

Utilization of Binahong Leaves (*Anredera Cordifolia*) as Traditional Medicine

Salmah Orbaniyah^{1}, Pinasti Utami², Kintoko³*

^{1,2}Department of Pharmacy, Faculty of Medicine and Health Science, 55183 Universitas Muhammadiyah Yogyakarta, Indonesia

³Department of Pharmacy, Faculty of Pharmacy, 55164 Universitas Ahmad Dahlan, Indonesia

Abstract: The use of natural materials as medicine tends to increase with the issue of back to nature and prolonged crises that result in a decrease in people's purchasing power for modern drugs which are relatively more expensive. Binahong plant (*Anredera cordifolia* (Ten.) Steenis) is one plant that can potentially be an alternative in overcoming hypercholesterolemia. Herbal tea bags are practical drink ingredients that easy to make at a cost that is not too expensive. Therefore, the use of binahong leaves for tea bags becomes very possible with the intention to lower cholesterol and blood sugar levels in people suffering from hypercholesterolemia and diabetes mellitus. This dedication intends to provide counseling about the benefits of binahong leaves for health and training in making tea bags from binahong leaves. The results of the study went smoothly, safely and orderly. The activity was held on Wednesday, March 8, 2023 with participants consisting of PRA Argorejo Sedayu Bantul, PRA Kauman and all Aisyiyah Central Leadership Staff and the surrounding community with a total of 36 participants. The activity began with an opening, and followed by remarks from the head of service. Furthermore, the first material was the Utilization of Traditional Medicine, followed by the material on the use of binahong leaves as a traditional medicine, and then continued the practice of making tea bags from binahong leaf powder.

Keyword: Binahong, hiperkolesterolemia, Diabetes mellitus, Tea bags, stir-fry

1 INTRODUCTION

According to data from the International Diabetes Federation (IDF), the number of diabetics in Indonesia in 2021 reached 19.5 million people. In fact, in 2019 the figure was 10.7 million. This indicates that there was an increase of almost 9 million in just 2 years or right during the Covid pandemic. With the addition of almost 2 times, it causes Indonesia to be ranked 5th most cases of diabetes in the world. Hypercholesterolemia was an undiagnosed, autosomal dominant disorder, generally affecting 1 in 220 people worldwide [1]. It is characterized by an increase in low-density lipoprotein cholesterol (LDL-C). If left untreated, it can lead to early atherosclerosis, an increase in cardiovascular risk factors and fatal or nonfatal heart disease by 30% to 50% at age 50 for men and 60 years for women [2].

The use of natural materials as medicine tends to increase with the issue of back to nature and prolonged crises that result in a decrease in people's purchasing power for modern drugs which are relatively more expensive. Binahong plant (*Anredera cordifolia* (Ten.) Steenis) is one plant that can potentially be an alternative in overcoming hypercholesterolemia [3]. Binahong leaves contain saponins, alkaloids, polyphenols, flavonoids and monopolisaccharides belonging to the L-arabinose, D- galactose, L-rhamnose, D-glucose groups. Flavonoid compounds found in binahong leaves are natural phenolic compounds that have the potential as antioxidants, where antioxidant compounds

* Corresponding author: orbayinah_salmah@umy.ac.id

can ward off free radicals [4]. According to research conducted by [5], the entire dosage variation of binahong leaf extract showed a good effect in lowering total cholesterol and blood glucose levels. This dedication intends to provide counseling about the benefits of binahong leaves for health and training in making tea bags from binahong leaves. This service activity was carried out in Sedayu District, Bantul with participants consisting of PRA Argorejo Sedayu Bantul, PRA Kauman and all Aisyiyah Central Leadership Staff and the surrounding community with a total of 36 people.

Sedayu District is located in Bantul Regency which borders Sleman Regency and Kulon Progo Regency. Sedayu District is located in the northwest of the capital city of Bantul. The administrative area of Sedayu District includes 4 villages: Argodadi Village, Argorejo Village, Argosari Village and Argomulyo Village. Based on observations that have been made, it turns out that many binahong plants (*Anredera cordifolia*) grow in the yards of community houses, especially in Argorejo village, which can be used as medicine. However, local people do not know the benefits of binahong plants (*Anredera cordifolia*) which can be traditional medicine.

Binahong plant (*Anredera cordifolia*) is a potential medicinal plant that can overcome various diseases. This plant belongs to the family Basellaceae originating from mainland China (China) with its original name is *Dheng shan chi*. In Indonesia this plant is not widely known, while in Vietnam this plant is a mandatory food for the people there. Binahong (*Anredera cordifolia*) grows creeper and can reach 5 meters in length, soft stems in cylindrical shape and in between the leaves and stalks there are like leathery textured tubers.



