The Effectiveness of Bay Leaf Water Boil Therapy in Reducing Hypertension in Pregnant Women in Ciseureuh Assisted Village, Purwakarta Regency

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Abstract.
World Health Organization (WHO) of 70% of known hypertension sufferers only 25% received treatment and only 12.5% were treated well (adequately treated cases) estimated that by 2025 the rate of high blood pressure will increase by 60% and will affect 1.56 billion people worldwide. The purpose of this study was to determine the Effectiveness of Bay Leaf Boiled Water (Syzygium Polyanthum) on Reducing Blood Pressure in Pregnant Women with Hypertension in the Taram Health Center Working Area, Limapuluh Kota Regency in 2020, This type of research is a Quasy Experiment with a One Group Pre test-post test design, purposive sampling technique with a sample of 30 people. Data collection uses observation, then the data is analyzed with a dependent T test. The results of the study showed that the average blood pressure of hypertension sufferers in pregnant women before the intervention was 140.91 mmHg, the average blood pressure of hypertension sufferers in pregnant women after the intervention was 119.09 mmHg, There is the effectiveness of boiled bay leaf water (Syzygium Polyanthum) on reducing blood pressure in pregnant women with hypertension in the assisted village of Ciseureuh in 2026 with (p value = 0.046 <0.05), So it is hoped that the village head can coordinate with other health workers or midwives to be able to increase counseling evenly and comprehensively about mothers with hypertension by using leaflets, brochures and pamphlets about hypertension so that it makes it easier for pregnant women with hypertension to understand it.

keywords : *Boiled Bay Leaf Water, Blood Pressure, Hypertension and Pregnant Women.*

I. INTRODUCTION

According to World Health Organization (WHO) data, of the 70% of known hypertension sufferers, only 25% receive treatment, and only 12.5% are adequately treated. It is estimated that by 2025, the prevalence of high blood pressure will increase by 60%, affecting 1.56 billion people worldwide. The prevalence of hypertension in Indonesia has risen from 134 (13.6%) to 165 (16.5%) in men, and from 174 (16.0%) to 176 (17.6%). Approximately 45% of these cases are pregnant women (Ministry of Health, 2023). The 2025 Basic Health Research (Rikesdas) indicates that the majority of hypertension cases in the community remain undiagnosed. This is evident from blood pressure measurements among those aged 18 and over, which found a prevalence of hypertension in Indonesia of 31.7%. Only 7.2% of the population is aware of their hypertension, and only 0.4% of cases are taking medication for

hypertension. Seventy-six percent of hypertension cases in the community are undiagnosed, meaning 76% of the population is unaware of their hypertension. Furthermore, some women with hypertension are pregnant, with high-risk pregnancies that can lead to preeclampsia. Complementary therapies can be used as a healing modality within holistic midwifery care. Within holistic midwifery services, there are four major groups of healing modalities: touch therapy (massage, acupressure, foot reflexology, and rieki), mind-body therapy (progressive relaxation, biofeedback, imagery, yoga, hypnosis meditation, and aromatherapy), transpersonal therapy (non-contact therapeutic touch and prayer), and alternative medicine therapies (acupuncture, oriental medicine, chiropractic, herbal medicine, homeopathy, and naturopathy).

One non-pharmacological treatment available for pregnant women in Indonesia is herbal therapy. This utilizes leaves, specifically bay leaves (Syzygium polyanthum). Bay leaves are nutritious, high in water, and low in sodium, making them suitable for consumption by pregnant women with hypertension. Furthermore, bay leaves (Syzygium polyanthum) can also lower bad cholesterol levels. The Ciseureuh Assisted Village in Purwakarta Regency is an area characterized by a community that still utilizes traditional medicine in their daily lives. This situation presents an opportunity to develop affordable herbal-based therapies that are culturally appropriate. Therefore, research on the effectiveness of bay leaf water therapy in reducing hypertension in pregnant women in this region is important to conduct.

II. METHODS

This study used a quasi-experimental design. According to Notoatmodjo (2005), a quasi-experimental design is a study that approaches an experiment or quasi-experiment. The design used was a pretest-posttest design with a time series design without a control group, but a first observation (pretest) was conducted, allowing researchers to examine changes that occurred after the experiment (posttest) The study was conducted in Ciseureuh Village, Purwakarta Regency. This study was planned for three months, from February 2026 to April 2026. The sample size was considered representative of the entire population. A total of 33 individuals were recruited. The independent variable in this study was the effectiveness of bay leaf administration, and the dependent variable was hypertension in pregnant women.

