



THE IMPACT OF MINDFULNESS-BASED STRESS REDUCTION ON BLOOD PRESSURE AND LIFE QUALITY IN HYPERTENSIVE WOMEN

Erni Tri Indarti*, Puji Astutik

STIKes Satria Bhakti Nganjuk, Jl. Brantas No.3b, Babadan, Werungotok, Kec. Nganjuk, Kabupaten Nganjuk, Jawa Timur 64412, Indonesia

*triindarti77@gmail.com

ABSTRACT

Hypertension remains one of the major health issues worldwide. More women than men suffer from hypertension. Hypertension is not only caused by physical factors and lifestyle but is also significantly influenced by psychological factors such as stress. Stress can increase blood pressure and affect a person's physical and psychological functions, leading to a decline in their quality of life. Mindfulness-Based Stress Reduction is one physical and psychological strategy that has been shown to be successful in treating hypertension individuals. Finding out how mindfulness-based stress reduction affected the blood pressure and quality of life of hypertensive women in Pustu Nglaban, Nglaban Village, Loceret Subdistrict, Nganjuk District, was the goal of this study. This study employed a pre-experimental design using a one-group pre-post test methodology. The sample consisted of 30 respondents selected through purposive sampling. Standard operating procedures (SOP) were used to execute mindfulness-based stress reduction, a Onemed blood pressure monitor was used to measure blood pressure, and the WHOQOL BREFF questionnaire was used to evaluate quality of life. The WHOQOL BREFF questionnaire has high validity and reliability for measuring quality of life in adolescents, adults and the elderly namely $r=0.949$ and cronbach's alpha 0.835. A paired-t test was used to analyze the data. Blood pressure and quality of life in women with hypertension are impacted by mindfulness-based stress reduction, according to the data analysis results, which indicated p-values of 0.000 for systolic blood pressure, 0.000 for diastolic blood pressure, and 0.000 for quality of life. For women with hypertension, mindfulness-based stress reduction is believed to be an alternate self-management treatment.

Keywords: blood pressure; mindfulness-based stress reduction; quality of life; women with hypertension

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INTRODUCTION

Hypertension remains one of the major health issues worldwide. Hypertension patients must regularly take hypertension medication, monitor their blood pressure, and modify lifestyle habits that may exacerbate their condition. This situation often causes stress for hypertensive patients. According to Hasna (2023), it is not only stress that causes hypertension, but hypertension can also lead to stress due to the pressure from physical, psychosocial, spiritual, and economic aspects caused by hypertension. Someone suffering from a chronic illness may exhibit stress, depression, pessimism, feelings of failure, despair, unhappiness in life, comparing themselves to others, feeling worse, low self-esteem, and even feeling powerless. Those who cannot cope with tension or stress in their lives will have their quality of life affected (Hasna, Meilianingsih, & Sugiyanto, 2023)

Data from the World Health Organization (WHO) in 2023 indicates that approximately 1.28 billion people worldwide live with hypertension, and more than 700 million of them are undiagnosed and do not receive adequate treatment. In Indonesia alone, the prevalence of hypertension based on the 2018 Riskesdas survey reached 34.1%. The prevalence of hypertension among women aged 18 years and older was 36.9%, higher than among men, and continues to show an increasing trend (Riskesdas, 2018). The prevalence of hypertension according to the 2023 SKI survey was 30.8%, with 14.43% of hypertension patients taking medication regularly and 13.34% making follow-up visits to healthcare services (Indonesia., 2023). The number of hypertensive patients at the Loceret

Community Health Center in 2024 was 6,082 out of a total population of 57,615, and in Nglaban Village, there were 75 patients, with 50 being women.

Hypertension is not only caused by physical factors and lifestyle but is also significantly influenced by psychological factors such as stress and anxiety. Nasrani (2015) asserts that gender influences the incidence of stress. When confronted with conflict, men and women react differently. Stress and conflict are negatively perceived by women's brains. Conflict causes negative hormones in women, which in turn cause tension, worry, and fear. Contrarily, men typically relish rivalry and conflict, even seeing it as a motivating factor. In other words, women are more prone to suffer stress, which raises blood pressure, when they are under pressure. Prolonged stress can trigger the activation of the sympathetic nervous system, leading to increased blood pressure. Therefore, stress management is an important component in efforts to lower blood pressure and prevent complications in hypertensive patients (Nasrani & Purnawati, 2015).

