



MISANJA Therapy (Islamic Spiritual Mindfulness and Ginger Drink) Can Lower Blood Pressure in Hypertension Patients: A Pre-Experimental

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ABSTRACT

Hypertension is a global health problem requiring a comprehensive treatment approach. There are two types of hypertension treatment: pharmacological and non-pharmacological. Pharmacological treatment has long-term effects that can harm the body. Therefore, researchers developed non-pharmacological therapy that combines herbal ginger drink therapy and Islamic spiritual relaxation therapy, which has minimal adverse side effects. The objective of this investigation was to evaluate the impact of MISANJA therapy (Mindful-ness Spiritual Islam and Ginger Drink) on the blood pressure of hypertensive patients. This research design utilizes the Pre-Experimental method, which is characterized by a one-group pre-post-test design. The total sampling technique was employed to recruit 120 respondents for this investigation. Blood pressure variables were assessed using a sphygmomanometer. The data was analyzed using the Wilcoxon Signed Rank Test. This research shows that the average pre-systolic and post-systolic blood pressure decreased from 156.23 to 123.48, as demonstrated by the study. The average pre-diastolic and post-diastolic blood pressure decreased from 97.68 to 82.28 mmHg. The results above indicate a significant difference in blood pressure levels before and after treatment, with a p-value of 0.000 ($p < 0.05$).

Keywords: Hypertension, Islamic Spiritual Mindfulness, Ginger Drink, Blood Pressure

ABSTRAK

Hipertensi merupakan masalah kesehatan global yang memerlukan pendekatan pengobatan yang komprehensif. Terdapat dua jenis pengobatan hipertensi: farmakologis dan nonfarmakologis. Pengobatan farmakologis memiliki efek jangka panjang yang dapat membahayakan tubuh. Oleh karena itu, peneliti mengembangkan terapi nonfarmakologis yang menggabungkan terapi minuman jahe herbal dan terapi relaksasi spiritual Islam, yang memiliki efek samping yang minimal. Tujuan dari penelitian ini adalah untuk mengevaluasi dampak terapi MISANJA (Mindful-ness Spiritual Islam dan Minuman Jahe) terhadap tekanan darah pasien hipertensi. Desain penelitian ini menggunakan metode Pra-Eksperimental, yang dicirikan oleh desain one-group pre-post-test. Teknik total sampling digunakan untuk merekrut 120 responden untuk penelitian ini. Variabel tekanan darah dinilai menggunakan sphygmomanometer. Data dianalisis menggunakan Wilcoxon Signed Rank Test. Hasil penelitian ini menunjukkan rata-rata tekanan darah pre-sistolik dan post-sistolik menurun dari 156,23 menjadi 123,48, seperti yang ditunjukkan oleh penelitian. Rata-rata tekanan darah pra-diastolik dan pasca-diastolik menurun dari 97,68 menjadi 82,28 mmHg. Hasil di atas menunjukkan adanya perbedaan yang signifikan pada tingkat tekanan darah sebelum dan sesudah pengobatan, dengan nilai p sebesar 0,000 ($p < 0,05$).

Kata kunci: Hipertensi, Kesadaran Spiritual Islam, Minuman Jahe, Tekanan Darah

INTRODUCTION

Hypertension is a significant health problem of non-communicable diseases that causes death. Hypertension is called the most significant health problem in the world because of its high prevalence, which is associated with an increased risk of cardiovascular disease (Ouyang et al., 2022). Hypertension can also cause morbidity and mortality. Hypertension is a "silent killer" whose symptoms are nearly identical to those of other diseases and can differ from person to person (Zou et al., 2018). According to the World Health Organization, developing countries have 40% of hypertension patients, while developed countries have only 35%. The African region has the most significant percentage of hypertension patients, at 40%. Southeast Asia comprises 36%, while the American region comprises 35%. Every year, this disease has claimed the lives of 1.5 million individuals in Asia. The death rate in Indonesia owing to hypertension is 427,218 deaths, while the number of hypertension cases is 63,309,620. In the province of East Java, the prevalence is 36.32% of the population. The death rate in Indonesia owing to hypertension is 427,218 deaths, while the number of hypertension cases is 63,309,620. In the province of East Java, the prevalence is 36.32% of the population (Danladi et al., 2025).

