

The Making of TOGA (Family Medicinal Plants) and Its Utilization in Improving Public Health in Sumbergede Village

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Abstract

Family Medicinal Plants (TOGA) are plants that are grown in the yard and are efficacious as medicine. The plants planted in the mini garden are telang flowers, red binahong, and kumis kucing. The manufacture of TOGA serves as a means to bring medicinal plants closer to public health efforts, which include preventive efforts (prevention), promotive efforts (improving health degrees), and curative efforts (curing diseases). Based on the problems and potentials owned by Sumbergede village, Wringinanom District, Gresik Regency, several stages are carried out, namely coordinating the creation of a mini toga garden with the head of Sumbergede village, conducting a survey of the location where the TOGA mini park will be made, Preparing tools and materials to create a TOGA mini garden, Making a TOGA mini garden. The educational participants seemed enthusiastic about participating in this activity. Some participants were able to identify the types of TOGA around their homes and were motivated to add other kinds of TOGA. The use of TOGA is considered safer, more practical, and does not require much cost than the use of drugs from pharmacies. Through this activity, it is hoped that the community can be motivated to plant TOGA around their homes and increase the use of TOGA in the treatment of diseases with mild symptoms in the community. Family medicinal plants are very important because they concern the health aspect of the community of Sumbergede village.

1. Introduction

Sumbergede is one of the parts of Wringinanom District, Gresik Regency, East Java, precisely at the very end of Wringinanom District. The people of Sumbergede village have various kinds of work patterns, ranging from civil servants, traders, entrepreneurs, and farmers. The income of the people is also very diverse according to their respective jobs. Social groups in Sumbergede village have various activities, including youth organizations, elderly groups, and pregnant women's groups.

The people in Sumbergede village have various kinds of health problems. Common health problems are osteoarthritis (bone pain), cholesterol, gout, and hypertension. Some of these problems can be overcome by using family medicinal plants (Alqamari, 2018). However, in Sumbergede village,

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precisely next to the village hall, there is a large lake next to which there is vacant land, so it can be used to make a TOGA mini park.

Family Medicinal Plants (TOGA) are plants that are grown in the yard and are efficacious as medicine. Family medicinal plants are categorized into three groups. Traditional medicinal plants are plants that are known and believed by certain people to have medicinal properties and have been used as raw materials for traditional medicine. Modern medicinal plants are plants that have been scientifically proven to contain compounds or active ingredients that are efficacious as drugs, and their use can be medically responsible. Potential medicinal plants are plants that are suspected of containing or have active compounds with medicinal properties but have not been scientifically and medically proven to be used as medicinal ingredients (Hidayat, 2008).

The use of medicinal plants can directly improve the body's immunity and nutritional status, reduce cholesterol levels, uric acid, and bone pain, and as a means of nature conservation, greening and beauty movements. The cultivation of medicinal plants on vacant land is known as the toga garden, which is productive in meeting the needs of the community for medicines so that they are more independent and not dependent on synthetic drugs. For this reason, it is necessary to understand how to cultivate medicinal plants to create an environmentally friendly garden.

The manufacture of TOGA serves as a means to bring medicinal plants closer to public health efforts, which include preventive efforts (prevention), promotive efforts (improving health degrees), and curative efforts (curing diseases). With the existence of family medicinal plants, it can overcome the health problems faced by the community. This shows that medicines derived from natural sources, especially plants, have shown their role in the implementation of public health efforts (Alqamari, 2017). Therefore, the service activities carried out are to create a family medicinal plant garden (TOGA) and provide education on how to care for medicinal plants that have been planted to people living in the Sumbergede area.

2. Method

Based on the problems and potentials owned by Sumbergede village, Wringinanom District, Gresik Regency, several stages are carried out, namely coordinating the creation of a mini toga garden with the head of Sumbergede village, conducting a survey of the location where the TOGA mini park will be made, preparing tools and materials to create a TOGA mini park, making a TOGA mini park. After going through several stages, the steps that we took during the implementation of the creation of the mini toga garden and education on how to care for the toga can be stated as follows, namely, the implementation of this program with the method of lectures, discussions, field practices, demonstrations, and evaluations, as well as the handover of the mini toga garden to the village represented by the village head.