One psychological approach proven effective for managing stress and anxiety is Mindfulness-Based Stress Reduction. Mindfulness-Based Stress Reduction is a psychological intervention program developed by Jon Kabat-Zinn, combining meditation techniques, breathing exercises, and light yoga. This method aims to train individuals to be more aware and accept their current condition fully without judgment, enabling them to respond to stress more adaptively. According to recent research, mindfulness-based stress reduction helps hypertension patients feel less anxious and have lower blood pressure. According to Zhang's (2023), mindfulness-based therapies for hypertension and pre-hypertensive patients effectively lower blood pressure and enhance mental health (Zhang & Cao, 2023). Similar findings were reinforced by Lee et al. (2021) in the *Journal of Hypertension*, which showed that the Mindfulness-Based Stress Reduction program was effective and well-received by hypertensive patients in lowering blood pressure (Lee, et al., 2021).

Additionally, Conversano et al. (2020) in *Hypertension Journal* also confirmed that Mindfulness-Based Stress Reduction positively impacts blood pressure reduction, anxiety, and stress in hypertensive patients (Conversano, et al., 2021). According to a more recent study published in *Complementary Therapies in Medicine* by Mir et al. (2024), mindfulness-based meditation practices can effectively reduce both the diastolic and systolic blood pressure (Mir, et al., 2024). Another study by Babak (2022) in the *Journal of Tehran University Heart Center* also showed that adult women with hypertension benefit from mindfulness-based stress reduction in terms of lower blood pressure, better mental health, and an improved quality of life (Babak, Motamedi, Mousavi, & Darestani, 2022). The goal of this study was finding out how mindfulness-based stress reduction affected the blood pressure and quality of life of hypertensive women in Pustu Nglaban, Nglaban Village, Loceret Subdistrict, Nganjuk District.

METHOD

The Nglaban Health Center was the site of the study, Nglaban Village, Loceret Subdistrict, Nganjuk District, from July 2nd to August 24th, 2025. The study population consisted of all women with hypertension at the Nglaban Health Center, Nglaban Village, Loceret Subdistrict, Nganjuk District, totaling 50 individuals. Women with hypertension will first undergo stress level screening using the Perceived Stress Scale (PSS). The Perceive Stress Scale (PSS) has high validity and reliability for measuring stress scores in adolescents, adults and the elderly namely 0.82. Women with hypertension who have mild to moderate stress levels will be selected as potential respondents. Out of 50 women with hypertension, 35 were found to have mild to moderate stress levels. Thirty respondents make up the study's sample, and purposive sampling was the method employed. Requirements for inclusion: being willing to answer, primary hypertension sufferers with mild and moderate stress levels, primary hypertension sufferers of degree I, and living in the same house with their immediate family.

A pre-experimental design using a one-group pre-posttest methodology was the study design employed. In this study, before receiving Mindfulness-Based Stress Reduction therapy, respondents

underwent blood pressure measurements using an Onemed sphygmomanometer and quality of life assessments using the WHOQOL BREFF questionnaire. The WHOQOL BREFF questionnaire has high validity and reliability for measuring quality of life in adolescents, adults and the elderly namely $r=0.949$ and cronbach's alpha 0.835. Participants received Mindfulness-Based Stress Reduction treatment consisting of 8 sessions over 2 months (once a week) with each session lasting 30–60 minutes. Blood pressure and quality of life assessments were conducted following the eight sessions. Prior to and following each Mindfulness-Based Stress Reduction session, blood pressure was measured. Mindfulness-Based Stress Reduction was conducted by a trainer with a certification of expertise. Data analysis was performed using SPSS 21 with a paired-t test. This research adheres to ethical principles including informed consent, autonomy, confidentiality, beneficence, non-maleficence, justice, and fidelity. The Health Research Ethics Committee of STRADA University in Indonesia granted ethical approval for this study.

