



JPM

Jurnal Pengabdian Mandiri

Volume 3 Issue 1, 2026 (27-30)

ISSN (*online*) : 3089-3070

Homepage : <https://jurnalunived.com/index.php/MANDIRI>

Doi : <https://doi.org/10.37676/mandiri>

Hypertension Counseling And Tomato Juice Provision To Lower Blood Pressure In Hypertension Patients In Suka Sari Village, Hamlet 02, Semarang, Kebawetan Subdistrict, Kepahiang Regency

**Ria Emalyanda¹, Feny Triyany², Suci Rohima Janista³, Reni Parida⁴,
M Syahrul Hamdi⁵, Diah Tepi Rahmawati⁶; Hengky Tranado⁷**

^{1,2,3,4,5,6,7} Universitas Dehasen Bengkulu

e-mail : emalyandaria@gmail.com

Received [22 April 2026]

Revised [01 Juni 2026]

Accepted [03 Juni 2026]

Abstract. Hypertension is a common health problem faced by many people and requires simple management that can be carried out independently. The activity "Counseling and giving tomato juice to lower blood pressure in hypertensive patients" by KKN-T students of Dehasen University Bengkulu was held in Suka Sari Village, Kebawetan District, Kepahiang Regency on Thursday, November 4, 2025. This activity aims to increase community knowledge about hypertension management and provide a healthy drink alternative in the form of tomato juice to help lower blood pressure. The method used was a pre-post test conducted in one day. The results of the activity showed an increase in understanding of how to manage hypertension. This activity is expected to become a simple effort that the community can apply to help control blood pressure independently.

Keywords: *Tomato Juice, Hypertension, Blood Pressure.*

INTRODUCTION

Hypertension is one of the biggest health problems in the world and is a major risk factor for cardiovascular diseases such as stroke, heart failure, and kidney disease. According to the World Health Organization (WHO, 2023), more than 1.28 billion people worldwide suffer from hypertension, and most of them do not receive proper diagnosis or treatment. Unhealthy lifestyles such as excessive salt consumption, lack of physical activity, stress, and a high-fat diet are the main factors contributing to the rising incidence of hypertension. In Indonesia, hypertension is also a major challenge for healthcare services. The Ministry of Health of the Republic of Indonesia (2023) reported that hypertension remains one of the non-communicable diseases with the highest prevalence at primary healthcare facilities. Uncontrolled hypertension can lead to serious complications such as stroke and organ damage, making promotive and preventive efforts in the community necessary.

One non-pharmacological approach that has been proven to help lower blood pressure is the consumption of tomato juice. Tomatoes are rich in lycopene, potassium, and antioxidants that play a role in maintaining the elasticity of blood vessels. Ginanjar's research (2025) shows that daily consumption of tomato juice without added salt can lower systolic and diastolic blood pressure in individuals with mild hypertension. Tomatoes are a food ingredient high in folic acid, vitamin C, and potassium (Pradian et al., 2020). The potassium content in 100 grams of tomato is 245 mg. Potassium can lower blood pressure by reducing sodium in the urine and water in the same way as diuretics. Potassium is essential in the body because it helps bind sodium (Na). Excessive sodium causes water around it to be minimal, increasing pressure inside. If potassium intake increases, potassium can bind Na, and less water is absorbed by Na, thereby

lowering blood pressure (Trismiyana et al., 2020). to prove that taking 200 ml of tomato juice once a day for 7 days affects the reduction of systolic blood pressure. Similar results were reported by Probosiswi (2025), who found that lycopene improves endothelial function and reduces blood pressure through antioxidant mechanisms. This indicates that providing tomato juice can be a simple, inexpensive, and safe strategy to support hypertension management. Therefore, counseling and providing tomato juice to lower blood pressure in hypertensive patients aim to raise public awareness while helping to naturally control blood pressure without significant side effects.

RESEARCH METHODS

This community service program was carried out in Suka Sari Village, Hamlet 02, Semarang, where students conducted their KKNT. The target of this program is the community of Suka Sari Village, Hamlet 02, Semarang. The activities use a pre-post observation method with a direct education approach. Assessment is not done through written questionnaires, but through oral questions and answers, observation of participant responses, and blood pressure measurements before and after. The outreach is conducted directly using communication techniques with the community:

1. Preparing the tools and materials to be used
2. Providing education about hypertension
3. Making tomato juice
4. Opening a question and answer session

RESULTS AND DISCUSSION

The results of the activity showed an increase in public knowledge about hypertension after the counseling session. As many as 80% of participants were able to recall the definition and signs of hypertension. The introduction of healthy food interventions in the form of tomato juice received a very positive response from the participants. About 90% of participants understood that tomatoes contain lycopene, potassium, and antioxidants that play a role in maintaining blood vessel elasticity and can help lower blood pressure. Cholifah's research (2021) showed that daily consumption of tomato juice without added salt can reduce systolic and diastolic blood pressure in individuals with mild hypertension. Similar results were shown by Probosiswi (2025), who found that lycopene improves endothelial function and lowers blood pressure through antioxidant mechanisms.

