

THE ROLE OF HEALTH EDUCATION IN THE PREVENTION AND MANAGEMENT OF HYPERTENSION IN THE ELDERLY: A LITERATURE REVIEW

Nenden Lesmana Wati¹, Putri Raningga¹, Dadang Rochman¹

Universitas Faletahan, Banten

Email: nendenlesmana73@gmail.com

ABSTRACT

Introduction: Hypertension is a significant health problem that, if not properly managed, can lead to more severe complications. Hypertension requires proper and accurate treatment. Systolic blood pressure over 140 mmHg and diastolic blood pressure over 90 mmHg is known as hypertension. **Objective:** To understand the role of health education in the prevention and management of hypertension in the elderly. **Methods :** The method used in this study is a literature review. Academic articles were searched through online databases such as PubMed and Google Scholar from 2019-2024, resulting in 10 relevant articles. **Results :** Based on the review and analysis of the 10 selected articles, it was concluded that education can increase respondents' knowledge regarding the prevention and management of hypertension. **Conclusion :** The role of nurses in assisting patients can improve health by providing information about the care and medical treatments they receive, and by offering nursing care to meet the needs of hypertensive patients and provide the necessary treatment.

Keywords: Education, Elderly, Hypertension

Introduction

Indonesia ranks 4th among the top 10 countries with the highest prevalence of hypertension in the world, following the United States, China, India, and then Indonesia, Myanmar, Sri Lanka, Bhutan, Thailand, Nepal, and Maldives (Ministry of Health, 2021). According to the American Heart Association in 2018, hypertension is defined as a persistent increase in systemic arterial blood pressure where systolic blood pressure is ≤ 140 mmHg and diastolic blood pressure is ≤ 90 mmHg (Iriyanti et al., 2021). One of the most common causes of death worldwide is hypertension, a non-communicable disease (World Health Organization, 2023).

According to WHO (2023), hypertension is a condition where blood vessels experience a persistently increased pressure. Blood is carried from the heart to all parts of the body in the vessels. Each time the heart beats, it pumps blood into the vessels. Blood pressure is created by the force of the blood pushing against the walls of the blood vessels (arteries) as it is pumped by the heart. The higher the pressure, the harder the heart has to pump. Hypertension is a serious medical condition and can increase the risk of heart disease, brain, kidney, and other diseases. Hypertension is defined as systolic blood pressure above 140 mmHg and diastolic blood pressure above 90 mmHg (Bohm et al, 2018).

Hypertension is also referred to as a silent killer or a silent disease. Individuals aged 60 and over are referred to as elderly or seniors (Ministry of Health RI, 2021). The elderly are more vulnerable to degenerative diseases (Andrieieva et al., 2019). These are among the top 10 diseases commonly experienced by the elderly. These diseases are often recognized by the elderly when they are already severe and with complications. This impacts many aspects, such as increased morbidity and mortality rates, decreased quality of life, and decreased ability of the elderly to perform daily activities (Hidayat, 2019). The elderly are a group vulnerable to health problems in their environment. Unhealthy lifestyle patterns and increasing age make them prone to hypertension, one of the most common degenerative diseases (Efendi & Surya, 2021).

Implementing integrated and continuous health service programs that are promotive, preventive, curative, and rehabilitative is part of the problem-solving framework. Preventive and promotive measures are currently the top priority. To prevent hypertension, lifestyle changes and regular blood pressure checks are very important. These checks are not very expensive compared to curative and rehabilitative therapy for hypertension (Tinambunan, 2021).

One of the efforts to prevent and control hypertension is to manage blood pressure, thus reducing the risk of stroke and recurrence after a stroke. High blood pressure is also associated with an increased risk of cardiovascular diseases such as myocardial infarction and heart disease. High blood pressure is also known to increase mortality rates from young adults to the elderly (Nurdin et al., 2022).

According to the World Health Organization (2023), it is estimated that 1.13 billion people worldwide have hypertension, with about 972 million or 26.4% suffering from the disease. It is estimated that 9.4 million people die each year from hypertension and its complications. Of the 972 million people with hypertension, 333 million are in developed countries, and the rest are in developing countries, including Indonesia. According to the 2019 Rikesdas results, the prevalence of hypertension in the 55-64 age group is 45.6%, in the 65-74 age group is 58.9%, and in the 75+ age group is 62.6%. In Banten Province, hypertension still holds the largest proportion of all reported non-communicable diseases, at 24.68%. In 2019, there were 1,705,025 people at risk (over 18 years old) who had their blood pressure measured, accounting for 30.23% of the total population. The highest percentage of the population having their blood pressure measured in 2016 was 97.70% in South Tangerang City, while the lowest was 4.67% in Tangerang City (Banten Provincial Health Office, 2019).