RESULT

Table 1.
Respondents' attributes (n=30)

Variable	f	%
Age		
25-35 Years	5	16,7
36-45 Years	12	40,0
46-55 Years	9	30,0
56-65 Years	4	13,3
Education		
No school	0	0,0
Elementary School	1	3,3
Middle School	2	6,7
High School	24	80,0
University	3	10,0
Profetion		
Housewife	26	86,7
Civil servant	1	3,3
Private sector	3	10,0
Long-suffering		
1 Years	2	6,6
2 Years	0	0,0
3 Years	8	26,7
4 Years	9	30,0
5 Years	3	10,0
6 Years	8	26,7
Regular medication		
yes	18	60,0
no	12	40,0
Living with		
Husband	5	16,7
Children	3	10,0
Husband and children	21	70,0
Siblings	1	3,3

Table 1. shows that of the 30 respondents, nearly half (12 respondents, or 40%) were aged 36–45 years, nearly all (24 respondents, or 80%) had a high school education, and nearly all (26 respondents, or 86.7%) were housewives. nearly half have suffered from hypertension for 4 years (9

respondents, 30%), most regularly take medication (18 respondents, 60%), and most live with their husbands and children (21 respondents, 70%).

Table 2.
The Blood Pressure Systole Pre and Post *Mindfulness-Based Stress Reduction* (n=30)

Blood Pressure Systole	n	Mean	SD	Min	Max	p-Value
Pre	30	149,23	22,55	130,0	235,0	0,000
Post		123,83	11,13	120,0	180,0	
Pre-Post		25,40	15,46	19,6	31,2	

Table 2. shows systolic blood pressure before Mindfulness-Based Stress Reduction was administered, with a mean of 149.23, standard deviation of 22.55, minimum of 130 mmHg, and maximum of 235 mmHg. Systolic blood pressure after Mindfulness-Based Stress Reduction: mean 123.83; standard deviation 11.13; minimum 120 mmHg and maximum 180 mmHg. Change in systolic blood pressure after Mindfulness-Based Stress Reduction: mean 25.40; standard deviation 15.46; minimum 19.6 mmHg and maximum 31.2 mmHg. A p-value of 0.000 was obtained from the paired t-test results, suggesting that mindfulness-based stress reduction affects the systolic blood pressure of hypertensive women.

Table 3.
The Blood Pressure Diastole Pre and Post *Mindfulness-Based Stress Reduction* (n=30)

Blood Pressure Diastole	N	Mean	SD	Min	Max	p-Value
Pre	30	96,20	13,09	84,0	145,0	0,000
Post		81,13	3,89	80,0	100,0	
Pre-Post		15,07	10,61	11,1	19,1	

Table 3. shows diastolic blood pressure before Mindfulness-Based Stress Reduction was administered, with a mean of 96.20, standard deviation of 13.09, minimum of 84 mmHg, and maximum of 145 mmHg. Diastolic blood pressure after Mindfulness-Based Stress Reduction was administered had a mean of 81.13, standard deviation of 3.89, minimum of 80 mmHg, and maximum of 100 mmHg. The change in diastolic blood pressure after Mindfulness-Based Stress Reduction was mean 15.07; standard deviation 10.61; minimum 11.1 mmHg and maximum 19.1 mmHg. A p-value of 0.000 was obtained from the paired t-test results, suggesting that mindfulness-based stress reduction affects the diastolic blood pressure of hypertensive women.

Table 4.
The Quality of Life Pre and Post *Mindfulness-Based Stress Reduction* (n=30)

t	N	Mean	SD	Min	Max	p-Value
Pre	30	69,73	7,79	60,0	92,0	0,000
Post		80,40	5,98	71,0	98,0	
Pre-Post		10,67	3,39	9,4	11,9	

Table 4. Shows the quality of life scores before Mindfulness-Based Stress Reduction was administered, with an average of 69.73; standard deviation of 7.79; minimum of 60, maximum of 92. Quality of Life scores after Mindfulness-Based Stress Reduction was administered, with an average of 80.40; standard deviation of 5.98; minimum of 71 and maximum of 98. The change in quality of life scores after Mindfulness-Based Stress Reduction was an average of 10.67; standard deviation 3.39; minimum 9.4 and maximum 11.9. A p-value of 0.000 was found in the paired t-test results, suggesting that mindfulness-based stress reduction affected the quality of life scores of hypertensive women.

