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The Effect Of Boiled Sail Leaf Water On Blood Pressure In Hypertension Patients

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ABSTRACT

Hypertension is a major health problem that can cause complications from various diseases such as heart disease, stroke, kidney failure and other diseases. One effort to lower blood pressure is with bay leaf boiled water therapy. Bay leaves contain flavonoids which function to relax arterial muscles so they can reduce high blood pressure in hypertensive patients. The aim of the research was to determine the effect of bay leaf boiled water therapy on blood pressure in hypertensive patients. The research design used a quasi-experiment with a one group pre-post test design approach, the sample size was 39 people using a purposive sampling technique. The patient drank water boiled with bay leaves ½ glass in the morning and ½ glass before eating for 2 weeks. Blood pressure was measured before and after drinking boiled bay leaves. The results of the research before therapy were carried out, the average systolic blood pressure was 160.67 mmHg and diastolic 93.1 mmHg, after therapy with bay leaf boiled water the average systolic blood pressure was 147.74 mmHg and diastolic 81.72 mmHg. The results of the analysis showed that bay leaf boiled water therapy had an effect on reducing blood pressure in hypertensive patients at the Menteng Community Health Centers, Palangka Ra (p=0.00)

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1. Introduction

Hypertension is increased blood pressure (long term) and can cause a person long illness and even death (Ainurrafiq et al., 2019). This condition causes the heart to beat faster so that blood pressure increases (systolic ≥140 mmHg or diastolic ≥ 90 mmHg) (Okmalasari & Sukesi, 2018). Estimated number of hypertension cases in Indonesia amounting to 63,309,620 people, while the figure deaths in Indonesia due to hypertension amounted to 427,218 deaths. Hypertension occurs in age group 31-44 years (31.6%), age 45-54 years (45.3%), aged 55-64 years (55.2%).

Central Kalimantan Province with Hypertension cases rank 6th out of 10 the most disease, there were 32,729 cases, (39.53%) (Central Kalimantan Provincial Health Service, 2019). Profile of the Palangka City Health Service Raya at the Pahandut Community Health Center sufferers hypertension as many as 3,425 (44.41%), Panarung Community Health Center as many as 2,444 (49.55%), Marina Permai

Community Health Center as many as 3,332 (49.01%), Bukit Hindu Community Health Centers numbered 4,948 (48.83%) and Kayon Community Health Center with 4,061 (48.31%), Jekan Raya Community Health Center as many as 257 (51.75%), Kereng Bangkirai Community Health Center as many as 1,080 (50.19%), Kalampangan Community Health Centers as many as 638 (49.37%), There are 1,334 Tangkiling Community Health Centers (48.20%) and Rakumpit Community Health Centers as many as 330 (38.48%)

Preliminary survey conducted in December 2022, at Menteng Community Health Centers, Palangka Raya in the general poly room obtained data for hypertension cases throughout 2021 as many as 2387 and 2022 from the month January - September there are 1695 people and in January 2023 there were 338 people. Hypertension if not treated or Early prevention will risk disease degenerative diseases such as kidney damage, retinopathy, coronary heart disease, heart wall thickening, stroke, broken blood vessels, even instant death suddenly (Ainurrafiq et al., 2019).

Non-pharmacological management or complementary therapy for hypertensive patients is to use bay leaves to lower blood pressure in the long term because it does not cause dangerous side effects (Syaifuddin, 2013). Mineral content in bay leaves makes blood circulation smoother and reduces high blood pressure. Leaf Salam also contains essential oils eugenol and methyl kavikol, as well as ethanol plays an active role as an anti-fungal and bacterial agent (Silalahi et al., 2020). This is also supported by several research results conducted by Hidayat S, et al (2018), Harahap, B (2021) and Silalahi, KL, et al (2020) which show that boiled bay leaves given for 3-7 days can reduce blood pressure in the elderly.