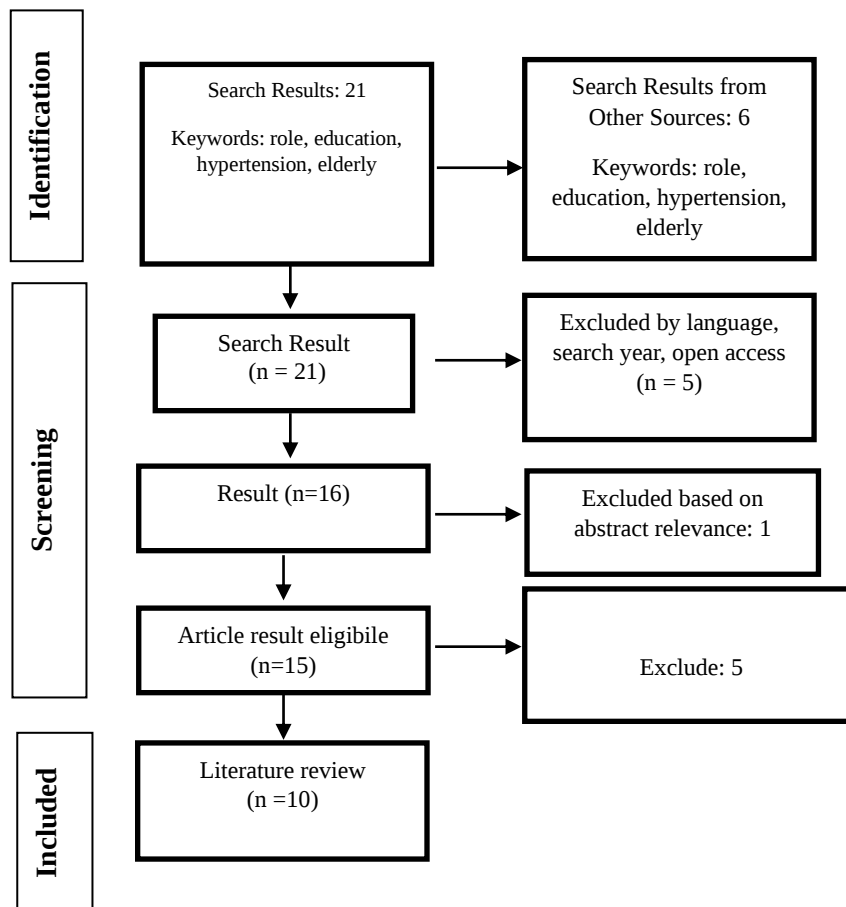
The Banten Provincial Health Profile for 2020 reported 1,857,866 cases of hypertension, with the highest data in 2019 in Tangerang Regency at 622,020 cases, Lebak Regency at 617,997 cases, South Tangerang City at 269,443 cases, Tangerang City at 112,125 cases, Serang Regency at 88,081 cases, Pandeglang Regency at 75,213 cases, Cilegon City at 66,906 cases, and Serang City at 6,031 cases. The majority of hypertension sufferers are women, while only 50 percent of estimated hypertension sufferers in Banten Province receive health services (Serang City, 2021). The aim of this study is to understand the role of health education in the prevention and management of hypertension in the elderly.

Method

This research utilizes a method involving the collection, analysis, and synthesis of literature relevant to the research topic, to generate new and useful conclusions. The journals used in this study are those that discuss the topic with keywords including Role, Hypertension Education, and Elderly. Academic journal searches were conducted through online databases including PubMed and Google Scholar from 2019-2024.

Several references related to the role of education were obtained from journal searches on PubMed and Google Scholar, yielding 10 articles using the keywords Role, Hypertension Education, and Elderly. Below is the journal search process that supports this review:

Figure 1. Literature Review Process



Literature Search Results

Below are the selected journals analyzed by the researcher in this literature review study:

