ISSN. 2338-7475
E-ISSN. 2620-7869
Hearty
Jurnal Kesehatan Masyarakat
Berinan, Tulus, Sepenuh Hati,Berbesar Hati, Jujur, Sehat dan Kuat
Vol. 13 No. 6, Desember 2025, Hal. 1399-1406

THE EFFECT OF HEALTHY LIVING EDUCATION ON REDUCING BLOOD PRESSURE IN ELDERLY PEOPLE WITH HYPERTENSION

Eka Apriyana *, Eli Indawati
Sekolah Tinggi Ilmu Kesehatan Abdi Nusantara
Jl. Swadaya No.7, RT.001/RW.014, Jatibening, Kec. Pd. Gede, Kota Bks, Jawa Barat 17412, Indonesia
Email: ekaapriyana3@gmail.com

Abstract

Background: Background: Hypertension is where a person experiences an increase in blood pressure from the normal limit, where diastolic blood pressure is more than 140 mmHg and diastolic blood pressure is more than 90 mmHg. Self-management of hypertensive patients is a person's ability to maintain healthy living behavior to reduce blood pressure in elderly patients with hypertension in Kampung Warga I Cilangkap Cipayung, East Jakarta. This type of research is pre-experimental design research with a one group pre test-post test design approach. The sampling technique is non-probability sampling with a purposive sampling method with a sample size of 30 respondents. The instrument used is an intervention. Research Objective: To determine the effect of healthy living education on reducing blood pressure in elderly people with hypertension. This type of research is pre-experimental design research with a one group pre test-post test design approach. The parametric statistical test is the Wilcoxon test Research Results: Based on the results of the Wilcoxon statistical test in table 5.6, data on pre-post intervention systolic blood pressure was obtained, it was found that of the 30 respondents there were 22 people who experienced a decrease in systolic pressure (Negative rank), 3 respondents experienced an increase in blood pressure (Positive rank) and 5 people had constant blood pressure (Ties). Meanwhile, for the pre-test diastole, of the 30 respondents, 17 people experienced a decrease in diastolic pressure (Negative rank), 4 experienced an increase in diastolic pressure (Positive rank) and 9 people had constant blood pressure (Ties) and for systolic blood pressure the P value (ρ value) was 0.004 which means the overall value or total of everything. This means that there is an influence of healthy living education on reducing blood pressure in hypertensive patients in Warga Village I Cilangkap Cipayung. Conclusions and Suggestions: There is an influence of healthy living education on reducing blood pressure in elderly people with hypertension. It is hoped that the results of this study can increase
Keywords: Healthy Living Education, Blood Pressure Hypertension

Introduction

World Health Organization (WHO) data for 2022 also recorded that one billion people in the world suffer from hypertension and it is estimated that by 2025 there will be an increase in hypertension sufferers from 972 million (26.4%) people to 29.2% and 30% of these sufferers will be in developing countries. Three-quarters of hypertensive patients (639 million) live in developing countries with limited resources, have little knowledge about hypertension and poor control of the condition.

The prevalence of hypertension in Indonesia can be seen from the results of basic health research (RISKESDAS) in 2021 which has increased by 34.1%. This figure is higher than the 2018 Riskesdas results of 25.8% with the highest prevalence of hypertension in women at 36.9% and in patients aged 60 years and over (Rikesdas, 2022).

Submitted: February-2024 Received: September-2024 Available Online: December-2025

Data from the DKI Jakarta Health Service for the period January 2020 to December 2023, the number of hypertension sufferers was 6,666 people. In 2020, the number of hypertension sufferers was 2,066 people. In 2021 the number of hypertension sufferers will be 22,406 people, and in 2022 the number of hypertension sufferers will be 22,406 people (DKI Jakarta Health Service, 2022).

Public knowledge about health is still very low, this is proven by people's habits of preferring fast food, smoking, alcoholic drinks, not maintaining sleep patterns and rarely exercising. People who realize that they suffer from hypertension and do not comply with taking medication are more likely to experience stroke complications. This trend of change can be caused by increasing knowledge of health and medicine, as well as socio-economic changes in Indonesian society which have an impact on people's culture and healthy lifestyles. (Eltannia, 2021).

