

## Training on Making Avocado Leaf Stew (*Persea americana* Mill.) in Socah Village, Bangkalan Regency

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### ABSTRACT

The higher prevalence of hypertension in Indonesia is directly proportional to the high cost of treatment. Training on making avocado leaf infusions in Socah Village, Bangkalan Regency, can be an alternative therapy for lowering blood pressure and help the government indirectly handle health and economic issues. This activity uses the lecture method and direct practice, involving ten people from the community who are willing to become participants. The implementation will occur from February 11 to July 16, 2023, beginning with a lecture, followed by direct practice and follow-up activities. Overall, this community service shows good results because of the enthusiasm of the people who are expected to be able to apply it in their daily lives. It was concluded that the people of Socah Village, Bangkalan Regency, could make an infusion of avocado leaves after going through training.

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## **INTRODUCTION**

Hypertension is responsible for 12.8% or 7.5 million deaths worldwide (Suhadi R et al., 2016). Hypertension is a disease proven in several studies as one of the main determinants of increasing cardiovascular risk (Bekki H et al., 2010). The results of the 2018 Basic Health Research (Riskesdas) show that the prevalence rate of hypertension in the population aged over 18 years in Indonesia is 34.1%; this prevalence is much higher than the figure shown in the 2013 Basic Health Research (Riskesdas) results of 25.8%. That is, the prevalence of hypertension continues to increase every year. Based on the highest prevalence, East Java Province is in sixth place (RI Ministry of Health, 2019). One of the districts in East Java Province that has experienced an increase in the prevalence of hypertension is Bangkalan Regency, which is 22% to 35%, from 2013 to 2018 (Ministry of Health RI, 2018). Socah Village is located in Bangkalan Regency, where people still need health-related education. After making observations through blood pressure checks, data was obtained that many people in Socah Village had high blood pressure. However, the exact percentage could not be determined because, of course, a survey that was focused on this topic was needed.

The cost of treating people diagnosed with hypertension is high because they have to take medicines for life to maintain their quality of life. The financial costs associated with hypertension continue to increase (Tsuji RLG et al., 2012). So we need a solution from the community itself so that they can maintain blood pressure at normal limits at a more economical cost. As we know, Indonesia is a country rich in natural resources, so many selected plants can be used to treat hypertension, including avocado leaves (Rachdian, 2011). Several studies have shown that blood pressure decreases after instilling avocado leaves, especially if the administration is done consistently (Ayu SK et al., 2017). The problem that occurs in the community is their ignorance in utilizing avocado leaves that are around. Therefore, we are interested in conducting training on making avocado leaf infusions in Socah Village, Bangkalan Regency.

## **IMPLEMENTATION AND METHODS**

A team of lecturers and students from the Yannas Husada Bangkalan Pharmacy Academy carried out this community service activity. The activity implementation uses the lecture method and direct practice involving ten community members willing to participate. The implementation will occur from 11 February to 16 July 2023, beginning with outreach, then direct practice and follow-up activities. Before deciding to conduct training in Socah Village, observations were made through blood pressure checks. Observations were made in February.



Figure 1. Observation through Blood Pressure Examination

The first stage introduces community service activities, which are hoped to run consistently and sustainably in the following years, with different themes. At this stage, it is also at the same time providing education about avocado leaf infusion, blood pressure, and hypertension. This stage is carried out in March.

The second phase, practices involving direct community participation, was carried out in April. This stage is the most core stage of community service because through this stage, the team of lecturers and students also conduct training and assistance to the community, and it is hoped that the community will not only gain knowledge but also be able to apply it in their daily lives. At this stage, a team of lecturers and students directed the participating community to make avocado leaf infusion tea. Here are the steps that must be done:

1. Prepare tools and materials.
2. Shred the avocado leaf *simplicia* using a blender.
3. Weigh the shredded leaves using a digital scale covered with parchment paper, and weigh as much as 2 grams.
4. Do it like that and so on until the results of the pieces run out.
5. Put it into a tea bag.
6. Each bag is paired with a thread.
7. Put 14 tea bags in the packing bag (primary packaging).
8. Each primary packaging is packed using secondary packaging.



Figure 2. Shredded Avocado Leaves



Figure 3. Tea Bags, Threads and Tea Tags



Figure 4. Primary Packaging



Figure 5. Secondary Packaging

After finishing the process of making avocado leaves infusion tea, the team of lecturers and students explained how to consume the avocado leaves infusion tea to the public, viz:

1. Take a bag of avocado leaves infusion tea, then brew it with 200 mL of boiling water. Let it be immersed for 10 minutes.
2. After 10 minutes, remove the tea bag, and the infusion tea is ready.
3. The avocado leaves infusion tea is taken twice daily for seven days.

The third stage was to follow up on making avocado leaf infusion, which was carried out in May, June and July. At this stage, the team of lecturers and students entrusted the community with making the infusion of avocado leaves without assistance, and a return visit was made to see the results of making the infusion of avocado leaves at the end of each month.

## RESULTS AND DISCUSSION

Community service in the form of training on making avocado leaf infusions in Socah Village, Bangkalan Regency, was conducted for six months, from February to July 2023. As many as ten community members participated in a series of activities from start to finish.

At the socialization stage, the lecturer team explained the effect of avocado leaf infusion on lowering blood pressure. Avocado leaves infusion tea can lower blood pressure because they contain active substances called flavonoids and quercetin. The flavonoids function as an antioxidant that can counteract free radicals in the body, breaking down atherosclerotic plaques that interfere with blood flow so that blood flow is smooth and blood pressure decreases or standard. In contrast, quercetin relaxes the arteries' muscles and helps dilate blood vessels (Lianti, 2014). Aside from being an antioxidant, the flavonoids in avocado leaves also function as a diuretic, which works by removing excess water and sodium through the excretion of urine (Sulistiawati AAAN et al., 2015). The blood vessels will loosen because of the reduced amount of water and sodium in the body, slowly decreasing blood pressure. Flavonoids' action promotes blood circulation and prevents blockage in blood vessels (Margowati S et al., 2016). In the second stage, namely direct practice, there was enthusiasm from the community to understand how to make steeping avocado leaves. Whereas in the final stage, namely the follow-up of the activity, the people who are participants all try to apply the knowledge gained even without assistance.



Figure 6. Avocado Leaves Tea in Tea Bags



Figure 7. Avocado Leaves Tea in Packaging

## CONCLUSIONS AND RECOMMENDATIONS

Training on making avocado leaf infusions tea in Socah Village, Bangkalan Regency, can stimulate community enthusiasm to take a role in treating hypertension. The people who participated in this community service activity were able to make steeping avocado leaves.

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