DISCUSSION

Blood Pressure

The result of this research shows systolic blood pressure before Mindfulness-Based Stress Reduction was administered, with a mean of 149.23, standard deviation of 22.55, minimum of 130 mmHg, and maximum of 235 mmHg. Systolic blood pressure after Mindfulness-Based Stress Reduction: mean 123.83; standard deviation 11.13; minimum 120 mmHg and maximum 180

mmHg. Change in systolic blood pressure after Mindfulness-Based Stress Reduction: mean 25.40; standard deviation 15.46; minimum 19.6 mmHg and maximum 31.2 mmHg. A p-value of 0.000 was obtained from the paired t-test results, suggesting that mindfulness-based stress reduction affects the systolic blood pressure of hypertensive women. The result of this research diastolic blood pressure before Mindfulness-Based Stress Reduction was administered, with a mean of 96.20, standard deviation of 13.09, minimum of 84 mmHg, and maximum of 145 mmHg. Diastolic blood pressure after Mindfulness-Based Stress Reduction was administered had a mean of 81.13, standard deviation of 3.89, minimum of 80 mmHg, and maximum of 100 mmHg. The change in diastolic blood pressure after Mindfulness-Based Stress Reduction was mean 15.07; standard deviation 10.61; minimum 11.1 mmHg and maximum 19.1 mmHg. The paired t-test results showed a p-value of 0.000, suggesting that mindfulness-based stress reduction affects women with hypertension's diastolic blood pressure.

The results of this study indicate that Mindfulness-Based Stress Reduction has an effect on lowering blood pressure in women with hypertension. According to a study by Lee et al. (2025), blood pressure significantly decreased in patients with nocturnal hypertension who participated in a Mindfulness-Based Stress Reduction program (Lee, et al., 2025). Similarly, research by Alifitah and Oktavianisya (2025) showed that Mindfulness-Based Stress Reduction intervention not only reduces stress levels but also lowers systolic and diastolic blood pressure in hypertensive patients (Alifitah & Oktavianisya, 2025).

A study Loucks et al (2023) found that adapting Mindfulness-Based Stress Reduction training for blood pressure-lowering behavior successfully resulted in clinically meaningful reductions in systolic blood pressure among participants with elevated blood pressure. These changes confirm that mindfulness interventions not only improve mental health but also have real physiological effects relevant to clinical outcomes in hypertension (Loucks, et al., 2023). The autonomic nervous system's activity, namely the equilibrium between the sympathetic and parasympathetic nervous systems, has a significant physiological impact on blood pressure. In hypertensive patients, sympathetic activity tends to dominate, leading to vasoconstriction of blood vessels, increased heart rate, and increased peripheral resistance. The Mindfulness-Based Stress Reduction program, which emphasizes breathing exercises, meditation, and relaxation, has been shown to increase parasympathetic tone while reducing sympathetic activity. This mechanism results in vasodilation, reduced systemic vascular resistance, and ultimately lower blood pressure. Mindfulness-Based Stress Reduction also balances the autonomic nervous system, helping the body maintain stable blood pressure. By promoting relaxation and preventing the sympathetic nervous system's stress reaction, mindfulness-based stress reduction lowers blood pressure (Hermanto, 2014).

Hormonal processes are another way that mindfulness-based stress reduction functions. The hypothalamic–pituitary–adrenal (HPA) axis is known to be activated by chronic stress in hypertensive individuals, resulting in elevated cortisol and catecholamine output. These two hormones cause an increase in blood pressure by increasing sodium retention, strengthening vasoconstriction, and increasing cardiac output. Mindfulness-Based Stress Reduction can reduce HPA axis hyperactivation and decrease cortisol secretion (Mu'afiro, Nursalam, Suwito, Kiaonarni, & Hidayati, 2024). Stress hormone reduction improves blood pressure regulation by lowering the hemodynamic burden on the heart and blood vessels. Mindfulness-Based Stress Reduction reduces adrenal gland hormone production and decreases sympathetic nervous system activity. Reduced sympathetic nervous system activity leads to a decrease in heart rate, stabilization of breathing, and reduced blood pressure (Nevid, Rathus, & Green, 2005).

Psychological factors also play a significant role in blood pressure control. Hypertensive patients experiencing psychological stress tend to have greater blood pressure fluctuations compared to patients without stress. Mindfulness-Based Stress Reduction helps individuals improve emotional regulation, reduce rumination, and respond to stressors more adaptively. In hypertension individuals, mindfulness-based stress reduction regularly lowers blood pressure and stress

ratings (Mu'afiro, Nursalam, Suwito, Kiaonarni, & Hidayati, 2024).

