



Nutrition Management Education Program for Hypertension Patients at UNS Hospital: A Community Service Approach

Tiara Putri Navy¹, Essa Andaru Anugraheni², Savika Arinta Putri³, Diana febriani⁴

¹ Universitas Muhammadiyah Surakarta

Correspondence: j230245113@student.ums.ac.id

Article Info

Article history:

Received Aug 27th, 2025

Revised Oct 20th, 2025

Accepted Oct 22th, 2025

Keyword:

Hypertension, Nutrition
Management, Patient Education,
Dietary Modification, Blood
Pressure Control

ABSTRACT (10 PT)

Hypertension remains a significant public health challenge globally, with nutrition playing a vital role in its management. This community service activity was conducted on July 13, 2025, at UNS Hospital to provide nutrition management education to 35 hypertension patients. The program aimed to increase patients' knowledge and self-care practices related to dietary modifications, including sodium intake reduction and healthy eating habits. Interactive educational sessions were held, followed by pre- and post-program evaluations to assess improvements in participants' understanding and behavior. The results demonstrated a marked enhancement in patients' nutritional knowledge and adherence to recommended dietary guidelines, contributing to better hypertension management. This community service initiative highlights the critical role of educational interventions in empowering patients, improving health outcomes, and promoting community health through hospital-based programs.



© 2025 The Authors. Published by CV. Morgensonne Media. This is an open access article under the CC BY license (<https://creativecommons.org/licenses/by/4.0/>)

INTRODUCTION

Hypertension, or high blood pressure, is a non-communicable disease that is one of the leading causes of death and disability worldwide (Kivelä et al., 2021). According to the World Health Organization (WHO) data in 2021, approximately 1.28 billion adults suffer from hypertension, and this number continues to rise due to changing lifestyles and demographics (Syafriati & Wiryansyah, 2022). In Indonesia, the prevalence of hypertension has also significantly increased, making it a serious public health concern that requires urgent attention (Widayanti et al., 2024).

Hypertension not only increases the risk of cardiovascular diseases such as stroke, heart attack, and heart failure but also contributes to other severe complications including chronic kidney disease and vision impairment (Seftiani, 2018). Effective management of hypertension requires a multifactorial approach, one of which is proper nutrition management (Setiadi & Halim, 2018). Healthy and controlled nutrition can lower blood pressure, slow disease progression, and improve patients' quality of life (Suryaningsih & Armiyati, 2021).

However, various studies show that many hypertension patients have insufficient knowledge about the impact of nutrition on their blood pressure (Yan & Fitriana, 2023). This lack of understanding results in low adherence to recommended diets, such as reducing salt intake, saturated fats, and increasing consumption of fruits and vegetables (Lesar et al., 2023). Moreover, unhealthy eating patterns influenced by cultural, economic, and daily habits also pose challenges in managing nutrition for hypertensive patients (Arini & Kartika, 2019).

Universitas Sebelas Maret Hospital (RS UNS), as a healthcare institution responsible for educating and treating patients, has a vital role in increasing patient knowledge and awareness regarding the importance of nutrition management in controlling hypertension. Through this community service program, it is expected to provide effective and practical education so that patients can implement healthy eating habits in their daily lives.

This nutrition management education program was conducted on July 13, 2025, with the aim of improving hypertensive patients' understanding of proper nutrition and motivating behavioral

changes in dietary habits to control blood pressure and prevent further complications. By enhancing knowledge and good practice, it is expected that the quality of life of hypertension patients at RS UNS will significantly improve.

METHODS

This community service program was conducted at Universitas Sebelas Maret Hospital (RS UNS) on July 13, 2025. A total of 35 hypertensive patients participated in the program. The selection of participants was based on convenience sampling, targeting patients who were diagnosed with hypertension and willing to join the educational sessions.

The program utilized interactive educational methods, including presentations, discussions, and practical demonstrations focused on nutrition management for hypertension. Key topics covered included the importance of reducing sodium intake, choosing healthy foods, managing portion sizes, and adopting a balanced diet rich in fruits, vegetables, and low-fat products.

Data collection was performed using pre- and post-intervention questionnaires to assess participants' knowledge and self-reported dietary practices related to hypertension management. The questionnaires included multiple-choice and open-ended questions developed based on existing literature and validated by nutrition and nursing experts.

Data analysis involved comparing pre- and post-test results to determine changes in knowledge and self-care behaviors. Descriptive statistics were used to summarize the data, and paired statistical tests were applied to evaluate the effectiveness of the educational intervention.

This program adhered to ethical considerations, ensuring informed consent from all participants, confidentiality of personal data, and the right to withdraw from the program at any time.

RESULTS AND DISCUSSION

The community service program involved 35 hypertensive patients at RS UNS and aimed to improve their knowledge and practices related to nutrition management. Analysis of pre- and post-intervention questionnaires showed a significant increase in participants' understanding of key nutritional principles for managing hypertension.



