



Community Service Report

Evaluation of the Moringa Tea Demonstration as a Healthy Beverage for Hypertension Prevention

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ABSTRACT

Hypertension is one of the health problems still commonly found among the community of Dusun Peo, Belabori Village, Parangloe District, Gowa Regency. This activity aims to evaluate the demonstration of making moringa leaf tea as an effort to improve skills and the use of local food in hypertension prevention. The target of the activity was the community of Dusun Peo, totaling 31 people. The activity included identifying health problems, demonstrating the making of moringa leaf tea, as well as monitoring and evaluation six months after the intervention through observation, interviews, and a skills checklist. The evaluation results show that 18 respondents (58.1%) gave a positive response to the demonstration of making moringa leaf tea. The community's skill level in making moringa leaf tea was in the very good category for 15 respondents (83.3%) and the good category for 3 respondents (16.7%). This activity was able to improve community skills and interest in utilizing moringa leaves as a local food-based healthy beverage for reducing hypertension.

1. Introduction

Hypertension is one of the non-communicable diseases that remains a public health problem in various countries, including Indonesia. Hypertension occurs when a person's blood pressure persistently remains above the normal threshold, thereby increasing the risk of cardiovascular disease, stroke, kidney failure, and other health complications. Hypertension is often referred to as the silent killer because most sufferers are unaware of their condition until more severe complications arise. The high prevalence of hypertension indicates that this disease remains a serious

challenge in efforts to improve public health status, particularly among rural communities that have limited access to information and preventive health services.

According to the World Health Organization (WHO), an estimated 1.28 billion adults aged 30–79 years worldwide have hypertension, most of whom live in developing countries. In Indonesia, hypertension is also one of the diseases with a high prevalence. Based on the results of the 2023 Indonesian Health Survey (SKI), the prevalence of hypertension among the population aged ≥18 years remains fairly high and is one of the main risk factors for non-communicable diseases. The high incidence of hypertension indicates that sustainable prevention and control efforts are needed through community-based promotive and preventive approaches.

Hypertension is influenced by various risk factors, such as a diet high in salt and fat, insufficient physical activity, smoking, stress, alcohol consumption, and low consumption of healthy foods containing antioxidants and essential minerals. Besides lifestyle factors, the community's low level of knowledge about hypertension also affects disease prevention behavior. Some community members tend to seek health examinations only after experiencing certain symptoms, so hypertension control is often carried out too late. Therefore, community empowerment efforts are needed that not only focus on increasing knowledge but also encourage behavioral change through the use of local resources that are easily accessible and applicable in daily life.

One local potential that can be utilized in hypertension prevention efforts is moringa leaf (*Moringa oleifera*). Moringa leaves are known to contain antioxidants, flavonoids, vitamins, minerals, and potassium that have the potential to help maintain stable blood pressure and improve overall health. In addition to having high nutritional value, the moringa plant is also easily found and cultivated by rural communities. However, the use of moringa leaves in the community is generally still limited to being consumed as a vegetable and has not been widely developed into functional food products that support hypertension prevention, such as moringa leaf tea.

Several previous community service activities related to hypertension have mostly focused on health counseling, blood pressure examinations, and healthy lifestyle education. Meanwhile, the use of local food as a community-based promotive and preventive medium has not been optimally implemented. This condition indicates a gap in community-based hypertension control efforts, particularly in the development of simple innovations that make use of local potential and can be independently applied by the community.

Blood pressure measurement results in Dusun Peo show that 43 respondents (26.4%) fell into the pre-hypertension category, 31 respondents (19.0%) had stage 1 hypertension, and 34 respondents (20.9%) had stage 2 hypertension. In addition, evaluation results show that regarding community knowledge about hypertension, 38.7% of participants had a poor level of knowledge, while the remaining 61.3% already had sufficient knowledge about hypertension. However, this still needs to be improved through community-based health interventions; this community service activity aims to evaluate the demonstration of making moringa leaf tea as an effort to improve knowledge, skills, and the use of local food in hypertension prevention among the community of Dusun Peo, Belabori Village, Parangloe District, Gowa Regency.

The demonstration activity on utilizing moringa leaves into a healthy beverage was carried out as a form of practical education that is easy to prepare, inexpensive, and can be consumed

independently at home. The demonstration was conducted to improve community knowledge, skills, and interest in utilizing moringa leaves as an alternative herbal beverage to help prevent hypertension. This approach was chosen because it is based on the community's local potential, so that it is expected to be more easily accepted and sustainably applied.