Hypertension often does not cause symptoms, while blood pressure that is consistently high over a long period can cause complications. If it affects the heart, it can cause myocardial infarction, coronary heart disease, and congestive heart failure (Budreviciute et al., 2020). If it affects the brain, it can cause stroke and hypertensive encephalopathy. If it affects the kidneys, it can cause chronic kidney failure. If it affects the eyes, it can cause hypertensive retinopathy. Hypertension generally

has an impact that can cause complications such as stroke, heart attack, accumulation or development of fatty plaque on the walls of blood vessels and salt plaque, rupture of capillary blood vessels in the brain, rupture of blood vessels, rupture of kidney blood vessels, and chronic kidney failure, even in severe hypertension can cause hypertensive encephalopathy, namely loss of consciousness or even coma. Therefore, hypertension management is needed (Fottrell et al., 2018a).

Hypertension treatment can be pharmacological or non-pharmacological. Pharmacological therapy involves administering antihypertensives, including diuretics. However, the side effects of pharmacology can damage the liver and kidneys if used for a long time. Therefore, research is needed to find safer and more effective alternative treatments. Combining relaxation techniques, Islamic Spirituality, and herbal therapy to lower blood pressure has never been studied and explained before (Fottrell et al., 2018b).

MISANJA Therapy (Mindfulness Spiritual Islam and Ginger Drink) is a novel therapy that integrates three primary components: 1. Mindfulness: Self-awareness and relaxation techniques that alleviate tension and anxiety; 2. Islamic Spirituality: The integration of Islamic spiritual values, including prayer, dhikr, and the appreciation of the verses of the Quran, to enhance self-confidence and serenity, 3). Ginger Tea with Herbal Ingredients: Ginger consumption as a beverage with antioxidant and anti-inflammatory properties can reduce blood pressure. In a study conducted by Muawanah S (2018), it was stated that giving ginger drink therapy affected the lowering of blood pressure in hypertensive patients who were given treatment (Laar et al., 2019). The ginger drink can lower blood pressure because it contains several chemical components of white ginger (*zingiber officinal var marum*), such as gingerol, zingerone, and shogaol, which provide pharmacological effects such as antioxidants, anti-inflammatory, anti-coagulants, analgesics, anti-carcinogenic, non-toxic and non-mutagenic even at high concentrations. One of the benefits of ginger is lowering blood pressure. This is because ginger stimulates the release of the hormone adrenaline and widens the blood vessels, resulting in blood flowing faster and smoother and lightening the heart's workload in pumping blood (Coates et al., 2020).

Meanwhile, in a study conducted by Sukarmin et al. (2023), spiritual activities such as prayer, dhikr, and meditation are believed to reduce hormones that cause vasoconstriction of blood vessels, contributing to increased blood pressure. The study showed mild blood pressure reactivity in subjects with greater religious beliefs (Pasién et al., 2023). This suggests that religious beliefs can be an essential variable for the study of patients with arterial hypertension. Prayer, meditation, and dhikr can increase optimism and help people overcome chronic diseases. Prayer, mindful meditation, and dhikr are beneficial in several ways because, in addition to requests to God, prayers are often made to thank life, health, and family, resulting in greater gratitude (Wijayanti et al., 2023).

1) MISANJA Therapy is novel. Holistic integration: The integration of physical (ginger drink), psychological (mindfulness), and spiritual (Islamic spiritual) components to produce a comprehensive therapeutic effect; 2. Ginger has anti-inflammatory and antioxidant properties that have the potential to reduce blood pressure; however, it has not been extensively utilized as a therapeutic component. (3). Integration of Islamic spiritual values: Using Islamic spiritual values to enhance self-assurance and tranquility can reduce blood pressure. Consequently, MISANJA Therapy provides a novel and comprehensive method for reducing blood pressure in hypertensive patients.