Based on the data and results of previous studies, the researchers wanted to conduct research on giving bay leaves to reduce blood pressure in hypertensive patients with different target ages and administration times at the Menteng Community Health Center, Palangka Raya City

2. Research Methods

The research design used a quasi-experiment with a one group pre-post test design approach, the sample size was 39 people using a purposive sampling technique. The instruments used in this research were the respondent's biodata format, a calibrated analog manual sphygmomanometer, a stethoscope, an observation sheet, and an SOP on how to make bay leaf boiled water.The patient drank water boiled with bay leaves ½ glass in the morning and ½ glass before eating for 2 weeks. Blood pressure was measured before and after drinking boiled bay leaves. Univariate data analysis in the research included gender, age, education, occupation and bivariate data analysis using the paired t-test. (Sugiyono, 2019)

3. Results and Discussion

3.1. Results

Table 1. Characteristics of Patient Respondents Hypertension in the Menteng, Community Health Centers Palangka Raya City (n=39)

No	Respondent characteristics	Frequency (F)	Percentage (%)
1.	Age		
	35-40 years	3	7.7
	41-50 years old	9	23.1
	51-60 years old	27	69.2
2.	Gender		
	Boy	7	17.9
	Woman	32	82.1
3.	Education		
	No school	-	-
	elementary school	8	20.5

	Junior High School	9	23.1
	Senior High School	13	33.3
4.	Bachelor	9	23.2
	Work		
	Not working/homework	15	38.4
	Laborer	8	20.5
	Private	12	30.8
	Civil servants	4	10.3

Table 1 shows that the age characteristics of the majority of respondents aged 51-60 years were 27 people (69.2%), the majority of hypertension cases were experienced by women, 32 people (82.1%) Characteristics of Hypertension respondents with high school education were 13 people (33.3 %), SMP and Bachelor's degrees respectively 9 people (23.1%) and elementary school 8 people (20.5%). Based on occupation, hypertension was found in 15 respondents who were not working/domestic workers (38.5%), 12 people in the private sector (30.8%), 8 workers (20.5%) and 4 civil servants (10.3%).

Table 2 . Effect of boiled water from bay leaves on blood pressure in sufferers Pretest and Posttest Hypertension (n=39)

Blood Pressure	*Means*	elementary school	Mean Difference	*S.E*	*P-Value*
Before Intervention					
Systole	160.67	18,082	12.93	1,501	0.00
Diastole	147.7	16,548	mmHg	1,558	
After Intervention					
Systole	93.13	12,280	11.31	1,182	
Diastole	81.82	9,600	mmHg	667	

Table 3 shows the average value of systolic blood pressure for hypertension sufferers before being given bay leaf boiled water was 160.67 mmHg and diastolic 93.1 mmHg. The average systolic blood pressure after being given bay leaf decoction was 147.74 mmHg and diastolic 81.82 mmHg. It can be seen that the difference in the average value of systolic blood pressure between before and after being given the bay leaf decoction was 12.93 mmHg and the difference in the average value of diastolic blood pressure between before and after being given the bay leaf decoction was 11.31 mmHg. It can be concluded that there is a significant effect before and after being given bay leaf boiled water to hypertensive patients in the The results of the analysis showed a significant effect before and after being given bay leaf boiled water to hypertensive patients at the Menteng Community Health Centers, Palangka Raya (p=0.00).

3.2. Discussion

a. Age

Research results based on age can be it is known that the majority of respondents who suffer from hypertension at the age of 35-40 years amounted to 3 people (7.7%), aged 41-50 years amounted to 9 people (23.1%), and age 51-60 years old amounted to 27 people (69.2%). From the research results above, it shows age 51-60 year olds suffer the most hypertension. As it increases age in a person, most likely suffering from hypertension, this is caused by structural changes to large blood vessels and is caused by decreased body resistance (Maulidina, 2019).

b. Gender

The results of the study showed that the characteristics of female respondents who mostly suffered from hypertension were 32 people (82.1%). This is in line with Perry's research (Perry, 2010),

namely women tend to have high blood pressure higher than in men. Artiyaningrum said if women entering menopause, stress Too much, the risk of hypertension increases so the prevalence is higher compared to men. This matter caused by the production of the hormone estrogen decreases during menopause so causes an increase in blood pressure tall (Artiyaningrum, 2016). Wulandari said that women are more inclined suffer from hypertension due to disorders hormonal (Ambarwati, 2020).