The administration of tomato juice is effective in lowering blood pressure in patients with hypertension, Wiguna (2025). This suggests that providing tomato juice can be a simple, inexpensive, and safe strategy to support hypertension management at the community level. In addition to increasing participants' knowledge about hypertension, this activity also successfully raised public awareness about the importance of regular blood pressure monitoring. Participants were educated that individuals with hypertension should have their blood pressure checked regularly, at least 1-2 times a week, or more often if their blood pressure tends to be unstable. This is important because hypertension is often called a silent killer that does not cause symptoms but can lead to serious complications such as stroke and heart failure.

Thus, counseling and providing tomato juice regarding hypertension have the potential to raise public awareness while helping to naturally control blood pressure without significant side effects. Habibyansyah (2024). Consuming tomato juice is a good herbal therapy for health and has various benefits, especially for people with hypertension, because tomato juice contains potassium, which is useful for preventing increases in blood pressure. One way it works is through vasodilation, which functions to widen blood vessels, thereby reducing retention or obstruction of blood flow in peripheral vessels, Almar (2024) Before the patient is given treatment, a pretest blood pressure measurement is first taken using a

sphygmomanometer. If the respondent's blood pressure is high, give tomato juice once every morning before meals for 4 consecutive days. Then recheck the respondent's blood pressure (posttest) to see if there is any decrease. In the practical activity, participants are taught the correct way to make tomato juice without adding sugar or salt, as follows: How to make 250 ml of tomato juice is to prepare tools and ingredients such as 200 grams of tomatoes, 50 ml of water, 5 grams of sugar, and a portable blender. Wash the tomatoes until clean, cut the tomatoes into several pieces, then put the cut tomatoes, sugar, and water into the blender. Wait for a few minutes, then pour the blended tomatoes into a glass that is ready, and the tomato juice is ready to be consumed. Podungge (2022). Examples of data presentation in the form of tables such as Table 1.

Table 1. Effectiveness of Hypertension Counseling and Tomato Juice Administration in Hypertensive Patients

Activity Theme	Evaluation
Increase in Knowledge After Counseling	No complaints
Number of Participants Who Consumed Tomato Juice	All attendees present
Complaints After Drinking Tomato Juice	No complaints
Participant Response	Positive
Blood pressure before and after intervention	Decreasing, approaching normal

Source: Primary data processed, 2025



Figure 1. Blood Pressure Reduction Graph After Tomato Juice Administration

CONCLUSION

Based on the results of the Community Service Program (KKN-T) conducted by students of the Faculty of Health Sciences, which focused on efforts to reduce blood pressure in hypertensive patients, it can be concluded that educational activities about hypertension and the practice of providing tomato juice were able to increase public knowledge and encourage behavioral changes in blood pressure management.

The provision of tomato juice as a non-pharmacological therapy also received a positive response from participants, indicated by increased interest in trying regular consumption as part of hypertension prevention and management. It is recommended to conduct more in-depth research on the effectiveness of tomato juice in lowering blood

pressure using an experimental research design and measuring blood pressure before and after regular consumption.

REFERENCES

- World Health Organization. (2023). Hypertension: Key Facts. Ministry of Health of the Republic of Indonesia. (2023). Indonesian Health Profile 2023.
- Noor Cholifah, Dewi Hartinah. (2021). The Effect of Tomato Juice Administration on Blood Pressure in Hypertensive Patients at Purwosari Health Center, Kudus. *Journal of Nursing and Midwifery Science*.
- Neni Probosiswi, (2025). STUDY ON THE CARDIOPROTECTIVE ANTIOXIDANT ACTIVITY OF POLYHERBAL PREPARATIONS IN HYPERTENSIVE PATIENTS IN PRIMARY CARE FROM THE PERSPECTIVES OF AXIOLOGY AND ONTOLOGY. *Nusantara Scientific Journal (JINU)*.
- Yusni Podungge. (2022). The Effect Of Giving Tomato Juice on Blood Pressure in Menopause. *Journal of Midwifery*
- Rachman Habibyansyah, Fitri Anita, Ipah Saripah. (2024). The Effect of Tomato Juice on Blood Pressure in Hypertensive Patients at Bandar Agung Public Health Center, Lampung.
- Rizaldi Nanda Wiguna, Rina Karmila, Haris Abdaly (2025). The Application of Tomato Juice in Lowering Blood Pressure in Hypertensive Patients
- Junelty Almar, Rita Dewi (2025). The Effect of Tomato Juice Consumption on Blood Pressure Reduction in Hypertensive Patients.
- Muslimah, P., Intan, & Handayani, H. (2020). The Application of Tomato Juice on Reducing Blood Pressure in Hypertensive Patients in RT 001 RW 002 Gunung Mangri Village, Cibeureum Primary Health Care Work Area. *Nursing Profession Study Program, Faculty of Health Sciences University*, 1-6.
- Prabasari, N. A. (2021). Application of the Role and Function of Nurses in Nursing Care for Elderly with Hypertension in the Community (Phenomenology Study). *Malang Nursing Journal*, 6(2), 115-126. <https://doi.org/10.36916/jkm.v6i2.145>
- Trismiyana, E., Isnainy, U. C. A. S., & Herizon, H. (2020). Effect of Tomato Juice Administration on Blood Pressure in Elderly Hypertensive Patients at Kotabumi 2 Community Health Center, Kotabumi Selatan Subdistrict, North Lampung Regency. *Malahayati Nursing Journal*, 2(4), 791-800. <https://doi.org/10.33024/manuju.v2i4.3048>.