3. Result and Discussion

Family Medicinal Plants (TOGA) are plants that are planted in the yard, garden, or a plot of land that is used for plant cultivation that is efficacious as a medicine in order to meet the family's needs for medicines (Sari, 2019). The implementation of this service activity has been carried out in August – September 2024, all carried out in accordance with the plan that has been prepared. PKK women, the Sumbergede Village Community, assisted in this activity. The creation of the TOGA mini garden was made on Friday, August 30, 2024. The plants planted in the mini garden are telang flowers, red binahong, and kumis kucing. With the procurement of plants and the use of TOGA, 80% of the knowledge the community about the efficacy of various types of medicinal plants and their good planting procedures, as well as the skills of processing TOGA plants. After the TOGA Mini Park Creation activity was carried out next to the big lake in Sumbergede village, the big lake looked very beautiful because of the TOGA mini park that had been arranged and given a banner board.

Preparations for the implementation of the activity have been carried out one week before this activity is carried out. The preparations made were by conducting an initial survey related to TOGA plants which are many around residential areas. Furthermore, a search was carried out related to the types of

diseases that occur in Sumbergede village and then selected the type of TOGA plant that is suitable for the treatment of the disease. The group continued preparations by holding a meeting related to the selection of TOGA plants and compiling educational materials in accordance with the facts obtained in the field. All TOGA plants were obtained from the Miru Driyorejo area. This activity was carried out by involving PKK women. The activity began with cleaning the grass, planting TOGA, then installing banner boards and ending with the provision of education carried out in the mini garden. The education was carried out by one of the students who was in charge of the activity. The education began with an opening greeting, followed by an oral evaluation related to the types and uses of TOGA, the handover of the TOGA mini garden, a question and answer session, and ended with an oral final evaluation. The implementation of education went well in accordance with the schedule that had been prepared previously. Providing related education.

TOGA is considered to have had a positive impact on the community. Public knowledge in the Sumbergede environment related to the use of TOGA has been proven to increase where education participants can identify well the types of TOGA planted types of diseases that can be treated using TOGA. The educational participants seemed enthusiastic about participating in this activity. Some participants were able to identify the kinds of TOGA around their homes and were motivated to add other types of TOGA. The plants that we have planted in the TOGA mini garden experience very fast growth due to the maximum care process. The telling flower has grown from 30 cm to 60 cm within 2 weeks. Then, the red binahong experienced growth ranging from 15 cm to 25 cm within 1 week. Then, the kumis kucing experience growth ranging from 25 cm to 30 cm.

According to the Ministry of Health of the Republic of Indonesia in 2011, in general, TOGA provides many benefits in terms of health, environment, economy and socio-culture. In the Health Aspect, TOGA, which plays a role as a traditional medicine is widely used as an effort to prevent and control diseases. Many TOGAs are very useful in reducing the morbidity and mortality of a disease such as hypertension. In the Environmental Aspect Currently, many plant-based simplicia come from wild plants which, if not cultivated, will become extinct and the extinction will become extinct. By encouraging the planting of medicinal plants, it also promotes greening. Tall and well-organized medicinal plants can provide beauty to the environment. From the Economic Aspect, medicinal plants can increase the income of the village community because by planting these medicinal plants, the community can use the plant as medicine. Still, the medicinal plant can be sold so as to increase income. Besides that, the medicinal plant can be processed more than dahlia, such as making sachets, so as to increase the value of sale. From the Socio-Cultural Aspect, the Planting of TOGA is an effort to preserve ancestral culture in maintaining and maintaining community culture. The success of the implementation of this community service can be seen from the achievement of the target, namely the involvement of the people of Sumbergede Village, who are enthusiastic about accepting students participating in KKN. The evaluation of the KKN activity program to the community is carried out starting from planning, implementation, and evaluation of results.



TOGA Mini Garden Results



Making a Brick Road to Telaga Gede



Telang Flower Plant



Cat Whisker Plant

Family Medicinal Plants (TOGA) are plants that are traditionally used as home remedies. In Indonesia, TOGA has an important role in alternative medicine. The following is a discussion of the three toga plants explained:

Telang Flower

Telang flower (*Clitoria ternatea* L.) is one of the plants belonging to the Fabaceae family. Fabaceae is a member of the Fabales nation that has the characteristics of a pod-type fruit that comes from the tropics of Southeast Asia. Its widespread causes Fabaceae plants to be widely used for food, feed, greening, and traditional medicine (Fikayuniar et al., 2023). The Telang flower plant (*Clitoria ternatea* L.) is one of the plants that have antioxidant activity. Phytochemical screening shows that the plant contains tannins, carbohydrates, saponins, alkaloids, triterpenoids, flavonoids, and steroids. From the results of various studies, *Clitoria ternatea* has pharmacological influence as an antimicrobial, antiparasitic, anti-inflammatory, antioxidant, antidepressant, and antidiabetic, and has the potential to play a role in the nervous system (Khasanah et al., 2021).

