

Utilization of Yard Land for Cultivation of Environmentally Friendly Medicinal Plants in Banjarwaru Village, Gilangharjo, Pandak, Bantul

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ABSTRACT

Food security will have an impact on the main problems in most countries in the world due to the increasing population, increasing purchasing power and global climate dynamics. Efforts to build family food security, one of which can be done by utilizing available resources, including through the utilization of yard land through family medicinal plants (TOGA). Based on the results of educational counseling activities and discussions, it can be concluded that most residents agree on the benefits and importance of TOGA and cultivation techniques correctly in their yards, especially in Banjarwaru Hamlet, Gilangharjo Village, Pandak District, Bantul, Yogyakarta.

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INTRODUCTION

Recently, numerous side effects of synthetic drugs have led to using medicinal plants as a reliable source of new therapy. Indonesians have long recognized various plants that can be used as medicines. This knowledge has been passed down from generation to generation, and is part of their culture. However, population growth has caused land that was originally planted with medicinal plants to be converted into residential or other buildings. This has resulted in the loss of habitat for medicinal plants.

Home yards or courtyards can be utilized for medicinal plant cultivation. Thus, in addition to being a family medicinal plant (TOGA), it can also be used as a side business for housewives. Backyard land has the potential to provide family food, reduce household expenditure on food purchases, and increase household income. In addition, it can be utilized for the cultivation of medicinal plants. Efforts to increase public awareness of growing medicinal plants in the yard need to be socialized by the Government. This task is given to the PKK Team, through its cadres. With the increasing knowledge of the cadres, it is expected that they can inform other community members, so that public awareness of planting medicinal plants in the yard will increase.

Community empowerment in Banjarwaru Hamlet, Gilangharjo, Pandak, Bantul, Yogyakarta aims to increase community understanding of the benefits of family medicinal plants (TOGA) and improve skills in environmentally friendly medicinal plant cultivation techniques in the yard.

Traditional health services are one of the options for the community in seeking treatment or overcoming health problems. Traditional health services have long been known since ancient times until now. The trend of using things that are natural or commonly known as back to nature is a reason for people to utilize natural ingredients including for treatment (Angraeni et al., 2022; Damarwati et al., 2023; Purwaningsih et al., 2023; Wahid et al., 2023; Wahid & Darmawan, 2020, Wahid & Darmawan, 2023; Wahid & Lailli, 2021). The choice of using herbal ingredients as traditional medicines has been widely accepted by society for a long time.

Traditional health services refer to empirically derived experiences and skills that can be accounted for and applied by the norms prevailing in the community (Law RI No.36, 2009). Traditional health efforts developed by WHO since 2014 have issued the Traditional Complementary Medicine Program 2014-2023 to be integrated into traditional health services in a national health system. So that this traditional health service system is part of the national health system. Currently, traditional health is regulated in the Minister of Health Regulation (Permenkes RI) Number 37 of 2017 concerning Integration Traditional Health Services.

Traditional health services in Riskesdas 2018 were seen from the utilization of family medicine gardens (TOGA), the proportion was 24.6%. The proportion of utilization of traditional health services increased slightly, from 30.4% (Riskesdas 2013) to 31.4%. The results of empirical studies state that the business in the yard if managed intensively in accordance with the potential of the yard, in addition to meeting household consumption needs, can also contribute to family income (Ashari et al., 2012). In line with this, Andrianyta et al. (Laweh & Bidang, 2022) revealed that although it could not fully provide food, the utilization of the yard at least served as a complement to certain food sources and strengthened food security in general. The impact on improving family welfare is evident in the savings of about 25.46% of total expenditure on food.

The government has already implemented programs related to the utilization of yards. Government programs related to the use of yard land include: Family Medicinal Plants Program (TOGA) and Food and Nutrition Diversification Development Program (DPG). In order to maintain the sustainability of yard utilization, it is necessary to update the design of yard utilization by taking into account various programs that have been running such as the Acceleration of Food Consumption Diversification (P2KP) and the Women's Movement for Yard Optimization (GPOP). The government combines these programs so that the benefits can be felt directly by the community. The Ministry of Agriculture through the Agricultural Research and Development Agency in collaboration with communities in several regions in Indonesia initiated a program to utilize yards and narrow land as a place to produce food needed by Indonesian families.

Banjarwaru Hamlet, which is one of the hamlets of Gilangharjo Village, has a fairly large yard. The yard has not been maximally utilized with environmentally friendly TOGA cultivation methods. This certainly requires efforts to support the utilization of yard land so that it can be utilized properly by the community. National food security must start from food security at the household level. To meet food needs at the household level, it is necessary to utilize the surrounding environment, one of which is the home yard.