Lifestyle factors can be classified into several components related to the incidence of hypertension, consisting of smoking, maintaining an ideal body weight, active activities and drinking alcohol (Triyanto, 2021). Current government programs to prevent and control hypertension provide a conducive environment, for example establishing a "car free day" on Sundays on protocol roads, so that hypertension sufferers have access to mass exercise and enjoy fresh, pollution-free air. Hypertension sufferers can measure their own blood pressure at home. Hypertension sufferers are aware that hypertension can be treated with changes in life behavior, sufferers understand that drinking regularly is a must in preventing complications (HKS Warning Guide, 2021).

Based on the results of a preliminary study, it was found that in the last three years the number of patients at the Pondok Ranggong Cilangkap Cipayung East Jakarta Community Health Center with hypertension in 2022 was 14.43%. From the problems that occurred, the researchers took the title 'The Effect of Healthy Living Education on Reducing Blood Pressure in Elderly People with Hypertension'.

Research Result

This research was carried out from 1 August to 30 December 2023 in Kampung Warga I Cilangkap Ciayung, East Jakarta. The sampling technique in this research uses the Non-Probability Sampling technique with a total sampling of 30 samples. Data collection in this research was done by visiting the respondents' homes. Respondents will have their blood pressure measured first, then distribute questionnaires to residents, after that education will be provided to patients and families and distributed Lelaflet media to each patient as a form of learning to manage a healthy life which will be observed by their families. This intervention was carried out for 4 weeks at intervals of 3 times a week.

Data processing using the SPSS for Windows version 24 computer program. After that the data was analyzed using the Wilcoxon test with a significance value of $\alpha = 0.05$. There is a correlation between acceptance and rejection, if the value of $\rho < 0.05$ then Ho is rejected, Ha is accepted. This means that there is an influence on maintaining healthy life on reducing blood pressure. If the p value $\geq$ 0.05 then Ho is accepted, Ha is rejected.

The appearance method

of the sampling method used is the non-probability sampling method with the Pulposive Sampling method, namely the desired sampling method, namely sampling based on the objective and real purpose because it is considered to have the necessary information for research. The sample in this research is a subset of patients in the Cilangkap Cipayulng Resident Village I in Delselmbelr 2023, with Rulmuls Ulji Belda Dula Melan

Distribution of Respondents Based on Age, Gender, and highest level of education in the Cilangkap Cipayung Village.

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	36-45 tahun	8	26.7	26.7	26.7
	45-55 tahun	2	6.7	6.7	33.3
	>55 tahun	20	66.7	66.7	100.0
	Total	30	100.0	100.0	

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	perempuan	8	26.7	26.7	26.7
	laki-laki	22	73.3	73.3	100.0
	Total	30	100.0	100.0	

Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SMP	8	26.7	26.7	26.7
	SMA	18	60.0	60.0	86.7
	S1	4	13.3	13.3	100.0
	Total	30	100.0	100.0	

Based on the table, data obtained on 30 people (respondents), the largest were in the > 56 year group, namely 20 (66.7%) respondents and the smallest were in the 45 -55 year age group, namely 2 (6.7%) respondents. Data on respondents who were male were 22 people (73.3%) respondents and the number of respondents who were female were 8 (26) respondents and data with the highest number of respondents in high school was 18 people (26.7%) respondents.

Univariate Analysis

Distribution of Respondents based on Blood Pressure before Education Healthy living

TD_diastol_pre

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Normal	17	56.7	56.7	56.7
	Prehipertensi	10	33.3	33.3	90.0
	Hipertensi Derajat 1	3	10.0	10.0	100.0
	Total	30	100.0	100.0	

Based on the table, data was obtained on 30 people (respondents) with 4 people classified as pre-hypertension (13.3%), 10 people classified as grade I hypertension, there were 3 people with the smallest number (10.0%), in pre-hypertension 10 people with a total of 17 people with a total of (56.7%).

Distribution of Respondents Based on Blood Pressure After Education

TD_sistol_post

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Normal	6	20.0	20.0	20.0
	Prehipertensi	8	26.7	26.7	46.7
	Hipertensi Derajat 1	10	33.3	33.3	80.0
	Hipertensi Derajat 2	6	20.0	20.0	100.0
	Total	30	100.0	100.0	

Based on the table, data was obtained on 30 people (respondents) 6 people were classified as normal (20.0%), 6 people were classified as grade II Hypertension (20.0%), 8 people were classified as pre-hypertension (26.7%) and the largest number was Hypertension (26.7%) and the largest number in grade I hypertension 10 people (33.3%). Meanwhile, based on diastolic blood pressure, the smallest number of 2 people were classified as grade I hypertension (66%), 8 people were classified as normal (26.7%) and the largest number was 20 people classified as pre-hypertensive (66.7%).