Mindfulness-Based Stress Reduction focuses attention and thoughts, helps reduce stress, directs the mood toward a more positive state, and improves emotional control. Mindfulness-Based Stress Reduction provides a sense of relaxation and refreshment, both physically and psychologically. By relaxing blood vessels, mindfulness-based stress reduction improves blood circulation and lowers blood pressure, which has an impact on the central nervous system (Zou, et al., 2018). Mindfulness-Based Stress Reduction is practiced through body scans, meditation, mindful breathing, and gentle yoga, which strengthen the mind-body connection (mind-body integration). As body awareness increases, patients become better able to recognize early signs of stress, enabling them to implement relaxation strategies before stress leads to elevated blood pressure (Mu'afiro, Nursalam, Suwito, Kiaonarni, & Hidayati, 2024). Meditation techniques in Mindfulness-Based Stress Reduction produce alpha waves in the brain. Alpha waves influence the secretion of norepinephrine, serotonin, and beta-endorphin hormones, thereby lowering blood pressure (Cozzolino, 2006).

Quality of Life

The study's findings indicate that before Mindfulness-Based Stress Reduction was used, quality of life scores ranged from 60 to 92, with an average of 69.73 and a standard deviation of 7.79. Following Mindfulness-Based Stress Reduction, the average score for Quality of Life was 80.40, with a standard deviation of 5.98, a minimum of 71, and a maximum of 98. Following mindfulness-based stress reduction, quality of life scores changed by an average of 10.67 with a standard deviation of 3.39, with a minimum of 9.4 and a maximum of 11.9 points. A p-value of 0.000 was found in the paired t-test results, suggesting that mindfulness-based stress reduction affected the quality of life scores of hypertensive women.

Research findings indicate that the implementation of Mindfulness-Based Stress Reduction has a positive impact on improving quality of life scores among women with hypertension. This is consistent with Lee et al.'s findings (2025), who also confirmed that Mindfulness-Based Stress Reduction enhances coping mechanisms and reduces psychological burden, thereby contributing to an overall improvement in quality of life (Lee, et al., 2025).

Babak (2022) reported that a 12-week Mindfulness-Based Stress Reduction program significantly decreased systolic and diastolic blood pressure, improved quality of life scores, and decreased stress and anxiety in adult women with hypertension (Babak, Motamedi, Mousavi, & Darestani, 2022). Furthermore, the phase 2 clinical trial of MB-BP (Mindfulness-Based Blood Pressure Reduction), a modified version of Mindfulness-Based Stress Reduction specifically targeting hypertension-related behaviors, demonstrated improved interoceptive awareness and adherence to the DASH diet among patients with elevated blood pressure (Mu'afiro, Nursalam, Suwito, Kiaonarni, & Hidayati, 2024). A drop in systolic blood pressure that was clinically meaningful was found in the Loucks (2023) research. Inflammatory indicators, stress reactivity, and self-regulation are all decreased by mindfulness. They are all linked to increases in quality of life and hypertension (Loucks, et al., 2023).

Chen (2024) explains that Mindfulness-Based Stress Reduction enhances self-regulation, adherence to treatment, and healthy behaviors such as diet and physical activity. Additionally, mindfulness reduces physiological stress reactivity and inflammatory markers, which contribute to improved blood pressure. These mechanisms ultimately support improved quality of life for hypertensive patients (Chen, Liu, & Du, 2024). The quality of life of hypertensive patients is influenced by physical, psychological, social, and spiritual conditions. Mindfulness-Based Stress Reduction interventions have been proven to have a positive impact on all four aspects. Physically speaking, Mindfulness-Based Stress Reduction lowers blood pressure, enhances sleep, and boosts energy levels, all of which help patients better handle their everyday tasks. From a psychological standpoint, mindfulness-based stress reduction lowers stress, anxiety, and depression, as evidenced by better mental health domain scores on measures of quality of life. From a social perspective, Mindfulness-Based Stress Reduction reduces emotional tension, leading to better social interactions

among patients. Improvements in patience, empathy, and openness to experiences helped improve interpersonal relationships. Mindfulness-Based Stress Reduction from the spiritual aspect emphasizes self-acceptance and living in the present moment. This increases gratitude, meaning in life, and acceptance of chronic conditions, thereby strengthening patients' spiritual well-being (Hasna, Meilianingsih, & Sugiyanto, 2023).