Table 1. Details of Primary Selected Journals for Literature Review

No	Author/ Year	Research Title	Journal Name	Research Objectives	Research Method	Research Result
1	Fatma Nuraisyah, Hafizh Radityo Kusumo, (2021)	Education on the Prevention and Management of Hypertension to Improve the Quality of Life in the Elderly	Bakti (Journal of Community Service)	Conducting education on the prevention and management of hypertension to improve the quality of life in the elderly.	True Eksperimental	There was an increase in knowledge among the elderly regarding the prevention and management of hypertension.
2	Rea Ariyanti, Ida Ayu Preharsini, Berliany Venny Sipolio, (2020)	Health Education in Efforts to Prevent and Control Hypertension in the Elderly	To Maega: J of Community Service	Improving cadres' understanding of efforts to prevent and control hypertension in the elderly	Quasi Eksperimental	There was an increase in the level of understanding regarding efforts to prevent and control hypertension in the elderly. Before the counseling sessions, the average pre-test score was 60.00, and after the counseling sessions, there was an increase in the average post-test score to 88.44.
3	Putri Dafriyani, Weni Sartiwi, Ratna Indah Sari Dewi, (2023)	Hypertension Education for the Elderly in Lubuk Buaya, Padang City	Abdimas Galuh : Journal of Community Services	This community service involves providing education on hypertension care for the elderly in Lubuk Buaya Subdistrict, Padang City.	Quasi Eksperimental	Increase in hypertension patients' knowledge from 76% to 85%.

4	Maksuk, Yusleni (2021)	Education and Elderly Gymnastics as Efforts for Prevention and Control of Hypertension in the Elderly	Journal of Community Service Creativity	Helping to prevent and control hypertension in the elderly through education and elderly gymnastics in the primary health center's working area..	Quasi Eksperimental	The evaluation results indicate an increase in elderly knowledge regarding hypertension, its causes, signs and symptoms, treatment, recommended and not recommended foods, as well as the benefits of elderly gymnastics.
5	Riko Sandra Putra, Diana H. Soebyakto (2024)	Management of Hypertension Education in the Elderly Using Carrot Juice	Journal of Cross Knowledge	So that residents of RT 15 know how to manage hypertension using carrot juice.	Quasi Eksperimental	Increasing respondents' knowledge from 35% to 95% with high/good knowledge.
6	Khoiroh Umah, Roihatul Zahroh, Mono Pratiko, Yuli Melli Kinarti, (2023)	Hypertension Counseling for the Elderly as Efforts to Prevent and Control Hypertension at the Elderly Integrated Health Post (Posyandu Lansia) in Suci Village, Manyar District, Gresik Regency	Journal of Community Service in the Archipelago	Improving elderly knowledge about hypertension and hypertension management	Quasi Eksperimental	The elderly's knowledge about controlling and preventing hypertension has increased.
7	Panggih Priyo Wicaksono, Wahyuni (2024)	Counseling on Early Prevention and Detection Efforts for Hypertension Issues in the Elderly Community in Kauman Subdistrict, Surakarta	Journal of Community Service Outcomes	Increasing public knowledge and understanding related to hypertension.	Quasi Eksperimental	The respondents were able to understand and gain more knowledge about what hypertension is, its prevention methods, and healthy lifestyles. There were a total of 16

						participants with results of 158.46/92.2 mmHg, which falls into the category of Stage 1 hypertension.
8	Moh Malikul Mulki, Ismunandar Wahyu Kindang, Suaib, (2023)	Efforts to Increase Community Knowledge About Hypertension Prevention Through Elderly Gymnastics in Mangu Village, RW 06/RT 11	Journal of Improving elderly knowledge on efforts to increase awareness in hypertension prevention and regular elderly gymnastics exercises in Mangu Village, RW 06/RT 11, so that the elderly can independently perform exercise activities at home.	Indept interview		Many people still disregard hypertension. Educating the elderly on hypertension prevention aims to increase their knowledge and prevent hypertension, promoting healthy and productive aging.
9	Ade Tika Herawati, H. Manaf, Eka Putri Kusumawati, (2021)	Knowledge about the management of hypertension in hypertensive patients	Jurnal Ilmiah Kesehatan Pencerah	Gaining knowledge about hypertension management	Deskriptif	The research result shows that 52.5% of respondents have inadequate knowledge about hypertension management.
10	Arif Irpan Tanjung, Sasono Mardiono, Andre Utama Saputra, (2023)	Health Education on Fitness Exercise in Blood Pressure Changes among Hypertensive Elderly at the Regional Public Hospital Kayuagung Tahun 2023	Journal of Community Service Cendekia	Understanding the Effect of Elderly Fitness Exercises on Lowering Blood Pressure in Hypertensive Elderly at RSUD Kayuagung.	Quasi Eksperimental	This study shows that knowledge about hypertension among the elderly has increased.

Discussion

Health education on hypertension is one of the efforts to prevent hypertension. Health education essentially involves activities or efforts to convey health messages to the community, groups, or individuals. Through these efforts, it is hoped that communities, groups, or individuals can acquire better knowledge about health (Hidayat et al., 2022). According to the research by Ariyanti et al. (2020), health education on hypertension significantly increases the respondents' knowledge about controlling hypertension. The findings emphasize the importance of education and understanding in preventing and managing high blood pressure, especially among the elderly. Education is a systematic activity aimed at producing learning. This process is designed to generate specific learning outcomes. Nurse-led education enhances clients' knowledge about the treatment and management of their illness. Clients will learn the best ways to manage their condition, thereby increasing awareness and compliance with treatment and medication (Hadidi, 2015).