c. Education

The results of the study showed that the most people suffering from hypertension were high school educated with a total of 13 people (33.3%). Khusnah (Khusnah et al., 2021) said that the respondent's education is in the high category but they still experience hypertension, the reason is that many people still know about the risk factors for hypertension, especially in terms of maintaining a lifestyle such as not consuming foods that contain high levels of sodium, for example salted fish and salted fish. which contain high cholesterol such as fried foods, but some of the respondents still violate this so they still suffer from hypertension.

d. Employment

The results of research based on work show that most people suffering from hypertension occur in housewives/not working with a total of 15 people (38.5%). This is in line with research conducted by (Hakim, 2018) which stated that there is a relationship between work and the incidence of hypertension, this is because people who do not work have a 1.42 times risk of experiencing hypertension. Cortas (Cortaz, 2008), states that people with low activity have a 30-50% risk of developing hypertension compared to those who are active. The lack of activities carried out by housewives where most of them just stay at home with routines that make them bored, causing stress. The results of this study show that housewives are more at risk of developing blood pressure.

e. The effect of bay leaf boiled water on blood pressure in hypertension sufferers before and after intervention

The results of this study have shown that drinking bay leaf water can reduce blood pressure in hypertensive patients. The mineral content in bay leaves makes blood circulation smoother and reduces high blood pressure. The results of this research are supported by research from Friska (Friska, 2016) in the Belimbing Padang Community Health Center. Leaf decoction therapy greetings are given twice a day for one Sunday. From this data there is an influence giving decoction of bay leaves to decreased blood pressure in the group experiment and this research are supported by research by Annisa (Rahmalia et al., 2021) in Kuok Village, the working area of the UPT BLUD Puskesmas Kuok. The results of the study showed that there was a decrease in blood pressure values before and after being given bay leaf boiled water to hypertension sufferers in Kuok Village, UPT BLUD Working Area, Kuok Health Center.

Bay leaves also contain the essential oils eugenol and metal kavikol, as well as ethanol which plays an active role as an anti-fungal and bacterial agent (Silalahi et al., 2020). The therapeutic effect of boiled bay leaf water lowers blood pressure because it contains flavonoids which can function as anti-oxidants which can prevent oxidation of body cells. The higher the cell oxide in the body, the higher a person's risk of suffering from hypertension.

By consuming boiled water from bay leaves twice a day, half a glass every day, you can help reduce stress hormones and relax artery muscles. Apart from that, the mineral content in bay leaves makes blood circulation smoother and can also reduce high blood pressure. Bay leaves contain

flavonoids which function as antioxidants which can prevent oxidation of body cells. The higher the cell oxide in the body, the higher a person's risk of suffering from degenerative diseases. The flavonoid content in bay leaves can be used to prevent hypertension (Ali, 2011).

4. Conclusion

The conclusion of this research shows that characteristics of respondents who suffer from hypertension are predominantly female respondents, with non-working/domestic status, aged 51-60, with the greatest educational background of higher education (SMA). The average systolic blood pressure before being given bay leaf decoction was 160.6 mmHg and the average diastolic blood pressure was 93.1 mmHg, while the average systolic blood pressure after being given bay leaf decoction was 147.7 mmHg and the average diastolic blood pressure was 81.8 mmHg. The results of the analysis show that drinking boiled leaf water has the effect of lowering blood pressure in hypertensive patients at the Menteng Community Health Centers, Palangka Raya (p=0.000)

The results of this research are beneficial for hypertension patients and health facilities, where bay leaf decoction has become an alternative therapy for treating hypertension. The results of this research can also be used as evidence based on the benefits of bay leaves in the context of complementary nursing. The limitation of this research is that it does not use a control group so it does not identify other variables that could influence the results of this research.

Reference

Ainurrafiq, A., Risnah, R., & Azhar, M. U. (2019). Non-Pharmacological Therapy in Controlling Blood Pressure in Hypertensive Patients: Systematic Review. *MPPKI (Indonesian Health Promotion Publication Media): The Indonesian Journal of Health Promotion*.

Ali. (2011). *Pengantar Asuhan Keperawatan Klien dengan Gangguan Sistem Kardiovaskular*. Salemba Medika.

Ambarwati, W. (2020). *Asuhan Kebidanan Nifas*. Nuha Medika.

Artiyaningrum, B. (2016). Factors Which Related to Events Uncontrolled Hypertension In Sufferers Who Do Routine Checkup. *Public Heal Perspect Journal*, *1*(1).

