education as a key empowerment strategy in family health management. Enhanced knowledge contributes to increased confidence among participants in managing their health independently, which is an essential component of community-based health promotion. Empowered families are more likely to adopt sustainable health behaviors and to utilize local resources responsibly (Agustina, 2023; Misfa, 2023).

Overall, this community service activity highlights the importance of integrating educational interventions on TOGA into community health programs. The observed improvement in knowledge among participants confirms that education is an effective approach to promoting the rational use of medicinal plants and supporting promotive and preventive health practices at the family level. Future programs may benefit from incorporating follow-up evaluations to assess long-term knowledge retention and behavioral changes related to TOGA utilization.

CONCLUSION

This community service activity confirms that structured education on the utilization of Family Medicinal Plants (TOGA) contributes to improved community knowledge in promotive and preventive family health. The observed increase in post-test scores reflects enhanced understanding of medicinal plant benefits, rational use, and safety, highlighting the role of TOGA-based education in strengthening community health promotion and disease prevention efforts. For sustainability, it is recommended that similar programs be conducted regularly, supported by local health workers, and complemented with simple educational materials to encourage continuous community engagement.

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