This service activity is in line with the 3rd and 5th Main Performance Indicators (IKU) of Higher Education. The 3rd KPI is that lecturers carry out activities outside the campus, in this case lecturers carry out community service carried out in Banjarwaru Hamlet. The 5th KPI is the work of lecturers used by the community, namely in the form of ideas and thoughts in the development of environmentally friendly plant cultivation.

Population growth has an impact on land that is generally planted with medicinal plants has changed into housing buildings or others. This certainly causes the loss of medicinal plant habitat. In addition, easy access to health services has further reduced public interest in the use of traditional medicines sourced from plants. Public awareness of the role of medicinal plants for health needs to be increased. Good public knowledge of herbal medicines can certainly increase opportunities for farming medicinal plants (Trisnarningsih et al., 2019).

Cultivating medicinal plants can be done in the yard or house yard. Apart from being a family medicinal plant (TOGA), it can function as a side business for housewives. Yard land has the potential to provide family food, reduce household expenditure on food purchases and increase household income, and can be utilized for the cultivation of medicinal plants. Efforts to increase public awareness to plant medicinal plants in the yard need to be socialized by the Government. This task is given to the PKK Team, through its cadres. Due to the increased knowledge of the cadres, it is hoped that they can inform other community members, so that public awareness of planting medicinal plants in the yard will increase (Firmansyah R., 2018).

Banjarwaru Hamlet, which is one of the hamlets of Gilangharjo Village, means a village that always preserves the potential of local culture with a populist economic framework and the spirit of mutual cooperation towards the realization of an independent and productive society through the fulfillment of basic rights. Currently, Gilangharjo Village is preparing to become a tourist village that has a variety of tourism potential

that should be juxtaposed with other tourist villages. The tourism potential includes culinary, home industry, handicrafts, historical sites, arts, culture and attractive rural natural scenery (Kalurahan Gilangharjo, 2024). This becomes interesting and useful if the Banjarwaru hamlet residents can utilize their land to cultivate medicinal plants in their yards.

Socialization and counseling on the utilization of yard land for family medicinal plants (TOGA) with environmentally friendly cultivation techniques, will increase the knowledge of the Banjarwaru Hamlet community, especially mothers who are members of the Family Welfare Development Movement Team (TP-PKK). So that the mothers will be encouraged to start making TOGA in their yard. As PKK cadres, these mothers are also expected to pass on their knowledge to other mothers in their area. The impact is that more and more mothers will plant TOGA.

METHOD

The approach methods used to support the realization of this Community Service activity include:

- a. Approach with the Head of Hamlet/RT Banjarwaru, Gilangharjo Village, Pandak Sub-district, Bantul, Yogyakarta to provide information and permission to the proposer to conduct Community Service.
- b. Initial observation of field and environmental conditions to find out the real situation of the location and map the target area of the field related to community service.
- c. Training was conducted by providing materials and direct discussion with the community. Training materials were delivered at community meetings and continued with discussions and questions from the community. The material to be delivered is the utilization of the house yard in TOGA cultivation can improve the level of public health. With the presence of TOGA in each house, it is hoped that the community will have the ability and awareness to use herbs, especially for first aid treatment. In addition, it is also related to environmentally friendly TOGA cultivation techniques. The technique demonstrated in this community service activity is related to planting medicinal plants using planting media with organic fertilizers that have been made using eco-enzymes.

In this extension service, we will see the understanding and behavior of the community by using a posttest related to TOGA and its environmentally friendly cultivation techniques. Community assistance in forming cadres or Agents of Change (AoC) to train the community to be able to independently improve the level of quality of life and health in their environment.

d. Distribution of door prizes to participants who can answer questions related to the socialization material that has been delivered about the use and handling of drugs.

RESULTS AND DISCUSSION

Community service activities with counseling to the community in utilizing yard land for family medicinal plants (TOGA) with environmentally friendly cultivation techniques were carried out on Sunday, May 06, 2024 in Banjarwaru Hamlet, Gilangharjo Village, Pandak District, Bantul, Yogyakarta. The total number of participants who attended this activity was 26 people consisting of PKK cadre mothers. Photo of counseling participants can be seen in Figure 1. Distribution of Respondents' Answers about TOGA Service in this counseling can be seen in Table 1.



Figure 1. TOGA Counseling Participants

The activity began with participants filling out a questionnaire to measure the level of knowledge and attitude of the community about TOGA cultivation. Furthermore, explanations were given by pharmacist presenters about the meaning of the abbreviation TOGA, the functions and benefits of TOGA, the prospects of medicinal / herbal plants in the era of global health, examples of TOGA plants that can be cultivated along with the benefits of these medicinal plants. In addition, material related to the correct TOGA Cultivation Technique was also presented by presenters from Agriculture.