The objective of this investigation is to evaluate the efficacy of MISANJA Therapy (Islamic spiritual mindfulness and ginger drink) in reducing blood pressure in hypertensive patients. The findings are anticipated to aid in developing safer and more effective hypertension treatments. Furthermore, this investigation may furnish pertinent data to hypertension patients and healthcare professionals responsible for their treatment.

METHOD

Study Design

This quantitative research employs a pre-experimental one-group pre-post-test design (Andri et al., 2022).

Setting and Respondent

The investigation is conducted in Balen Village, Bojonegoro, Indonesia. A sample of 120 hypertensive patients was selected from the population in this investigation using the total sampling method. The sample criteria for this study were as follows: patients who are Muslim, adults who are at least 18 years old, willing to be active respondents and sign informed consent, willing to undergo Islamic Spiritual Mindfulness therapy and consume ginger drinks, not deaf (unable to hear), and willing and able to complete tasks from start to finish. The exclusion criteria (Patients who refuse to be respondents, patients who have blood pressure \leq 120/90 mmHg, are taking hypertension medication during therapy. The drop-out criteria in this study are respondents who do not participate in research activities from start to finish.

The Variable, Instrument, and Measurement

The independent variables in this study are MIS-ANJA Therapy (Islamic Spiritual Mindfulness and Ginger Drink), and the dependent variable is blood pressure in hypertension patients.

The instruments in this study use:

The dependent variable (blood pressure) was collected using a sphygmo-manometer with the Omron HEM-71221 brand to measure blood pressure.

The pre-test and post-test methods were implemented to capture data. Before the therapy (post-test), the researcher observed blood pressure. If the patient's blood pressure is \geq 120/90 mmHg, the researcher provides MISANJA therapy (Islamic Spiritual Mindfulness and Ginger Drink) for 4 days. Then, on the last day of the experiment, the researcher observed the respondent's blood pressure again as a post-observation after the therapy.

Experimental Procedure

A pre-experimental design with pre-test and post-test was employed in this study to ascertain the efficacy of MISANJA therapy (Islamic Spiritual Mindfulness and Ginger Drink) in reducing blood pressure in hypertensive patients. The experimental procedure began with a pre-test; before the therapy was given, the researcher first observed blood pressure. If the patient's blood pressure was \geq 120/90 mmHg, the researcher provided MISANJA therapy (Islamic Spiritual Mindfulness and Ginger Drink) for 15-20 minutes during the action process. This therapy was given by the SOP, which was carried out once a day for four consecutive days in 1 week. Then, on the last day, the fourth day, the

researcher observed the respondent's blood pressure again as a post-observation after the therapy. Furthermore, the pre-and post-blood pressure observation assessment results were tabulated and analyzed.

Data Analysis

For this study, the frequency distribution was employed in univariate analysis, while the Wilcoxon sign Rank Test was employed in bivariate analysis, with a p-value of less than 0.05.

Ethical Consideration

The Ethics Committee of the Muhammadiyah University of Lamongan issued the ethical approval letter for this investigation, numbered 081/ EC/ KEPK—S1/ 02/ 2025.

RESULTS AND DISCUSSION

Respondent Characteristics

Table 1. Respondent Characteristics

Characteristics	Frequency	Presentation
Age		
18-40	3	2,5%
40-60	75	62,5%
>60	42	35,0%
Total	120	100%
Gender		
Man	39	32,5%
Woman	81	62,5%
Total	120	100%
Work		
Farmer	63	52,5%
Housewife	21	17,5%
Self-employed	27	22,5%
Civil servants	9	7,5%
Total	120	100%
Education		
No school	6	5,0%
elementary school	12	10,0%
Junior High School	27	22,5%
Senior High School	51	42,5%
Bachelor	24	20,0%
Total	120	100%
Drug Consumption		
Regular consumption Drug	42	35,0%

Not regular consumption Drug	78	65,0%
Total	120	100%

Source: Primary data after processing, 2025

Based on the data in Table 1 above, the age indicator is mainly 40-60, with as many as 75 patients (62.5%), and a small part is 18-40 years old, with as many as three patients (2.5%). In the gender indicator, most are female, with 81 patients (67.5%), and almost some are male, with as many as 39 patients (32.5%). In the Occupation Indicator, most work as farmers, with 63 patients (52.5%), and a small part work as civil servants, with nine patients (7.5%). In the Education Indicator, almost all have high school education, as many as 51 patients (42.5%), and a small part do not attend school as many six patients (5.0%). In the drug consumption indicator, most do not routinely consume drugs as many as 78 patients (65.0%), and almost some routinely consume drugs as many as 42 patients (35.0%).