The activity evaluation results show that the community gave a positive response to the demonstration of making moringa leaf tea. A total of 18 respondents (58.1%) stated that they were interested in the demonstration conducted. In addition, most respondents had a good level of skill in making moringa leaf tea, and several community members began trying to consume moringa leaf tea independently at home as part of a healthy lifestyle. These results indicate that the demonstration of making moringa leaf tea can be one form of community empowerment in the use of local food to support hypertension prevention.

2. Method

This activity uses the method of *Asset Based Community Development* (ABCD), an approach that focuses on utilizing the potential and assets owned by the local community. In this activity, the assets utilized include the availability of moringa plants as a local food source, the involvement of health cadres, and the active participation of the community in the demonstration and evaluation activities. This approach aims to increase community independence in utilizing local resources as an effort to improve health, particularly in reducing the incidence of hypertension.

This community service activity was carried out in three stages: stage 1, conducted on June 19–July 12; stage 2, on October 1–14; then, after 6 months, precisely on April 23–May 6, 2026, we returned to conduct an evaluation in Dusun Peo, Belabori Village, Parangloe District, Gowa Regency. The target of this activity was the community of Dusun Peo who participated in stage 1, totaling 31 people, and subsequently in stage 2 an evaluation of the moringa tea-making demonstration was carried out.

The implementation of the activity was carried out through several stages, namely the preparation stage, the demonstration implementation stage, and the activity evaluation stage. In the preparation stage, coordination was carried out with village officials and health cadres regarding the implementation of the activity. The implementation stage was carried out through a demonstration of making moringa leaf tea for the community using lecture methods, hands-on practice, and interactive discussion. Subsequently, the evaluation stage was conducted six months after the intervention through direct observation, brief interviews, and the completion of a skills checklist to determine the level of understanding, skills, and community interest in independently applying the making of moringa leaf tea at the household level.



Figure 1. Flowchart of the Community Service Activity

3. Results & Discussion

a. Problem and Community Potential Identification Stage (Stage I)

The initial stage of the activity was carried out through interviews and community data collection using the *KoBoToolbox* application. This activity aims to identify community health problems and local potential that can be utilized in health interventions. Based on the data collection results, a high incidence of hypertension was found among the community of Dusun Peo. In addition, community asset identification was carried out using the *Asset Based Community Development* (ABCD) approach. The assets identified included human resource (HR) assets, namely village cadres and the hamlet head; organizational assets in the form of the majelis taklim (Islamic study group); and building assets in the form of residents' houses and the mosque, which were used as venues for carrying out health activities. The potential of the moringa plant, which is easily found in the community environment, was also one of the local assets that supported the implementation of the moringa leaf tea-making demonstration intervention. Based on the results of community data collection using the *KoBoToolbox* application, a high incidence of hypertension was still found among the community of Dusun Peo, as presented in the following table

Table 1. Blood Pressure Data Collection Results for the Community of Dusun Peo, Belabori Village, Parangloe District, 2025

Health Problem	Data Collection Result
Pre-hypertension	43 respondents (26.4%)
Stage 1 Hypertension	31 respondents (19.0%)
Stage 2 Hypertension	34 respondents (20.9%)

Source: Primary Data 2025



Figure 2. Blood Pressure Examination



Figure 3. Data Collection

b. Program Planning and Implementation Stage (Stage II)

The program planning stage was carried out through coordination with the head of the hamlet, village cadres, and the community of Dusun Peo to determine the form of intervention appropriate to the community's health problems and local potential. Based on the discussion results, the demonstration of making moringa leaf tea was chosen as a form of utilizing the moringa plant into a healthy beverage. This activity involved 31 women from the majelis taklim (Islamic study group), with the implementation location at a resident's house used throughout the community service activity. In addition to helping with activity preparations, village cadres also played a role in re-delivering the educational material using the local language so that the community could more easily understand the benefits and process of making moringa leaf tea.

After the planning stage was completed, the activity continued with the implementation of the moringa leaf tea-making demonstration in Stage II. This demonstration activity was carried out as a form of education and community empowerment in utilizing the moringa plant as a nutritious local food. The demonstration was conducted directly so that the community not only obtained information regarding the health benefits of moringa leaves, but was also able to understand and practice the process of processing them into tea that can be consumed daily.

1) Moringa Leaf Washing Stage

The moringa leaves used were first washed with clean water to remove dirt attached to the leaves before further processing.