The systolic blood pressure of Selbellulm and Selsuldah Eldulkasi is described in the table as a bellricult:

TD_sistol_post

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Normal	6	20.0	20.0	20.0
	Prehipertensi	8	26.7	26.7	46.7
	Hipertensi Derajat 1	10	33.3	33.3	80.0
	Hipertensi Derajat 2	6	20.0	20.0	100.0
	Total	30	100.0	100.0	

Based on the table, the average (meldian) systolic blood pressure before intervention was 154.67 with a standard deviation of 15.477, while the mean (meldian) value was 160.00 and the minimum and maximum values were 130 -180. while the average systolic blood pressure obtained post intervention was 139.00 with a standard deviation of 15.391 while the median was 140.00 and the minimum and maximum values were 120 - 170. The descriptive value above is an initial illustration of the difference in systolic blood pressure pre-intervention and post-intervention as the impact of intervention from healthy living education on blood pressure.

Distribution of Respondents Based on Diastolic Blood Pressure Before and After Education in Citizen Village I.

Statistics

		TDsistol_pre	TDdiastol_pre	TDsistol_post	TDdiastol_post
N	Valid	30	30	30	30
	Missing	0	0	0	0
Mean		154.67	84.33	139.00	79.67
Median		160.00	80.00	140.00	80.00
Std. Deviation		15.477	11.043	15.391	10.334
Minimum		130	70	120	60
Maximum		180	100	170	100
Percentiles	25	140.00	77.50	130.00	70.00
	50	160.00	80.00	140.00	80.00
	75	170.00	92.50	150.00	90.00

Based on the table, the average pre-intervention diastolic blood pressure is 84.33 with a standard deviation of 11.043, while the median is 80.00 and the minimum and maximum values are 70 -100 and the average value for post-intervention diastolic blood pressure is obtained. namely 79.67 with a standard deviation of 10.334 while the median is 80.00 and the minimum and maximum values are 60-100. The descriptive value above is an initial illustration of the difference in pre and post diastolic blood pressure as an impact of interventions from healthy living education regarding blood pressure.

II Bivariate Analysis

a.The Effect of Healthy Lifestyle Education on Blood Pressure of Hypertension Sufferers in Warga Village I.

Ranks

		N	Mean Rank	Sum of Ranks
TDsistol_post - TDsistol_pre	Negative Ranks	22[a]	14.02	308.50
	Positive Ranks	3[b]	6.50	19.50
	Ties	5[c]		
	Total	30		
TDdiastol_post - TDdiastol_pre	Negative Ranks	17[d]	11.12	189.00
	Positive Ranks	4[e]	10.50	42.00
	Ties	9[f]		
	Total	30		

a. TDsistol_post < TDsistol_pre
b. TDsistol_post > TDsistol_pre
c. TDsistol_post = TDsistol_pre
d. TDdiastol_post < TDdiastol_pre
e. TDdiastol_post > TDdiastol_pre
f. TDdiastol_post = TDdiastol_pre

Based on the results of the Wilcoxon statistical test in the table, data on pre-post intervention systolic blood pressure was obtained, it was found that of the 30 respondents there were 22 people who experienced a decrease in systolic pressure (Negative rank), 3 respondents experienced an increase in blood pressure (Positive rank) and 5 people with constant blood pressure (Tiels). Meanwhile, for prel-telst diastole, of the 30 respondents, 17 people experienced a decrease in diastolic pressure (Negative rank), 4 experienced an increase in diastolic pressure (Positive rank) and 9 people had constant blood pressure (Tiels) and for systolic blood pressure the P value (ρ valulel) was 0.004 which means the overall value or original total. Which means that there is an influence of .

Discussion

Hypertension Incidence in Resident Village I Cilangkap Cipayung

Based on the results of the Wilcoxon statistical test in the table, data on systolic blood pressure pre test and post test intervention was obtained, it was found that of the 30 respondents there were 22 people who experienced a decrease in systolic pressure (Negative rank), 3 respondents experienced an increase in blood pressure (positive rank) and 5 people had constant blood pressure (tiet). Meanwhile, for pre-post diastole (negative rank), 4 people experienced an increase in diastolic pressure (positive rank) and 9 people whose blood pressure remained the highest (tightest) and for systolic blood pressure, diastolic blood P value (ρ value) was 0.004, which means the overall value or total which means the total value or total of everything. Which means that there is an influence of healthy living education on reducing blood pressure in elderly people with hypertension in the I Cilangkap Cipayung Resident Village.

