

## Prevention Of Hypertension Through The Use Of Moringa Leaves In The Elderly Of Kunduran Village

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**Abstract.** Hypertension is one of the most common health problems and a major risk factor for heart disease, stroke, and kidney failure. According to the results of a 2023 survey by the Indonesian Ministry of Health (Kemenkes), the prevalence of hypertension in people aged 18 years and older was recorded at 30.8%. Prevention of hypertension does not only depend on pharmacological therapy, but can also be done through non-pharmacological approaches such as diet management, physical activity, stress management, and the use of natural ingredients that have the potential to lower blood pressure. One herbal plant that has great potential in preventing hypertension is moringa leaves (*Moringa oleifera*). Moringa leaves are known to be rich in various nutrients and bioactive compounds, such as potassium, calcium, antioxidants, flavonoids, and polyphenols, which play a role in maintaining blood vessel health and helping to lower blood pressure. The antioxidant content in moringa leaves also serves to reduce oxidative stress, which often occurs in the elderly and contributes to the onset of hypertension. In addition to their high nutritional content, moringa leaves are easy to cultivate and can be processed in various forms, such as vegetables, herbal tea, or powder, making them practical for consumption by the elderly. The use of moringa leaves as a preventive measure against hypertension is expected to be a safe and sustainable natural solution, while also supporting community independence in maintaining health.

**Keywords:** *Utilization, Moringa Leaves, Hypertension.*

### INTRODUCTION

Hypertension is one of the most common health problems and a major risk factor for heart disease, stroke, and kidney failure. The increasing number of hypertension cases in Indonesia from year to year indicates that this disease remains a major challenge in efforts to improve public health. Changes in lifestyle, dietary habits, and the increasing consumption of high-salt foods and processed products are suspected to be the main triggers for the high incidence of hypertension.

Hypertension can lead to complications such as stroke, heart failure, coronary heart disease (CHD), kidney disorders, and others, which result in impaired function of vital organs such as the brain, kidneys, and heart, which can lead to disability and even death. Hypertension, also known as the silent killer, is one of the most influential risk factors for cardiovascular disease.

According to a 2023 survey by the Indonesian Ministry of Health (Kemenkes), the prevalence of hypertension in the population aged 18 and over was recorded at 30.8%. Hypertension management is carried out to reduce the risk of high blood pressure and its treatment. Hypertension management includes non-pharmacological efforts (lifestyle modification through health education) and pharmacological efforts (medication). Some healthy

lifestyle habits recommended by many guidelines include weight loss, reducing salt intake, regular exercise, reducing alcohol consumption, and quitting smoking (Damayantie et al., 2018).

Local food diversity is rich in nutrients and has the potential to reduce the risk of hypertension, such as local vegetables, fruits, tubers, nuts, and various spices that function as natural antioxidants and anti-inflammatories. Local foods are generally low in sodium, high in fiber, and rich in potassium, magnesium, and various phytonutrients that play a role in maintaining balanced blood pressure. Regular consumption of local foods can help control sodium levels, reduce blood pressure, and improve cardiovascular health.

However, the use of local foods is often reduced due to a lack of public awareness of their benefits and the perception that modern foods are more practical and appealing. Furthermore, improper processing of local foods, such as repeated frying in oil, adding excessive salt, or using instant seasonings, can also reduce the healthfulness of these foods and even increase the risk of hypertension.

Hypertension prevention relies not only on pharmacological therapy but can also be achieved through non-pharmacological approaches such as diet management, physical activity, stress management, and the use of natural ingredients that have the potential to lower blood pressure. The use of herbal plants as an alternative or complementary treatment is gaining popularity due to their relative ease of access, affordability, and minimal side effects when used appropriately.

One herbal plant with significant potential in hypertension prevention is the *Moringa oleifera* leaf. Moringa leaves are known to be rich in various nutrients and bioactive compounds, such as potassium, calcium, antioxidants, flavonoids, and polyphenols, which play a role in maintaining blood vessel health and helping lower blood pressure. The antioxidant content in Moringa leaves also functions to reduce oxidative stress, which often occurs in the elderly and contributes to hypertension.