Boiled Bay Leaves (Syzygium Polyanthum.) Water is 5 medium-sized leaves (10 grams) washed with clean water and then cut into pieces. Then boil with three glasses of water until one glass remains. After cooling, the water is filtered before drinking. Boiled Bay Leaves (Syzygium Polyanthum.) Drink 1 time a day after breakfast for 7 days. Blood Pressure Pregnant women after drinking boiled bay leaves, blood pressure measurements are taken (> 140/90 mmHg) and recorded on the recording sheet.

Data analysis includes univariate analysis to explain/describe the characteristics of each research variable. The form of analysis depends on the type of data. For blood pressure data, the mean, median, and standard deviation values are used. In general,

this analysis produces a frequency distribution and percentage of each variable. Bivariate analysis aims to analyze the differences between two variables. Bivariate analysis will describe the mean differences in the blood pressure variable of pregnant women before and after administration of boiled bay leaf water. Bivariate analysis is conducted using a paired sample dependent statistical test t-test (a test of differences in means for related samples). This means that if the data collected from two related samples, meaning that one sample will have two sets of data, such as the difference in average blood pressure before and after administration of boiled bay leaf water.

III. RESULT AND DISCUSSION

1. Univariate Analysis

a. Average blood pressure in hypertension sufferers before drinking boiled bay leaf water (Syzygium polyanthum)

Table 5.1 Distribution of Average Blood Pressure in Hypertension Patients Before Boiling Bay Leaves (Syzygium Polyanthum) in Ciseureuh Assisted Village, Purwakarta Regency

Blood pressure	Sistole Mean	Diastole Mean	T/D	SD	Min.Max
Pre Test	140,91	87,27	140/91.	8,893	130/70 160/100

Based on table 5.1 above, the average blood pressure based on the calculation of the sphygmomanometer in hypertensive patients before the administration of boiled Bay Leaves (Syzygium Polyanthum) was 140/87 mmHg with a standard deviation of 8.893 mmHg. The lowest score was 130/70 mmHg and the highest was 160/100 mmHg. Before the administration of Bay Leaves (Syzygium Polyanthum), the blood pressure of hypertensive patients in the data collection format was the lowest blood pressure according to the calculation was 130/70 mmHg, namely 3 people, while the highest blood pressure according to the calculation was 160/100. This is caused by various factors, one of which is stress, where stress can increase blood pressure in the short term by activating the part of the brain and nervous system that usually controls blood pressure automatically. Increased blood pressure experienced repeatedly due to stress will eventually cause persistent high blood pressure.

b. Average blood pressure in hypertension sufferers after being given boiled bay leaf water (Syzygium Polyanthum)

Table 5.2 Distribution of Average Blood Pressure in Hypertension Patients After Boiling Bay Leaves (Syzygium Polyanthum) in Ciseureuh Assisted Village, Purwakarta Regency

Blood pressure	Sistole Mean	Diastole Mean	T/D	SD	Min.Max

'Pos Test	119,27	80.00	119/09.	4.369	125/90 110/70

Based on table 5.2 above, the average blood pressure based on the calculation of Hypertension Standards for hypertensive patients after being given boiled bay leaves was 119/80 mmHg with a standard deviation of 8.178 mmHg. The lowest score was 110/70 mmHg and the highest was 125/90 mmHg. Bay leaves contain flavonoid compounds, where flavonoids containing Quarcertin have an effect as a vasodilator, antiplatelet and antiproliferative and lower blood pressure, the result of oxidation and repair of body organs that have been damaged due to hypertension. Thus, it is concluded that flavonoids can be used to reduce the risk of myocardial infarction and stroke. The increase in vasoconstrictor response can be overcome by administering Bay Leaves (Syzygium Polyanthum) therapy to the body will make vasodilation of blood and lymph vessels, and increase the baroreceptor reflex response that affects the decrease in sympathetic nervous system activity and increase parasympathetic nervous system activity. This mechanism causes systemic vasodilation and decreased heart muscle contractility, subsequently affecting heart rate, cardiac output, and stroke volume, ultimately lowering blood pressure (Regues, 2022). Bay leaves (Syzygium polyanthum) can help restore energy and blood flow. Generally, tapping relaxes blood vessels, especially if the pressure on the points is painful (Pelin, 2018). Blocked energy flow at key points in the body must be released and allowed to flow again by using water (tapping) on specific body parts..