Similar research was conducted by Nuraisyah et al. (2021), using a true experimental design by distributing leaflets door to door to 31 elderly individuals. After conducting post-tests, there was an increase in knowledge among the elderly regarding hypertension prevention and management. In providing health education on hypertension prevention and management, there was an increase in knowledge among hypertension patients. Before receiving health education, the majority lacked knowledge due to insufficient information about their health, resulting in a lack of attention to their health and inadequate knowledge about hypertension prevention and management. After receiving health education on hypertension prevention and management, the majority of respondents had sufficient and good knowledge because they paid close attention during the education session.

These research findings are consistent with Purwati's (2019) study on the Effect of Health Counseling on Hypertension Patients, which found a significant difference in knowledge before and after health counseling, with a p-value of $0.000 \leq 0.05$ indicating an increase in knowledge. Similarly, Utari et al. (2021) found a difference in knowledge before and after health education, with a p-value of $0.000 \leq 0.05$, indicating an increase in knowledge from before to after receiving health education.

Herawati et al.'s (2021) research on knowledge about hypertension management among hypertension patients found that 52.5% of respondents had inadequate knowledge about hypertension management. Based on these findings, the role of health education becomes crucial in improving the well-being of individuals and communities. Health education can create a healthier and more health-conscious society, ultimately enhancing overall well-being and reducing the burden on healthcare systems.

Health education promotes the adoption of healthy lifestyles, such as a low-salt diet, increased physical activity, smoking cessation, and reduced alcohol consumption, all of which are crucial for controlling hypertension. By controlling hypertension, individuals can enjoy a better quality of life with more energy and a lower risk of serious health conditions. Effective hypertension control through education can significantly reduce hypertension-related mortality and morbidity, improving overall public health (Manurung & Syahrizal, 2024).

Education on hypertension among the elderly is considered crucial because this age group is at high risk of hypertension and related complications. Hypertension education for the elderly should be holistic, continuous, and involve support from family and healthcare professionals, aiming to improve quality of life and reduce the risk of complications. According to Mulki and Kindang (2023), many

people are still indifferent to hypertension. Health education can increase awareness among people who were initially unaware of the risk factors and early symptoms of a disease, enabling them to take more effective preventive measures.

Conclusions

The role of nurses as educators in helping patients can improve health by providing information about the treatment and medical procedures they receive and providing nursing care to meet the needs of hypertension patients and provide necessary treatment.