Apart from that, there was also research conducted (Kurnia &nataria, 2021). This research used 62 respondents where their blood pressure was measured before and after the intervention and the results showed that there was a difference between diastolic blood pressure and diastolic blood pressure before and after the intervention where the values Pvalue = 0.000, meaning there is an influence of healthy environmental management education on reducing blood pressure

Hypertension is systolic blood pressure above 140 mmHg and diastolic blood pressure above 90 mmHg. Blood pressure is the pressure that comes from the blood and is pumped by the heart to the walls of the arteries (Aspiani. 2022). There are two measurements of blood pressure, namely systolic and diastolic. Blood pressure is the contraction of the heart which pumps blood into the main arteries, and diastolic is the relaxation stage where the heart is filled again with blood from the blood vessels and lungs.

According to researchers, hypertension is an increase in a person's blood pressure above normal systolic blood pressure of above 140 mmHg and blood pressure above 90 mmHg, which can cause an increase in morbidity and mortality.

Results of Healthy Lifestyle Events in Resident Village I Cilangkap Cipayung

Meanwhile, for the pre-post changes in healthy living which were marked by 30 respondents, 17 people experienced a decrease in diastolic pressure (Negative Rank), 4 people experienced an increase in diastolic pressure (Positive Rank) and 9 people had their blood pressure remain constant (Ties) and for pressure direction The systole value is the P value (ρ value) 0.000. Meanwhile for diastole blood pressure the P value (ρ value) is 0.004, which means the overall value or the total. This means that there is an influence of healthy living education on reducing blood pressure in hypertensive patients in Warga Village I Cilangkap Cipayung.

This is based on research (Rusmailini Lumban, Gaol, 2022) entitled The Effect of Education on the Blood Pressure of Hypertensive Patients in the Inpatient Room at Santa Elisabet Hospital, Medan, showing a decrease in blood pressure after respondents were given intervention for four weeks with a total of 60 respondents.

According to researchers, it is not only focused on drugs, but changes to healthy lifestyles also need to be made in order to support the success of treatment in hypertension patients. To modify healthy living for independent nursing behavior that helps hypertensive patients become aware of health problems, both as a group, individually and in society, the influence of the surrounding environment, and psychological mechanisms (Hellwig & Domschke, 2020).

The Relationship between Knowledge and the Incident of Hypertension in Resident Village I Cilangkap Cipayung

Based on a study conducted by researchers (Lestari et al., 2022) regarding the correlation between self-management and blood pressure in elderly people with hypertension, it was found that there was a negative relationship between the level of self-management and blood pressure. Analysis of research results shows that the higher the self-management ability, the greater the impact on reducing blood pressure, while conversely, lack of self-management increases the risk of increasing blood pressure in hypertension sufferers.

This study also reveals that self-management of hypertension involves efforts to change lifestyle to reduce blood pressure. However, it should be noted that lifestyle changes are also an effective form of intervention in lowering blood pressure. In certain situations, especially when blood pressure experiences a significant increase, sufferers may require medical treatment, such as drug therapy, to stabilize their blood pressure.

Based on a study conducted by researchers (Lestari et al., 2022) regarding the correlation between self-management and blood pressure in elderly people with hypertension, it was found that there was a negative relationship between the level of self-management and blood pressure. Analysis of research results shows that the higher the self-management ability, the greater the impact on reducing blood pressure, while conversely, lack of self-management increases the risk of increasing blood pressure in hypertension sufferers.

This study also reveals that self-management of hypertension involves efforts to change lifestyle to reduce blood pressure. However, it should be noted that lifestyle changes are also an effective form of intervention in lowering blood pressure. In certain situations, especially when blood pressure experiences a significant increase, sufferers may require medical treatment, such as drug therapy, to stabilize their blood pressure.

Providing motivation and education can help respondents improve patient behavior because in this case nurses instill individual awareness which can be helped by the family so that they can improve behavior based on desires that arise from themselves. Healthy living modifications were given to respondents by providing education regarding diet to hypertensive patients, what is meant by eating pattern is a system, way of working or effort to do something.