c. Bivariate Analysis

Table 5.3 The Effect of the Effectiveness of Boiled Bay Leaves (Syzygium Polyanthum) on Reducing Blood Pressure in Pregnant Women with Hypertension in the Ciseureuh Assisted Village, Purwakarta Regency

Variabel	Mean	SD	SE	Min-Max	N	P-value
Pre-post	21.818	9.020	2.720	15.758- 27878	11	0.046

Based on table 5.3, the average blood pressure of hypertension sufferers before and after the therapy of drinking boiled bay leaves was 21,818 with a standard deviation of 9,020. The lowest value of blood pressure of hypertension sufferers before and after the therapy of bay leaves was 15,758 and the highest value was 27,878. The results of the T-Test statistical test obtained a p value = 0.046, meaning that at alpha 5% there was an effectiveness of boiled bay leaves (Syzygium Polyanthum) on reducing blood pressure in pregnant women with hypertension in the Ciseureuh Assisted Village, Purwakarta Regency.

complementary therapy is the therapy of boiled bay leaves (Syzygium Polyanthum) is a nutritional herbalist technique, is one form of mind-nutritherapy of complementary and alternative therapies in obstetrics. Boiled bay leaves (Syzygium

Polyanthum) is a combination of the body's energy system (energy nutritionist medicine) by using oral drinking water on the body. Bay Leaf Decoction (Syzygium Polyanthum) works on more or less the same principle as drinking other energy (energy meridian) in the body.

The difference compared to other herbal leaves depends on the composition used is safer, easier, faster, and simpler, because Bay Leaf Decoction (Syzygium Polyanthum) only uses boiled water with the addition of bay leaves. Herbalists of Bay Leaf Decoction (Syzygium Polyanthum) are very useful for treating various biological and psychological problems. One of them can lower blood pressure, because drinking Bay Leaf Decoction (Syzygium Polyanthum) can relax blood vessels so that blood vessels vasodilate, so the flow of energy in the body is smooth and can lower blood pressure in hypertensive patients.

Researcher analysis, the effect of Bay Leaf Decoction (Syzygium Polyanthum) on reducing blood pressure in patients because giving Bay Leaf Decoction therapy (Syzygium Polyanthum) properly and according to the steps can neutralize and vasodilator or widen the body's nerves caused by stress, so that it can smooth blood flow. increased sympathetic nerve response that increases vasoconstriction of blood vessels can be overcome by giving Bay Leaf Decoction (Syzygium Polyanthum) where the therapy can increase baroreceptor response that affects the decrease in sympathetic nervous system activity and increases parasympathetic nervous system activity. This mechanism causes systemic vasodilation and decreased heart muscle contractility, subsequently affecting the decrease in heart rate, and stroke volume and ultimately a decrease in blood pressure.

IV. CONCLUSION

Based on the results of the study on the Effectiveness of Boiled Bay Leaf Water (Syzygium Polyanthum) on Lowering Blood Pressure in Pregnant Women with Hypertension in the Taram Community Health Center Work Area, Limapuluh Kota Regency in 2020, the following conclusions can be drawn:

1. The average blood pressure of hypertensive patients before drinking boiled bay leaf water (Syzygium Polyanthum) among pregnant women with hypertension in Ciseureuh Village, Limapuluh Regency, in 2026 was 140.91 mmHg.
2. The average blood pressure of hypertensive patients after drinking boiled bay leaf water (Syzygium Polyanthum) among pregnant women with hypertension in Ciseureuh Village, Limapuluh Regency, in 2026 was 119.09 mmHg.
3. The effectiveness of boiled bay leaf water (Syzygium Polyanthum) on lowering blood pressure in pregnant women with hypertension in Ciseureuh Village, Limapuluh Regency, in 2026 (p-value = 0.046<0.05).

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