Table 2. Distribution of Blood Pressure Frequency Before and After MISANJA Therapy (Mindfulness and Ginger Drink)

Blood pressure	Pre Test		Post Test	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Normal	0	0%	57	47,5%
Prehypertension	48	40,0%	45	37,5%
Hypertension stage 1	12	10,0%	18	15,0%
Hypertension stage 2	60	50,0%	0	0%
Total	120	100%	120	100%

Source: Primary data after processing, 2025

Table 2 illustrates that 48 patients (40.0%) were classified as prehypertensive, 12 patients (10.0%) as stage 1 hypertensive, and 60 patients (50%) of the 120 respondents who experienced improved blood pressure following MISANJA therapy (Mindfulness Spiritual Islam and Ginger Drink), were classified as stage 2 hypertensive. After receiving standard treatment, 57 patients (47.5%) were classified as pre-hypertensive, 45 patients (37.5%) as prehypertensive, and 18 patients (15.0%) as stage 1 hypertensive.

Table 3. Average Blood Pressure Before and After MISANJA Therapy (Mindfulness and Ginger Drink)

Blood pressure	N	Mean	Min-Max
Pre Sistol	120	156,23	126-210

Post Sistol	120	123,48	101-152
Pre Diastol	120	97,68	80-129
Post Diastol	120	82,28	70-99
Wilcoxon Signed Rank Test P = 0,000			

Source: Primary data after processing, 2025

Table 3 above illustrates that the average systolic blood pressure in hypertensive patients was 156.23 prior to receiving MISANJA therapy, with a minimum value of 126 and a maximum value of 210. The average systolic blood pressure of hypertensive patients decreased to 123.48 after receiving MISANJA therapy, with a minimum value of 101 and a maximum value of 152. The average diastolic blood pressure of hypertensive patients before receiving MISANJA therapy was 97.68, with a minimum value of 80 and a maximum value of 129. Following MISANJA therapy, the average diastolic blood pressure decreased to 82.28, with a minimum value of 70 and a maximum of 99. The Wilcoxon signed rank test results, conducted using SPSS 22, were $P = 0.000$, with a significance level of $P < 0.005$. Consequently, H_0 was rejected, and H_1 was accepted. This indicates that the MIS-ANJA therapy (Mindful-ness Spiritual Islam and Ginger Drinks) affects the reduction of blood pressure in hypertension patients in Balen Village, Bojonegoro.

According to Table 3, the average pre-systolic and post-systolic blood pressure has decreased from 156.23 to 123.48. The average pre-diastolic and post-diastolic blood pressure decreased from 97.68 to 82.28. This shows a difference in blood pressure levels before MISANJA therapy (Islamic Spiritual Mindfulness and Ginger Drink) and before MISANJA therapy (Islamic Spiritual Mindfulness and Ginger Drink). The provision of MISANJA therapy (Islamic Spiritual Mindfulness and Ginger Drink) affects reducing blood pressure in hypertensive patients; this is by the Wilcoxon Signed Rank Test analysis using SPSS 22, the results of Asymp $P = 0.000$ where $P < 0.005$ so that H_0 is rejected and H_1 is accepted, which means that MISANJA therapy (Islamic Spiritual Mindfulness and Ginger Drink) can reduce blood pressure in hypertensive patients in Mayangkawis Village, Balen District, Bojonegoro Regency.