2) Moringa Leaf Drying Stage

The washed moringa leaves were then dried for approximately two days to reduce the moisture content of the leaves. This drying process aims to make the resulting tea color more concentrated and improve the tea quality when brewed

3) Moringa Leaf Tea Brewing Stage

The dried moringa leaves were placed into a glass and then mixed with honey as a natural sweetener. Honey was used because it contains antioxidants that are beneficial for health and can help boost the body's immune system. After that, boiling water was poured into the glass so that the resulting tea color would be more appealing and the aroma of the moringa leaves would be more pronounced

4) Stirring and Straining Stage

The moringa leaf tea was then stirred until evenly mixed and strained before consumption so that the leaf residue would not be consumed along with the tea.

c. Activity Monitoring and Evaluation Stage (Stage III)

The monitoring and evaluation stage was conducted in Stage III, namely six months after the implementation of the moringa leaf tea-making demonstration in Stage II. The evaluation was carried out through direct observation, interviews, and the completion of a checklist sheet for community members who had participated in the demonstration activity. This activity aims to determine the sustainability of understanding, skills, and community interest in independently applying the making of moringa leaf tea at the household level.

Based on the evaluation results using the checklist sheet, it was found that most community members gave a positive response to the moringa leaf tea-making demonstration activity. A total of 18 respondents (58.1%) answered “yes”, while 13 respondents (41.9%) answered “no”. These results indicate that the demonstration activity was reasonably well received and still remembered by the community even though the evaluation was conducted six months after the intervention.

Table 2. Monitoring and Evaluation Results of the Demonstration of Moringa Leaf Tea Making in Dusun Peo, 2026

Indicator	Frequency	Percentage
Respondent Feedback		
Yes	18	58.1%
No	13	41.9%
Total	31	100%
Skill		
Very good	15	83.3
Good	3	16.7
Total	18	100

Source: Primary Data 2025 & 2026

Based on Table 2, the monitoring and evaluation results conducted six months after the moringa leaf tea-making demonstration show that the activity carried out was well received by the community. A total of 18 respondents (58.1%) gave a positive response to the moringa leaf tea-making demonstration, while 13 respondents (41.9%) gave a negative response. These results indicate that more than half of the participants still remembered and had an interest in utilizing moringa leaves as a healthy beverage even though the activity had taken place several months earlier.

The positive response given by most respondents indicates that the moringa leaf tea-making demonstration is an educational method that is well received by the community. The demonstration allowed participants to directly observe each stage of making moringa leaf tea, making the information provided easier to understand compared to delivering the material verbally alone. The active involvement of participants during the demonstration process also helped increase community interest in utilizing moringa leaves as a healthy beverage. The demonstration method is known to improve participants' understanding and skills because it involves direct learning experiences, making the material delivered easier to understand and remember (Lai, C., 2024).

Nevertheless, there were still 41.9% of respondents who gave a negative response to the activity. This may be caused by the community's unfamiliarity with consuming moringa leaf tea, as well as their preference for beverages commonly consumed daily. Consumption habit is one of the factors that can influence a person's acceptance of new food innovations (Tuorila & Hartmann, 2020). Therefore, ongoing education and mentoring are needed so that the community becomes more accustomed to utilizing moringa leaves as an alternative local food-based healthy beverage.

In addition, the skills assessment results show that all respondents who applied the moringa leaf tea-making process had good skills. A total of 15 respondents (83.3%) were in the very good category and 3 respondents (16.7%) were in the good category. These findings indicate that the demonstration method used was able to help the community understand and practice the stages of making moringa leaf tea independently. The skills that persisted up to six months after the intervention indicate that the demonstration activity not only improved knowledge but also provided a practical experience that was easy to remember and apply by the community.

The success of this activity was also supported by the utilization of community assets through the *Asset Based Community Development* (ABCD) approach, such as the involvement of village cadres, women of the majelis taklim, and the utilization of moringa plants available in the surrounding environment. The involvement of village cadres in delivering the material using the local language helped improve community understanding, making the information provided easier to accept. Overall, the evaluation results indicate that the moringa leaf tea-making demonstration is an effective form of education in encouraging the use of local food as a healthy beverage alternative in the community

4. Conclusion

The community service activity through the moringa leaf tea-making demonstration in Dusun Peo succeeded in improving community skills and interest in utilizing moringa leaves as a local

food-based healthy beverage. The evaluation results conducted six months after the intervention show that 58.1% of respondents gave a positive response to the activity, and all respondents who applied the demonstration had skills in the good category (16.7%) and very good category (83.3%). These findings indicate that the demonstration method is effective in improving the community's ability to independently process moringa leaves and in encouraging the utilization of local potential to support public health.

As a follow-up, it is recommended that similar activities be carried out on an ongoing basis by involving village cadres and majelis taklim groups as educational agents in the community. In addition, the development of varied moringa leaf-based products is needed to increase community interest in consuming and utilizing moringa leaves as part of a healthy lifestyle

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