Figure 1. Health Education Activities

Before the intervention, many participants had limited awareness of the impact of sodium intake and unhealthy dietary habits on blood pressure control. After the educational sessions, most participants demonstrated improved knowledge about reducing salt consumption, increasing intake of fruits and vegetables, and adopting a balanced diet. Self-reported adherence to recommended dietary guidelines also improved, indicating that participants were motivated to implement positive changes in their eating behaviors.

The interactive educational approach, which included presentations, discussions, and practical demonstrations, was effective in engaging participants and facilitating their understanding. This method helped overcome common barriers such as limited health literacy and low motivation.

Despite these positive outcomes, challenges remain in maintaining long-term behavior change. Ongoing support, follow-up education, and involvement of family members or caregivers may be necessary to sustain healthy dietary practices. Hospitals like RS UNS play a crucial role not only in providing clinical care but also in promoting community health through education. In conclusion, the nutrition management education program successfully increased knowledge and improved self-care behaviors among hypertensive patients, contributing to better management of their condition and overall quality of life.



Figure 2. Health Education Activities

This community service program aimed to provide education on nutrition management for hypertension patients receiving treatment at UNS Hospital. Hypertension is one of the most common non-communicable diseases and a major risk factor for cardiovascular diseases such as stroke and heart disease. Managing hypertension requires not only medical treatment but also lifestyle modifications, especially healthy and appropriate dietary patterns.



Figure 3. Health Education Activities

Through this educational program, patients were given information and knowledge about the importance of nutritional management in lowering blood pressure and maintaining hypertension control. The education covered the principles of the DASH diet (Dietary Approaches to Stop Hypertension), reducing salt intake, managing potassium, calcium, and magnesium consumption, as well as increasing the intake of vegetables and fruits. Additionally, the program emphasized avoiding foods high in saturated fat, cholesterol, and sugar.

The results showed an improvement in patients' understanding of the role of nutrition in managing hypertension. Many patients reported changes in their eating habits, such as reducing salt usage, consuming vegetables and fruits more frequently, and avoiding processed and fast foods. This indicates that the education successfully encouraged positive behavioral changes.

Besides knowledge improvement, this program also strengthened the role of nurses and health workers in providing continuous guidance and motivation to hypertension patients. The community service approach allowed healthcare providers to build closer relationships with patients and better understand their needs and challenges in maintaining a healthy diet (Wijayaningsih et al., 2024).

However, some challenges were identified during the implementation, such as entrenched eating habits, limited access to healthy food for some patients, and lack of family support in adopting new dietary patterns (Barbato et al., 2023). Therefore, nutrition education should be accompanied by a more holistic approach involving family and the patient's social environment to ensure behavioral changes are more effective and sustainable (Rahayu et al., 2025).

Time and resource limitations during the community service program also restricted the scope of education and follow-up with patients (Díez & Butler, 2023). Long-term programs and monitoring are necessary so that the educational benefits can be consistently implemented and produce positive outcomes in hypertension management (Seftiani, 2018).

Overall, this program demonstrated that nutrition management education is an effective strategy to assist hypertension patients in managing their condition through lifestyle changes (Butel-simoes et al., 2024). Education delivered with a participatory and interactive approach can increase patient awareness and motivation (Ratta et al., 2021). This aligns with various studies that emphasize the importance of nutritional education interventions in controlling hypertension and preventing related complications (Vacca et al., 2023).

Therefore, hospitals and health institutions should continue to develop nutrition education programs as an integral part of hypertension patient care. Furthermore, collaboration with families, communities, and local governments is crucial to create supportive environments that encourage healthy lifestyles for hypertension patients.

CONCLUSION

The Nutrition Management Education Program for Hypertension Patients at UNS Hospital successfully improved patients' knowledge and awareness regarding the role of diet in managing hypertension. The program encouraged positive changes in eating behaviors, such as reducing salt intake and increasing consumption of fruits and vegetables. Despite challenges like habitual eating patterns and limited access to healthy foods, the community service approach proved effective in providing education and ongoing support. Continued efforts involving healthcare providers, families, and communities are essential to sustain these lifestyle changes and improve hypertension control. Integrating nutrition education into routine patient care can significantly contribute to better health outcomes for hypertension patients.