References

- Andrieieva, O., Hakman, A., Kashuba, V., Vasylenko, M., Patsaliuk, K., Koshura, A., & Istyniuk, I. (2019). Effects of physical activity on aging processes in elderly persons.
- Ariyanti, R., Preharsini, I. A., & Sipolio, B. W. (2020). Edukasi Kesehatan Dalam upaya pencegahan dan pengendalian penyakit hipertensi pada lansia. *To Maega: Jurnal Pengabdian Masyarakat*, 3(2), 74-82.
- Böhm, M., Schumacher, H., Teo, K. K., Lonn, E., Mahfoud, F., Mann, J. F., ... & Yusuf, S. (2018). Achieved diastolic blood pressure and pulse pressure at target systolic blood pressure (120–140 mmHg) and cardiovascular outcomes in high-risk patients: results from ONTARGET and TRANSCEND trials. *European heart journal*, 39(33), 3105-3114.
- Dafriani, P., Sartiwi, W., & Dewi, R. I. S. (2023). Edukasi Hipertensi pada Lansia di Lubuk
- Efendi, Z., & Surya, D. O. (2021). Hubungan Dukungan Keluarga Dengan Pelaksanaan Continuity of Care Pasien Diabetes Melitus Tipe 2 Pada Masa Pandemi Covid19. *Jurnal Kesehatan Mercusuar*, 4(1), 66-74.
- Hadidi, K. (2016). *Pengaruh psikoedukasi terhadap pengetahuan, koping, kepatuhan dan tekanan darah pada lansia dengan hipertensi menggunakan pendekatan teori Adaptasi Roy* (Doctoral dissertation, Universitas Airlangga).
- Herawati, A. T. (2021). Pengetahuan tentang penanganan penyakit hipertensi pada penderita hipertensi. *JIKP Jurnal Ilmiah Kesehatan Pencerah*, 10(2), 159- 165.
- Hidayat, N. (2019). Penyuluhan Kesehatan Tentang Asam Urat Pada Lansia Di Dusun Balong Kabupaten Sleman. *DIMAS: Jurnal Pengabdian Masyarakat*, 1(1).
- Irianti, C. H., Antara, A. N., & Jati, M. A. S. (2021). Hubungan Tingkat Pengetahuan Tentang Hipertensi dengan Tindakan Pencegahan Hipertensi di BPSTW Budi Luhur Bantul. *Jurnal Riset Daerah Kabupaten Bantul*, 21(3), 4015-4032.
- Kemenkes RI, K. K. R. I. (2021). Apa yang dimaksud dengan Hipertensi , Penyakit Jantung dan Pembuluh Darah. *Kemenkes.Go.Id*, 2–5. <http://p2ptm.kemkes.go.id/informasi-p2ptm/hipertensi-penyakit-jantung-dan-pembuluh-darah>
- Maksuk, M., & Yusneli, Y. (2021). Edukasi Dan Senam Lansia Sebagai Upaya Pencegahan Dan Pengendalian Lansia Dengan Hipertensi. *Jurnal Kreativitas Pengabdian Kepada Masyarakat (PKM)*, 4(3), 733-740.
- Mulki, M. M., & Kindang, I. W. (2023). Upaya Peningkatan Pengetahuan Masyarakat Tentang Pencegahan Hipertensi Dengan Senam Lansia Di Desa Mangu RW 06/RT 11. *AMMA: Jurnal Pengabdian Masyarakat*, 1(12), 1784-1787.
- Nuraisyah, F., & Kusumo, H. R. (2021). Edukasi Pencegahan dan Penanganan Hipertensi untuk Meningkatkan Kualitas Hidup pada Lansia. *BAKTI: Jurnal Pengabdian Kepada Masyarakat*, 1(2), 35-38.

- Nurdin, F., Ibrahim, I., & Adhayanti, I. (2022). Tingkat Pengetahuan dan Kepatuhan Minum Obat Pasien Hipertensi di Puskesmas Leppang, Kabupaten Pinrang. *Jurnal Gizi Kerja dan Produktivitas*, 3(2), 81-87.
- Purwati, R. D., Bidjuni, H., & Babakal, A. (2014). Pengaruh penyuluhan kesehatan terhadap pengetahuan perilaku klien hipertensi di puskesmas bahu manado. *Jurnal Keperawatan*, 2(2).
- Putra, R. S., & Soebyakto, D. H. (2024). Manajemen Edukasi Penanganan Hipertensi Pada Lansia Dengan Jus Wortel. *Journal of Cross Knowledge*, 2(1), 244-249.
- Tanjung, A. I., Mardiono, S., & Saputra, A. U. (2023). Pendidikan Kesehatan Senam Bugar Dalam Perubahan Tekanan Darah Pada Lansia Hipertensi Di Rsud Kayuagung Tahun 2023. *Nanggroe: Jurnal Pengabdian Cendikia*, 2(4).
- Tinambunan, M., & Sintaro, S. (2021). Aplikasi Restfull Pada Sistem Informasi Geografis Pariwisata Kota Bandar Lampung. *Jurnal Informatika Dan Rekayasa Perangkat Lunak*, 2(3), 312-323.
- Umah, K., Zahroh, R., Gustomi, M. P., & Kinarti, Y. M. (2023). Penyuluhan Hipertensi Pada Lansia Sebagai Upaya Mencegah Dan Pengendalian Hipertensi Di Posyandu Lansia Di Desa Suci Kecamatan Manyar Kabupaten Gresik. *Jurnal Pemberdayaan Masyarakat Nusantara*, 1(2), 132-136.
- Utari, R., Sari, N., & Sari, F. E. (2021). Efektivitas Pendidikan Kesehatan perhadap Motivasi Diit Hipertensi Pada Lansia Hipertensi di Posyandu Lansia Desa Makarti Tulang Bawang Barat Tahun 2020. *Jurnal Dunia Kesmas*, 10(1), 136-144.
- WHO, W. H. O. (2023). Hypertension. March. <https://www.who.int/news-room/fact-sheets/detail/hypertension>
- Wicaksono, P. P., Wahyuni, W., & Rahim, A. F. (2024). Penyuluhan Upaya Pencegahan Dan Deteksi Dini Terhadap Permasalahan Hipertensi Pada Komunitas Lansia Di Kelurahan Kauman Surakarta. *Kegiatan Positif: Jurnal Hasil Karya Pengabdian Masyarakat*, 2(1), 38-46.