Figure 1. Explanation to the community about binahong leaves

The leaves are single and have short, interspersed and heart-shaped peduncles. The leaves are between 5-10 cm long and have a width of between 3-7 cm. All parts of the binahong plant can be utilized, starting from the roots, stems, leaves, bulbs and flowers. The plant is rooted in the shape of a rhizome and soft flesh. The stem is soft, cylindrical, intertwined, red in color, the inside is solid, single-leaved peduncles very short. The benefits of these chemicals can help various diseases heal. The chemical content of Binahong is flavonoids, oleanolytic acid, protein, ascorbic acid, and saponins.

2 Methodology

Community service activities was carried out for housewives partners in Argorejo Sedayu Bantul. Activities are carried out in coordination with PKK mothers. The methods used in this community service are the methods of Counseling, Discussion and Practice. During the activity, counseling materials were presented with a time allocation of 30%, while 70% was for discussion and practice, so that the participants were more active and the activity as a whole became livelier. The stages of service implementation are as follows:

1. Planning the Community Service Team that coordinates with the Chairman of the PKK to prepare a plan for the implementation of activities which include counseling, discussion and training.
2. The implementation of the delivery of counseling materials is carried out by the Community Service Team and collaborates with PKK devices in providing facilities and infrastructure. This counseling activity was divided into two sessions, namely material delivery sessions and discussion and practice sessions.
3. Participants are divided into two groups.
 - a. The first group practices making binahong leaf tea bags
 - b. The second group practices making stir-fried binahong leaves

The evaluation of the implementation of activities includes 2, namely first cognitive test through MCQ and second assessing the taste and appearance of tea bag practice and stir-fried binahong leaves.

3 Results and Discussion

This dedication intends to provide counseling about the benefits of binahong leaves for health and training in making tea bags from binahong leaves and making stir-fried binahong leaves. The output target to be achieved at this service is the publication of the results of service in community service journals at least sinta 3 and also on social media in the form of videos and writing.



Figure 2. Weighing of Binahong Leaf Herbal Tea Bags

The partners involved are community members in the Sedayu area, especially Argorejo village who are members of the housewives group. The problems that exist in partners today include:

1. Low public knowledge about the use of Binahong plants.
2. Not all residents have Binahong plants in their yards.
3. There is no extension program on the use of Binahong plants, among others, for making tea bags and stir-frying binahong leaves

The activity was held on Wednesday, March 8, 2023 with participants consisting of PRA Argorejo Sedayu Bantul, PRA Kauman and all Aisyiyah Central Leadership Staff and the surrounding community with a total of 36 participants. The activity began with an opening, followed by remarks from the head of service. Furthermore, the first material was the Utilization of Traditional Medicine, followed by the material on the use of Binahong Leaves as a traditional medicine, and then continued the practice of making tea bags from binahong leaf powder. Evaluation of pre and post tests showed a significant increase in understanding of 60%. The practice of making binahong tea bags became an interesting thing for participants. Most participants want a follow-up of activities, namely leading to entrepreneurship so as to increase income from the community.



Figure 3. Explained about binahong leaves

Pre and post-test activities resulted in a 60% increase in comprehension, namely Pre-test about 75.308 and post-test about 79.310. The number of participants was 36 participants and all were active. The practice of making tea bags was followed enthusiastically. Participants were divided into 3 groups, group 1 made tea bags with a dose of binahong powder of 2 grams. Group 2 is mixed with Rosela in the ratio of binahong 0.5 and roselle 1.5 grams. Group 3 with a ratio of binahong 1.5 and roselle 0.5 grams. All participants listened carefully.

4 Conclusions

The implementation of community service activities is expected to provide the best results for the target communities subjected to the program. Based on the problems that have been described, the right solution offered is to provide knowledge in the form of counseling and training on the use of Binahong plants as traditional medicine that will be made drinks and stir-fried binahong leaves.

The targets that can be given to solve the problems that have been described in the partner problem are as follows:

- a. The first problem: Low public knowledge about the use of Binahong plants. The way to overcome this is to involve the community in counseling, discussion and practice related to Binahong plants.
- b. Second Problem: Not all residents have Binahong plants in their yards. The way to overcome this is to involve the community in counseling, discussion and practice related to Binahong plants, including how to grow Binahong plants.
- c. Third problem: There is no extension program on the use of Binahong plants, among others, for making tea bags and stir-frying binahong leaves. The way to overcome this is to teach tea bag making and binahong leaves stir-fry making.

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