High levels of stress and worry are among the primary causes of hypertension patients' poor quality of life. Hypertensive patients often experience feelings of worry about disease complications, medication adherence, and lifestyle restrictions. Mindfulness-Based Stress Reduction helps individuals develop mindfulness of their thoughts and feelings, enabling them to manage stress in a more adaptive manner. According to Mu'afiro et al. (2024), hypertensive patients who undergo Mindfulness-Based Stress Reduction show improvements in relaxation, emotional calmness, and reduced reactivity to stressors. These conditions directly contribute to improved quality of life, as patients feel more capable of controlling their emotional state and engaging in daily activities with greater comfort (Mu'afiro, Nursalam, Suwito, Kiaonarni, & Hidayati, 2024).

In addition to psychological aspects, quality of life is also influenced by the patient's physical condition. Chronic stress can worsen hypertension and reduce sleep quality, energy, and vitality. Mindfulness-Based Stress Reduction, which involves meditation, deep breathing, and body scans, has been proven to increase relaxation, lower heart rate, and improve sleep quality. Hypertensive patients who experience better sleep and reduced fatigue will feel an improvement in physical function, which directly enhances their quality of life dimensions. Therefore, the increase in physical health brought about by the physiological impacts of mindfulness practice can be used to explain how mindfulness-based stress reduction affects quality of life. Mindfulness-Based Stress Reduction can relax the body, reduce headaches, alleviate muscle soreness, calm the mind, and foster positive affirmations, thereby enhancing quality of life (Park & Han, 2017).

Mindfulness-Based Stress Reduction modifies brain activity related to psychological well-being. This technique reduces hyperactivity in the amygdala, which is linked to anxiety, while increasing activity in the prefrontal cortex (PFC), which is involved in emotion control and decision-making (Damarlapally, et al., 2025). These changes contribute to improved subjective well-being, an important indicator of quality of life. To put it another way, mindfulness-based stress reduction helps hypertension patients feel happier, more at peace, and have a stronger sense of purpose in life in addition to lowering blood pressure and stress. Mindfulness-Based Stress Reduction can lead to positive thinking, self-love, reduced anxiety, and overall decreased stress and psychological pressure. Mindfulness-Based Stress Reduction can improve mental, physical, cognitive, affective, and interpersonal health, thereby enhancing quality of life (Fazia, et al., 2020).

Mindfulness-Based Stress Reduction aims to achieve the ability to understand the current condition and decide whether to change or remain, thereby accepting the current condition. Individuals who practice Mindfulness-Based Stress Reduction become aware of their differences from others and accept themselves as they are without judgment, enabling them to live more productively and improve their quality of life (Pratikta, 2020) (Saputra & Widiyari, 2016). Mindfulness-Based Stress Reduction enhances optimal function and prevents neurological and neuropsychiatric disorders. By lowering stress, exhaustion, mental anguish, and physical symptoms, mindfulness-based stress reduction can improve compassion, job satisfaction, and self-well-being, all of which improve quality of life (Janssen, Heerkens, Kuijer, Heijden, & Engels, 2018).

Mindfulness-Based Stress Reduction helps individuals understand that the feelings and sensations they experience in the present are temporary and that nothing is permanent. This gives individuals a new perspective that everything has its time. Individuals can develop the perception that the illness they are experiencing does not prevent them from being able to function. They will be confident that their physical condition will improve as symptoms decrease. This new perception helps individuals distance themselves from negative thoughts and emotions, thereby improving their

physical and psychological well-being, which in turn enhances their quality of life (Chambers, Lo, & Allen, 2008).

Mindfulness-Based Stress Reduction is practiced with full awareness, enabling a person to focus and be fully conscious of what they are doing in the present moment. A person is able to give meaning to every daily activity they perform, thereby not losing their sense of purpose even when ill. When a person is able to take an active role in their life, their self-confidence increases. Mindfulness-Based Stress Reduction helps individuals accept themselves without judgment, and when practiced repeatedly, it can prevent negative thoughts and self-criticism, allowing them to focus on the present and engage in activities within their capabilities, thereby improving their quality of life (Munazilah & Hasanah, 2018).