The telang flower (*Clitoria ternatea* L.), referred to as the butterfly pea, is a typical flower with a single purple petal, but is also found in pink, light blue, and white (Kazuma, 2013). There are several benefits of telang flowers, including curing diseases, as the leaves contain kaempferol-3-glucoside, triterpenoids can be used to treat ulcers, ulcers, coughs, scabs, the root contains toxic substances that are laxative, diuretic, emetic stimulant and blood purifier. At the same time, the seeds are useful for deworming and mild laxatives, as well as the flowers contain flavonoids and polyphenols that can be used to treat mucous membrane inflammation eye and bronchitis (Hanani, 2015).

Cat Whiskers

The whiskered cat belongs to the Labiatae family, with the scientific name *Orthosiphon aristatus* (Blume) Miq. Cat whiskers are one of the medicinal plants that are highly productive in traditional medicine, wet and dry cat whisker leaves are useful for use as medicinal ingredients. People use cat whiskers in an effort to cure coughs, gout, colds, and constipation. Cat whiskers are also beneficial for the treatment of kidney inflammation and kidney stones. The chemical content contained in the kumis kucing includes potassium salts, saponins, alkaloids, essential oils, glycosides, orthosiponin, tannins, flavonoids, organic acids, terpenoids (Adnyana et al., 2013). Cat whiskers are also used as antioxidants, antiangiogens, and anticancer (Hadiyanti & Mariyono, 2019).

Red Binahong

In traditional medicine, binahong plants have many properties, including being able to cure diabetes mellitus, dysentery, ulcers, gout, and hemorrhoids, heal wounds, shortness of breath, cough, and broken bones, and increase stamina. They can cure acne (Marzuki & Nova, 2018). According to (Sumayyah &

Salsabila, 2017), The use of traditional medicine is considered safer than modern medicine. This is because traditional medicine has relatively fewer side effects than modern medicine. However, precision is still needed in the use of traditional medicine to minimize its side effects. Meanwhile, the use of binahong plants for herbs is enough to use only the leaves of the binahong plant without having to use other additives. Usually, binahong leaves are concocted by boiling, brewing like tea, pounding, and some even consume it as a dish as desired (Kurnia & Atifah, 2023).



a. Telang



b. Kumis Kucing



c. Binahong

Question	Pretest		Posttest		Information
	Yes	No	Yes	No	
1. Do you know about the plant "TOGA"?	100%	No	yes	No	Knowledge goes up
2. Do you have a "TOGA" plant at home?	75%	25%	100%	0%	Knowledge goes up
3. Do you know the benefits of the plant "TOGA"	95%	5%	100%	0%	Knowledge goes up
4. Do you feel that the plant "TOGA" is effective as a natural remedy?	95%	5%	100%	0%	Knowledge goes up
5. Have you ever attended training or socialization about the "TOGA" plant?	40%	60%	100%	0%	Knowledge goes up

Based on the results of the pretest data, many already know about TOGA and its benefits, although there are still many who have never participated in socialization about TOGA. Meanwhile, the results of the post-test data showed interest in adding or planting TOGA around their homes. In addition, they now better understand the importance of caring for and planting TOGA in their home environment

6. Conclusion

The use of TOGA as a drug that is ready to be consumed can be done as long as the TOGA is available around residential areas. The use of TOGA is considered safer, more practical, and does not require much cost than the use of drugs from pharmacies. Through this activity, it is hoped that the community can be motivated to plant TOGA around their homes and increase the use of TOGA in the treatment of diseases with mild symptoms in the community.

Author Contributions

Oktafia Damayanti: Writing- Original draft preparation, Ramadhan Maulana Putra: Writing- Original draft preparation, Arista Wahyu Ningsih: Conceptualization, Methodology, Software, Ivan Charles: Validation, Dewi Rahmawati: Validation, Yani Ambari: Validation, Bella Fevi Aristia: Supervision, Farida Anwari: Writing- Reviewing and Editing, Elis Anita Farida: Writing- Reviewing and Editing, Nungky Tantiasari: Writing-

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