In addition to their high nutritional content, Moringa leaves are easy to cultivate and can be processed into various forms, such as vegetables, herbal teas, and powders, making them convenient for consumption by the elderly. The use of Moringa leaves as a hypertension prevention measure is expected to be a safe and sustainable natural solution, while also supporting community independence in maintaining health.

Based on this description, the use of moringa leaves in preventing hypertension in the elderly is an interesting and important topic to study. This effort is expected to increase knowledge and awareness among the elderly and the public about the importance of preventing hypertension through natural approaches, thereby reducing the risk of complications and improving their quality of life.

## **RESEARCH METHODS**

This outreach and education activity was held on Wednesday, December 5, 2025, in Kunduran Village, Ulu Musi District. Both activities are considered crucial for the elderly and pre-elderly who suffer from hypertension or are at risk of developing it. The outreach methods used in this hypertension prevention activity through the use of Moringa leaves for the elderly were designed to be simple, communicative, and easy to understand to suit the characteristics of the elderly participants. The outreach methods used were as follows:

### **1. Lecture (Direct Outreach)**

The lecture method was used to convey basic information about hypertension, including the definition of hypertension, risk factors, signs and symptoms, impacts, and the importance of prevention efforts. Furthermore, the health benefits of Moringa leaves, their nutritional content, and their role in helping control blood pressure were explained. The material was delivered using simple language and examples relevant to the daily lives of the elderly.

## 2. Discussion and Question-and-Answer

The discussion and question-and-answer method was used to increase interaction between the outreach provider and participants. Seniors were given the opportunity to share their experiences, daily habits, and challenges in controlling their blood pressure. This method aimed to deepen participants' understanding of the material and clear up any misconceptions they might have.

## 3. Demonstrations

Demonstrations were conducted by directly demonstrating the correct and safe use and processing of moringa leaves, such as making clear soup, moringa leaf tea, or moringa leaf powder. This method allowed seniors to observe and imitate the instructions directly, making them easier to implement at home.

## 4. Educational Media

The counseling session was supported by the use of educational media in the form of leaflets, posters, or simple images containing information about hypertension and the benefits of moringa leaves. These media helped clarify the material, improved participants' memory, and could be taken home for review.

## RESULTS AND DISCUSSION

Activity results counseling about Hypertension in the elderly in Hamlet II Kesa Kunduran Ulu Musi District, Musi Regency Four Mace namely the average pre-test knowledge of the elderly about Hypertension before given counseling about disease Hypertension is <50 in category less . Then the average post-test knowledge of the elderly about Hypertension after given counseling about disease Hypertension is >50 in category Good.

**Tabel 1**

Criteria	Frequency	Percentage (%)
Good	6	23%
Not enough	20	74%
Amount	26	100%

Based on table on show before given counseling knowledge Good own value of 23% while knowledge less than 74%.

**Tabel 2**

Criteria	Frequency	Percentage (%)
Good	18	69%
Not enough	8	31%
Amount	26	100%

Based on the table above show after counseling given knowledge Good own value of 69% while knowledge less than 31%.

## CONCLUSION

Hypertension is a disease that has become increasingly common in recent years. It is also often referred to as high blood pressure. The goal is to explain the definition, causes, signs and symptoms, complications, dietary restrictions, and treatment methods for hypertension. Results before the education session showed good knowledge at 23%, while knowledge was poor at

74%. Results after the education session showed good knowledge at 69%, while knowledge was poor at 31%. Celery leaf decoction can be used as a complementary therapy to help lower blood pressure through its diuretic, vasodilator, and antioxidant effects. This herbal remedy can provide additional benefits for those with mild to moderate hypertension. However, its use must be accompanied by medical supervision, a healthy lifestyle, and drug therapy as recommended by a healthcare professional. Proper education is essential to ensure the safe, effective, and misunderstandings surrounding the management of hypertension.

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