This study provided the intervention by MISANJA therapy (Islamic Spiritual Mindfulness and Ginger Drink). This aligns with research conducted by Anadia (2025), which showed that boiled white ginger has a significant antihypertensive effect. This shows that white ginger has the potential for complementary therapy to lower blood pressure for the elderly. In addition, the decrease in blood pressure for elderly respondents using hypertension varies greatly, even though researchers have given the same dose and treatment. This blood pressure-lowering effect may be related to the active content in white ginger, namely flavonoid compounds, saponins, and non-flavonoid phenolics (Kristiani & Ningrum, 2021).

Ginger contains the chemical compound gingerol, which inhibits the vitrification of calcium channels in blood vessel cells. This results in vasodilation or vasoconstriction of the blood vessels, which in turn stimulates a reduction in smooth muscle contractions in the arterial walls, thereby causing a decrease in blood pressure. The results of this study are also based on the study conducted by Malianti et al. (2023), where the results of the average blood pressure measurements after being given an

intervention in the form of boiled ginger water showed a decrease. In the intervention group that was given treatment, systolic blood pressure was 128-145 mmHg and diastolic 82-95 mmHg, while in the control group, systolic 155-168 mmHg and diastolic 90-105 mmHg. A decrease in blood pressure was experienced by 10 respondents whose initial blood pressure was grade 1 criteria. After drinking boiled ginger water for five consecutive days, their blood pressure decreased to normal. Meanwhile, the other six respondents also experienced decreased blood pressure but were still included in the grade 1 hypertension criteria (Utama, Teguh Kurniawan, and Rakhmawati, 2021).

Mindfulness involves the concentration of attention and the attention of the mind. Mindfulness has the potential to regulate blood pressure (BP), alleviate tension, regulate emotions, and provide a refreshing and relaxed mental and physical sensation. Mindfulness has the potential to influence the central nervous system by relaxing blood vessels, thereby facilitating the passage of blood and reducing blood pressure (Rw et al., 2021). This is proven by research conducted by Widiastuti et al. (2022), where the results of the study showed that blood pressure after being given mindfulness therapy showed a decrease from 30 respondents, systolic blood pressure in the normal category was 5 (13.0%), mild as many as 15 (60.0%), moderate as many as 8 (20.0%), and severe as many as 2 (7.0%). In diastolic blood pressure, the normal category was 8 (40.0%), mild as many as 16 (47.0%), moderate as many as 6 (13.05). According to Utama (2021), mindfulness meditation can also balance the autonomic nerves responsible for helping the body maintain normal blood pressure. Previous studies have found that blood pressure decreases with mindfulness meditation, and this effect varies across age groups; scientifically measured results suggest that this practice is a safe alternative in some cases (Alhuda et al., 2018).

Researchers have suggested that MISANJA therapy (Islamic Spiritual Mindfulness and Ginger Drink) can be used as a supplement to pharmacological therapy in hypertension patients to reduce blood pressure (Widiastuti et al., 2022). This is due to the chemical compound gingerol, which inhibits calcium channel vitrification in blood vessel cells, resulting in vasodilation or vasoconstriction of blood vessels. This process stimulates a reduction in smooth muscle contractions of the arterial walls, leading to a decrease in blood pressure. The central nervous system can be influenced by mindfulness, which can reduce blood pressure and facilitate the passage of blood by relaxing blood vessels (Ouyang et al., 2022).

CONCLUSIONS

The results of this study indicate that MIS-ANJA (Islamic Spiritual Mindfulness) therapy is capable of substantially reducing blood pressure in hypertension patients. Prior to the intervention, the majority of patients had elevated blood pressure, specifically stage 2 hypertension. The patient's blood pressure decreased to prehypertension, stage 1 hypertension, and even normal following the intervention. This study is supported by the Wilcoxon statistical test, which yielded a p-value of less than 0.05 (0.000). Based on prior research, it has been determined that ginger beverages and Islamic spiritual mindfulness are effective in reducing blood pressure. Consequently, the MIS-ANJA (Islamic Spiritual Mindfulness and Ginger Drink) therapy has the potential to reduce blood pressure in hypertensive patients.

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