Thus, a healthy eating pattern can be interpreted as a way or effort to carry out healthy eating activities. Healthy living also determines health for the body. During the research process which lasted for 4 weeks by conducting group education using leaflets and home visits for each respondent, the initial data that the researchers obtained was that the respondents had a less healthy lifestyle such as smoking, lack of sports activities in a community, uncontrolled eating patterns showed that the staple food most consumed by respondents is rice, the most eaten side dishes are tofu, tempeh, eggs, chicken, sea fish, salted fish, and fresh fish. The most eaten vegetables are spinach, kale, cassava leaves which are prepared using coconut milk, Side dishes such as fish are most often fried. Most respondents consumed salt without paying attention to dietary rules for hypertension and still consumed sea fish and salted fish containing a lot of salt.

Conclusion

The results of this study concluded that there was a correlation between healthy lifestyle education factors and the incidence of hypertension in Kampung Warga I Cilangkap Cipayung, East Jakarta. Data processing using the SPSS for Windows version 24 computer program. After that the data was analyzed using the Wilcoxon test with a significance value of $\alpha = 0.05$. As for the provisions for acceptance and rejection, if the value of $\rho < 0.05$ then Ho is rejected, Ha is accepted. This means that there is an influence of providing healthy living education on reducing blood pressure. If the p value ≥ 0.05 then Ho is accepted, Ha is rejected.

References

[1] Anshari, Z. (2020) 'Complications of Hypertension in Relation to Patient Knowledge of Hypertension and Efforts to Prevent It', 2(2), pp. 46–51. Available at: *http://ejournal.delihusada.ac.id/index.php/JPKM.*

[2] Aristotle (2020) 'Correlation of Age and Gender with Hypertension', Indonesian Nursing Journal, 3(1), pp. 9–16. Available at: *https://ejr.stikesmuhkudus.ac.id/index.php/ijp/article/view/576/409*

[3] Ariyanti, R., Preharsini, I.A. and Sipolio, B.W. (2020) 'Health Education in Efforts to Prevent and Control Hypertension in the Elderly', To Maega: Journal of Community Service, 3(2), p. 74. doi:10.35914/tomaega.v3i2.369.

[4] Buhar, A.D.Y., Mahmud, N.U. and Sumiaty, S. (2020) 'Relationship of Lifestyle to the Risk of Hypertension in the Elderly in the Work Area of the Makassar City Flyover Health Center', Window of Public Health Journal, 1(3), pp. 188–197. doi:10.33096/woph.v1i3.188.

[5] Effendi, N. and Widiastuti, H. (2020) 'IDENTIFICATION OF IMMUNOGLOBULIN M (IG.M) ACTIVITY OF CEPLUKAN LEAVES (Physalis Minima Linn.) ETHANOLIC EXTRACT IN MICE', Journal of Health, 7(2), pp. 353–360.

[6] Hariawan, H. and Tatisina, C.M. (2020) 'Implementation of Family Empowerment and Hypertension Exercise as a Self-Management Effort for Hypertension Sufferers', Sasambo Community Service Journal, 1(2), p. 75. *doi:10.32807/jpms.v1i2.478*

[7] Isnaini, N. and Lestari, I.G. (2020) 'The Effect of Self Management on the Blood Pressure of Elderly People with Hypertension', Indonesian Journal for Health Sciences, 2(1), p. 7. *doi:10.24269/ijhs.v2i1.725.*

[8] Jayanti, I.G.A.N., Wiradnyani, N.K. and Ariyasa, I.G. (2020) 'The relationship between alcoholic beverage consumption patterns and the incidence of hypertension in tourism workers in Legian Village', Indonesian Journal of Nutrition, 6(1), pp. 65–70. doi:10.14710/jgi.6.1.65-70.

[9] Kiha, R.R., Palimbong, S. and Kurniasari, M.D. (2020) 'Effectiveness of a Low Salt Diet I in Regular and Soft Foods on the Length of Recovery for Hypertension Patients', Muhammadiyah Nursing Journal, 3(1). doi:10.30651/jkm.v3i1.1574.

[10] Mufidah, N. (2020) 'The Relationship between Self-Management and Blood Pressure in Hypertensive Patients in the Outpatient Clinic of Anwar Medika Hospital Sidoarjo', STIKES Repository of Anwar Medika Hospital, pp. 1–93.