TOGA is a family medicinal plant that was formerly referred to as “Living Pharmacy”. TOGA is a family medicinal plant that was formerly referred to as “Living Pharmacy”. TOGA or Family Medicinal Plants is a group of plants with medicinal properties for health that are arranged into a garden and have beauty value (PermenKes No.9, 2016).

TOGA has several functions including,

- a. To mobilize the community to carry out self-care
- b. Increasing family nutrition intake
- c. Beautification and greening of the environment
- d. Preservation of the nation's cultural heritage
- e. Exploration of local plant species native to the local area / rare plants with medicinal properties
- f. As a means or medium of education about traditional medicine
- g. Development of family innovation in processing medicinal garden products
- h. Increase family income

In addition, PkM participants were also informed about the benefits of TOGA such as:

- a. Increasing endurance so as not to be susceptible to disease (promotion)
- b. Preventing disease (preventive) and or health risks and the further impact of certain diseases
- c. Overcoming minor health complaints and or first aid efforts against an illness (curative)
- d. Recovery and health care, improving health and fitness (rehabilitative)

Some examples of family medicinal plants include ginger, turmeric, lemongrass, bay leaves, cat's whiskers, aloe vera, peppermint, garlic, and many more.

Here is a photo of the TOGA socialization activity (Figure 2).



Figure 2. TOGA socialization

At the end of the session we conducted a posttest to the respondents regarding their experience and knowledge about TOGA. There were 12 questions that we gave through the questionnaire. The questions are as in Table 1.

Table 1. Distribution of Respondents' Answers about TOGA Devotion

No	Questions	Agree (N;%)	Disagree (N;%)	Don't know (N;%)
1	I have received information and training on family medicinal plant cultivation.	26 (100%)	0 (0%)	0 (0%)
2	Medicinal plants (ginger, turmeric, lemongrass, bay leaves, and the like) can boost the immune system and prevent disease.	26 (100%)	0 (0%)	0 (0%)
3	Every family should plant medicinal plants in their yard.	26 (100%)	0 (0%)	0 (0%)
4	I have planted medicinal plants in the yard	26 (100%)	0 (0%)	0 (0%)
5	Cultivating family medicinal plants in the yard requires a lot of money	2 (7.7%)	23 (88.5%)	1 (3.8%)
6	Cultivating family medicinal plants (TOGA) in the yard is easy to do	26 (100%)	0 (0%)	0 (0%)
7	TOGA cultivation can reduce family expenditure on medicine and vitamins.	26 (100%)	0 (0%)	0 (0%)
8	The training materials presented are useful for the community	26 (100%)	0 (0%)	0 (0%)
9	The material presented is relevant to the needs of the community	26 (100%)	0 (0%)	0 (0%)
10	I need further information/training on cultivation and processing of family medicinal plants	26 (100%)	0 (0%)	0 (0%)
11	This training motivated me to grow family medicinal plants.	26 (100%)	0 (0%)	0 (0%)
12	I have learned about the use of eco enzyme in the cultivation of family medicinal plants	24 (92.3%)	1 (3.8%)	1 (3.8%)

The results in Table 1 show that most of the people in Banjarwaru Hamlet, Gilangharjo Village, Pandak Sub-district, Bantul, Yogyakarta agreed that TOGA has a good impact on the community. This practice not only encourages self-reliance, but also contributes to a healthier lifestyle and potentially reduces medical costs.

Cultivating these TOGA at home can be a rewarding and cost-effective way to maintain a natural remedy supply for common health issues. They can be grown in a garden, backyard, or even in pots indoors, depending on the plant's specific requirements and the available space. It's essential to research each plant's cultivation requirements, including soil, sunlight, water, and temperature needs. Additionally, understanding the proper harvesting and processing methods is crucial to maximize the plant's medicinal properties. Overall, incorporating family medicinal plants into your home garden can not only provide access to natural remedies but also foster a deeper connection with nature and promote self-sufficiency in healthcare.

Research on family medicinal plants encompasses various aspects, including their therapeutic properties, cultivation techniques, processing methods, and potential applications in healthcare. Research on family medicinal plants contributes to our understanding of their therapeutic potential, cultivation practices, and applications in healthcare, ultimately supporting their integration into modern medicine and promoting sustainable health practices. Such as some research by about medicinal plants around the community that are efficacious and have been carried out up to the stage of pre-clinical trials to the clinic (Damarwati et al., 2022; (Wahid & Darmawan, 2023)(Purwaningsih et al., 2022).

CONCLUSION

Based on the results of educational counseling activities and discussions, it can be concluded that most residents agree on the benefits and importance of TOGA and proper cultivation techniques in their yards, especially in Banjarwaru Hamlet, Gilangharjo Village, Pandak District, Bantul, Yogyakarta.

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