REFERENCES

- Arini, T., & Kartika. (2019). Aktifitas Perawatan Diri Pada Lansia Penderita Hipertensi. *Jurnal Keperawatan*, 2(1), 1–6.
- Barbato, E., Azizi, M., Schmieder, R. E., Lauder, L., Böhm, M., Brouwers, S., Bruno, R. M., Dudek, D., Kahan, T., Kandzari, D. E., Lüscher, T. F., & Parati, G. (2023). *Renal denervation in the management of hypertension in adults . A clinical consensus statement of the ESC Council on Hypertension and the European Association of Percutaneous Cardiovascular Interventions (EAPCI) European Society of Cardiology European Society of Hypertension*. 1227–1243. <https://doi.org/10.4244/EIJ-D-22-00723>
- Butel-simoes, L. E., Haw, T. J., Williams, T., Sritharan, S., Gadre, P., Herrmann, S. M., Herrmann, J., Ngo, D. T. M., & Sverdlov, A. L. (2024). *Established and Emerging Cancer Therapies and Cardiovascular System: focus on hypertension – mechanisms and mitigation*. 80(4), 685–710. <https://doi.org/10.1161/HYPERTENSIONAHA.122.17947>.Established
- Díez, J., & Butler, J. (2023). *Growing Heart Failure Burden of Hypertensive Heart Disease : A Call to Action*. *January*, 13–21. <https://doi.org/10.1161/HYPERTENSIONAHA.122.19373>
- Kivelä, J., Sormunen-harju, H., Girchenko, P. V., Huvinen, E., Stach-lempinen, B., Kajantie, E., Villa, P. M., Reynolds, R. M., Hämäläinen, E. K., & Lahti-pulkkinen, M. (2021). Longitudinal Metabolic Profiling of Maternal Obesity , Gestational Diabetes , and Hypertensive Pregnancy Disorders. *The Journal of Clinical*

Endocrinology & Metabolism, 2021, Vol. 106, No. 11, E4372–E4388
<https://doi.org/10.1210/Clinem/Dgab475> Clinical Research Article, 106(11), 4372–4388.

- Lesar, I. F., Modjo, D., & Sudirman, A. A. (2023). *Hubungan Antara Kadar Kolesterol Dalam Darah dengan Kejadian Hipertensi Pada Lansia di Pkm Tabongo Kabupaten Gorontalo*. 1(2).
- Rahayu, C. N., Kurniyanti, M. A., & Alfianto, A. G. (2025). *EFEKTIFITAS EDUKASI VIDEO AI (ARTIFICIAL INTELLIGENCE) TERHADAP PENGETAHUAN DALAM KEPATUHAN MINUM OBAT HIPERTENSI*. 9, 804–810.
- Ratta, K., Rana, N. M., Rajasekaran, S. R., & Tupas, G. D. (2021). *Sweet basil leaves as adjunct therapy for stage 1 and 2 hypertension : a pilot clinical trial*. 9(1), 1–7.
- Seftiani, L. (2018). HUBUNGAN KUALITAS HIDUP LANSIA DENGAN HIPERTENSI DIWILAYAH KERJA PUSKESMAS PERUMNAS II KELURAHAN SUNGAI BELIUNG KECAMATAN PONTIANAK BARAT. *Transcommunication*, 53(1), 1–8.
- Setiadi, A. P., & Halim, S. V. (2018). Penyakit Kardiovaskular: Seri Pengobatan Rasional. In *Graha Ilmu*. Graha Ilmu.
- Suryaningsih, M., & Armiyati, Y. (2021). Penurunan Tekanan Darah Pada Pasien Usia Lanjut Menggunakan Terapi Musik. *Ners Muda*, 2(2), 53. <https://doi.org/10.26714/nm.v2i2.6301>
- Syafriati, A., & Wiryansyah, O. A. (2022). PENYULUHAN KESEHATAN HIPERTENSI DENGAN MEDIA BOOKLET PADA LANSIA DI WILAYAH BINAAN KELURAHAN. *Community Development Journal*, 3(2), 550–554.
- Vacca, A., Bulfone, L., Cicco, S., Brosolo, G., Porto, A. Da, Soardo, G., Catena, C., & Sechi, L. A. (2023). *Alcohol Intake and Arterial Hypertension : Retelling of a Multifaceted Story*. 1–14.
- Widayanti, N., Rahmawati, A., & Isnaeni, Y. (2024). Gambaran Dukungan Keluarga Pada Lansia Hipertensi Di Padukuhan Plurugan Kasihan Ii Bantul Yogyakarta. *Prosiding Seminar Nasional Penelitian Dan Pengabdian Kepada Masyarakat*, 2(September), 1738–1747.
- Wijayaningsih, K. S., Mutmainna, A., Mina, W., Isa, L., Mato, R., Indrayani, F., Tinggi, S., Kesehatan, I., Hasanuddin, N., Article, I., Lansia, H., & Commons, C. (2024). EDUKASI KEGAWATDARURATAN HIPERTENSI DALAM MENINGKATKAN PENGETAHUAN LANSIA DENGAN HIPERTENSI. *ABDIMAS BERKARYA*, 3(03), 89–97.
- Yan, A., & Fitriana, N. (2023). Peran Dukungan Keluarga sebagai Upaya Pengontrolan Hipertensi Pada Lansia Prediksi dari World Health. *NERS: Jurnal Keperawatan*, 19(2), 61–67.