Central Kalimantan Provincial Health Service. (2019). *Profil Kesehatan Provinsi Kalimantan Tengah Tahun 2019. In Profil Kesehatan Provinsi Kalimantan Tengah*.

Cortaz, K. (2008). Hypertension. *The Journal of Public Health*. http://www.emedicine.com

Friska, R. (2016). *Pengaruh Pemberian Daun Salam Terhadap Perubahan Tekanan Darah Pada Penderita Hipertensi di Wilayah Kerja Puskesmas Belimbing Kota Padang Tahun 2016*. Universitas Andalas.

Gao, Y., Zhao, J., Qin, C., Yuan, Q., Zhu, J., Sun, Y., Lu, C., Federal, U., Cear, D. O., Ci, C. D. E., Agr, N., Ci, E. M., Alimentos, T. D. E., Lopes, S., Oliveira, G. O. D. E., Afifah, I., & Sopiany, H. M., Psicologia, P. D. E. P. E. M., Orrico Junior, M., Santos, H. D. S., … Augusto, K. V. O. N. Z. (2023). No Main article: Co-dispersion structure analysis of health-related indexes and health-related indexes. Title. Aleph, 87(1,2), 149–200.

Hakim, L. (2018). *Description of the Characteristics of Hypertension Sufferers in Community Health Centers New Management of Banjarmasin*.

Harahap BYH, Hasim H, Faridah DN. Antioxidant Activities and αglucosidase Inhibition of Gayo Arabica Coffee Skin (Coffea arabica L). Curr Biochem. 2021;8(1):37-50. https://journal.ipb.ac.id/index.php/cbj/article/view/38786

Hidayat, S. (2018). Pengaruh Rebusan Daun Salam Terhadap Penurunan Tekanan Darah Pada Lansia Dengan Hipertensi. Jurnal Kesehatan "Wiraraja Medika," 8(2), 14–22. https://doi.org/https://doi.org/10.24929/fik.v8i2.647.

Khusnah, F., Rizal, A., & Irianty, H. (2021). Relationship between Education Level, Knowledge and Attitude Towards Prevention of Hypertension in Productive Age in Work Areas Melati Health Center Kuala Kapuas Tahun 2021. *Unsika*, *63*, 1–8.

Maulidina, F. (2019). Factors that Related to Events Hypertension in the Community Health Center Work Area Jati Luhur Bekasi 2018. *ARKESMAS (Health Archives Society)*, 149–155. https://doi.org/https://doi.org/10.22236/arkesmas.v4i1.3141

Okmalasari, F. I., & Sukesi, N. (2018). Pemberian Terapi Tertawa Untuk Menurunkan Tekanan Darah Pada Pasien Hipertensi Di RSUD KRMT Wongsonegoro Semarang. *Jurnal Manajemen Asuhan Keperawatan*.

Perry. (2010). *Fundamental Of Nursing edisi 7*. Salemba Medika.

Rahmalia, A., Apriza, & Isnaeni, L. M. A. (2021). Pengaruh Pemberian Air Rebusan Daun Salam (Syzygiumpolyanthum) Terhadap Penurunan Tekanan Darah Pada Penderita Hipertensi Di Desa Kuok Wilayah Kerja UPT BIUD Puskesmas Kuok. *Jurnal Kesehatan Tambusai*, *2*(4).

Silalahi, A. S., Setiawan, T., & Absah, Y. (2020). *International Journal of Multicultural and Multireligious Understanding The Influences of Organizational Culture, Job Satisfaction and Motivation on Employee Performances at PT Sumatra Sistem Integrasi Medan*. 25–36.

Silalahi;, K. L., Nainggolan, N., Simanjuntak, S., & Ginting, F. A. (2021). Pengaruh Rebusan Daun Salam Terhadap Penurunan Tekanan Darah Tinggi Pada Penderita Hipertensi. Jurnal Penelitian Perawat Profesional, 3(November), 653–660. http://jurnal.globalhealthsciencegroup.com/index.php/JPPP

Sugiyono. (2019). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Alfabeta.

Syaifuddin. (2013). *Anatomi Fisiologi: Kurikulum Berbasis Kompetensi untuk Keperawatan dan Kebidanan*. Penerbit Buku Kedokteran EGC.