The quality of life for hypertensive patients is also influenced by social dimensions. Mindfulness-Based Stress Reduction is often practiced in groups, creating important social support for patients. Through shared experiences and group exercises, patients feel less alone in facing their illness. According Mu'afiro (2024), Mindfulness-Based Stress Reduction can enhance social interaction, foster empathy, and strengthen interpersonal relationships. As satisfaction in social relationships increases, the quality of life dimension related to social functioning also improves (Mu'afiro, Nursalam, Suwito, Kiaonarni, & Hidayati, 2024).

CONCLUSION

The study's findings show that women with hypertension experienced improvements in their blood pressure and quality of life following mindfulness-based stress reduction, indicating that mindfulness-based stress reduction has a substantial impact on these variables. This study was conducted on women with hypertension, so future research should be conducted on men with hypertension. Mindfulness-Based Stress Reduction can be used as a complementary therapy for women with hypertension.

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REFERENCES

- Alifitah, & Oktavianisya. (2025). Pengaruh Terapi MBSR Terhadap Tekanan Darah dan Tingkat Stress pada Penderita Hipertensi. *Jurnal Ilmiah Kesehatan*, 15(1), 35-43. <https://ojs.unsiq.ac.id/index.php/jik/article/view/9661/3888>.
- Babak, Motamedi, Mousavi, & Darestani. (2022). Effects of mindfulness-based stress reduction on blood pressure, mental health, and quality of life in hypertensive adult women: a randomized clinical trial study. *The Journal of Tehran University Heart Center*, 17(3), 127. <https://doi.org/10.18502/jthc.v17i3.10845>.
- Chambers, Lo, B. C., & Allen, N. B. (2008). The impact of intensive mindfulness training on attentional control, cognitive style, and affect. *Cognitive therapy and research*, 32(3), 303-322. <https://doi.org/10.1007/s10608-007-9119-0>.
- Chen, Liu, H., & Du, S. (2024). Effect of mindfulness-based interventions on people with prehypertension or hypertension: a systematic review and meta-analysis of randomized controlled trials. *BMC Cardiovascular Disorders*, 24(1), 104. <https://doi.org/10.1186/s12872-024-03746-w>.
- Conversano, Orrù, Pozza, Miccoli, Ciacchini, Marchi, & Gemignani. (2021). Is mindfulness-based stress reduction effective for people with hypertension? A systematic review and meta-analysis of 30 years of evidence. *International journal of environmental research and public health*, 18(6), 2882. <https://doi.org/10.3390/ijerph18062882>.
- Cozzolino, W. (2006). *The Nuts and Bolts of Meditation*. California: Raissa Publisher.

- Damarlapally, Binti, N. U., Winson, T., Basu, P., Tejani, V., Damarlapally, K., & Khena, D. (2025). Overall Effect of Stress Reduction Interventions on Cardiovascular Outcomes (Both Qualitative and Quantitative): A Systematic Review and Meta-Analysis. *Circulation, 151(Suppl 1)*, 1025. https://doi.org/10.1161/cir.151.suppl_1.P102.
- Fazia, Bubbico, F., Iliakis, I., Salvato, G., Berzuini, G., Bruno, S., & Bernardinelli, L. (2020). Short-term meditation training fosters mindfulness and emotion regulation: A pilot study. *Frontiers in psychology, 11*, 558803. <https://doi.org/10.3389/fpsyg.2020.558803>.
- Hasna, Meilianingsih, & Sugiyanto. (2023). Stres Mempengaruhi Kualitas Hidup Pasien Hipertensi di Puskesmas Garuda Kota Bandung. *Jurnal Keperawatan Indonesia Florence Nightingale, 3(1)*, 17–25. <https://doi.org/10.34011/jkifn.v3i1.1352>.
- Hermanto, J. (2014). Pengaruh Pemberian Meditasi Terhadap Penurunan Tekanan Darah Pada Lansia Dengan Hipertensi Di Unit Sosial Rehabilitasi Pucang Gading Semarang. *Jurnal Keperawatan, 1(9)*, 1-9.
- Indonesia., S. K. (2023). *Laporan Survei Kesehatan Indonesia*. Jakarta: Kementerian Kesehatan RI.
- Janssen, Heerkens, Kuijer, W., Heijden, V. D., & Engels, J. (2018). Effects of Mindfulness-Based Stress Reduction on employees' mental health: A systematic review. *PloS one, 13(1)*, 0191332. <https://doi.org/10.1371/journal.pone.0191332>.
- Lee, K. P., Yeung, N. C., Xu, Z., Zhang, D., Yu, C. P., & Wong, S. Y. (2021). Effect and Acceptability of Mindfulness-Based Stress Reduction Program on Patient With Elevated Blood Pressure or Hypertension : A Meta-Analysis of Randomized Controlled Trials. *Journal of Hypertension, 39*, 325. <https://doi.org/10.1097/01.hjh.0000748252.13174.15>.
- Lee, Wang, Ng, S. N., Sit, R., Ying, C., Yip, B. H., . . . Wong, S. (2025). Feasibility and preliminary effectiveness of mindfulness-based stress reduction program on patients with nocturnal hypertension: A pilot randomized controlled trial. *Journal of Hypertension, 43(Suppl 1)*, 46. <https://doi.org/10.1097/01.hjh.0001115632.96757.51>.
- Loucks, Nardi, W. R., McGowan, S. K., Osborne, M. J., Hossain, N. I., Britton, W. B., & Haring, R. C. (2023). Adapted mindfulness training for elevated blood pressure: A randomized clinical trial. *Journal of the American Heart Association, 12(5)*, 028796. <https://doi.org/10.1161/JAHA.122.028796>.
- Mir, I., John, Humayra, Khan, Chong, & Manan. (2024). Effect of mindfulness-based meditation on blood pressure among adults with elevated blood pressure and hypertension: A systematic review of randomized controlled trials. *Complementary therapies in medicine, 85*, 103084. <https://doi.org/10.1016/j.ctim.2024.103084>.
- Mu'afiro, Nursalam, Suwito, J., Kiaonarni, O. W., & Hidayati, S. (2024). The effect of mindfulness interventions on blood pressure and stress in hypertensive patients: A Literature Review. *Gaceta Médica de Caracas, 132*, 266. <https://doi.org/10.47307/GMC.2024.132.s2.14>.
- Munazilah, & Hasanah, N. (2018). Program Mindfulness Based Stress Reduction untuk Menurunkan Kecemasan pada Individu dengan Penyakit Jantung Koroner. *Gadjah Mada Journal of Professional Psychology (GAMAJPP), 4(1)*, 22-32. <https://doi.org/10.22146/gamajpp.45346>.
- Nasrani, & Purnawati. (2015). Perbedaan Tingkat Stres Antara Laki-Laki Dan Perempuan Pada Peserta Yoga Di Kota Denpasar. *Jurnal Medika Udayana, 4(12)*, 1-7.
- Nevid, Rathus, S. A., & Green, B. (2005). *Psikologi abnormal (edisi 5/jilid 1)*. Jakarta: Penerbit Erlangga.
- Park, S. H., & Han, K. S. (2017). Blood pressure response to meditation and yoga: a systematic review and meta-analysis. *The journal of alternative and complementary medicine, 23(9)*, 685-695. <https://doi.org/10.1089/acm.2016.0234>.
- Pratikta, A. C. (2020). Mindfulness as an effective technique for various psychological problems: A conceptual and literature review. *Journal Of Professionals in Guidance and Counseling, 1(1)*, 1-13. <https://doi.org/10.21831/Progcouns.V1i1.30605>.
- Riskesdas. (2018). *Hasil Utama Riskesdas*. Jakarta: Kementerian Kesehatan RI.

- Saputra, W. N., & Widiyari, S. (2016). Acceptance and commitment therapy: the new wave of cognitive behavior therapy. *Indonesian Journal of School Counseling*, 1(1), 1-5. <https://doi.org/10.23916/Schoulid.v1i1.28.1-5>.
- Zhang, & Cao, M. (2023). Effect of Mindfulness-Based Interventions on People with Hypertension and Prehypertension: A Systematic Review and Meta-Analysis. *BMC Cardiovascular Disorders*, 23(1), 110-121.
- Zou, Yeung, A., Li, C., Wei, G. X., Chen, K. W., Kinser, P. A., . . . Ren, Z. (2018). Effects of meditative movements on major depressive disorder: a systematic review and meta-analysis of randomized controlled trials. *Journal of clinical medicine*, 7(8), 195. <https://doi.org/10.3390/jcm7080195>.