



The Effect of Al-Qur'an Murottal Therapy Surah Ar-Rahman on Reducing Blood Pressure in Menopausal Women Suffering from Hypertension in Purwakarta Regency, Indonesia

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ABSTRACT

Background: Hypertension is a chronic disease that often occurs in menopausal women. Murottal therapy from Al-Qur'an Surah Ar-Rahman is believed to lower blood pressure. This study aims to determine the effectiveness of murottal therapy from Al-Qur'an Surah Ar-Rahman on reducing blood pressure in menopausal women with hypertension in Purwakarta Regency, Indonesia. **Methods:** This research used a quasi-experimental design with a pretest-posttest with a control group design. A total of 60 menopausal women with hypertension in Purwakarta Regency were randomly divided into two groups: the intervention group (n=30) who received murottal therapy of Al-Qur'an Surah Ar-Rahman for 30 minutes every day and the control group (n=30) who did not receive the intervention. Blood pressure was measured before and after intervention for 4 weeks. **Results:** The results showed that there was a significant difference in the reduction in systolic and diastolic blood pressure between the intervention and control groups after 4 weeks ($p < 0.05$). Systolic blood pressure in the intervention group fell by an average of 10.5 mmHg, while in the control group, it fell by an average of 3.2 mmHg. Diastolic blood pressure in the intervention group fell by an average of 7.4 mmHg, while in the control group it fell by an average of 2.8 mmHg. **Conclusion:** Al-Qur'an murottal therapy Surah Ar-Rahman is effective in lowering blood pressure in menopausal women with hypertension.

1. Introduction

Hypertension is a chronic disease with blood pressure above 140/90 mmHg. Hypertension is one of the main risk factors for cardiovascular disease, stroke, and kidney disease. Menopausal women are more at risk of developing hypertension than men due to hormonal changes. Based on data from the Purwakarta Regency Health Service in 2022, the prevalence of hypertension in women aged 45-54 years in Purwakarta Regency is 35.2%. This shows that hypertension is a serious health problem in Purwakarta Regency, especially in menopausal women.^{1,2}

Murottal therapy from the Al-Qur'an Surah Ar-Rahman is believed to be able to lower blood pressure through relaxing effects and calming the soul. Several studies have shown that murottal therapy of Al-Qur'an Surah Ar-Rahman is effective in lowering blood pressure in hypertensive patients. Research on the effectiveness of murottal therapy from Al-Qur'an Surah Ar-Rahman on reducing blood pressure in menopausal women with hypertension in Purwakarta Regency is important because hypertension is a serious health problem in Purwakarta Regency, especially in menopausal women. Murottal therapy from the Al-Qur'an Surah Ar-Rahman is believed to be

able to lower blood pressure through relaxing effects and calming the soul. There has been no research that tested the effectiveness of murottal therapy from the Al-Qur'an Surah Ar-Rahman on reducing blood pressure in menopausal women in Purwakarta Regency.³⁻⁵ This study aims to determine the effectiveness of murottal therapy from the Al-Qur'an Surah Ar-Rahman on reducing blood pressure in menopausal women with hypertension in Purwakarta Regency.

2. Methods

This research used a quasi-experimental design with a pretest-posttest design with the control group. The population of this study were all menopausal women with hypertension in Purwakarta Regency. The sample for this study was taken randomly, with as many as 60 people, with 30 people in the intervention group and 30 people in the control group. Inclusion Criteria: Menopausal women aged 45-55 years,

suffering from hypertension with systolic blood pressure ≥ 140 mmHg and/or diastolic ≥ 90 mmHg, Willing to take part in the study for 4 weeks, Do not have other chronic diseases such as diabetes mellitus, heart disease, and stroke. Exclusion criteria: Having hearing impairment, having a mental illness, and taking antihypertensive drugs.

The intervention group received murottal therapy of Al-Qur'an Surah Ar-Rahman for 30 minutes every day. Therapy is carried out by listening to the murottal of the Al-Qur'an Surah Ar-Rahman read by a famous reciter. The control group did not receive any intervention. Blood pressure was measured before and after intervention for 4 weeks. Blood pressure measurements are carried out using a digital blood pressure meter. Data were analyzed using the t-test to determine the difference in blood pressure between the intervention and control groups before and after the intervention.

3. Results and Discussion

Table 1. Effectiveness of interventions on blood pressure between groups.

Group	Systolic blood pressure (mmHg)	Diastolic blood pressure (mmHg)
Intervention (n=30)		
Before	153,2 ± 10,5	94,8 ± 8,2
After	142,7 ± 9,1	87,4 ± 7,3
Decrease	10,5 (p=0,001)	7,4 (p=0,001)
Control (n=30)		
Before	152,8 ± 9,8	95,3 ± 7,9
After	149,6 ± 8,9	92,5 ± 7,0
Decrease	3,2 (p=0,211)	2,8 (p=0,154)

Table 1 shows the results of the analysis of blood pressure reduction in menopausal women with hypertension after following Al-Qur'an murottal therapy Surah Ar-Rahman for 4 weeks. In the intervention group who received murottal therapy, there was an average decrease in systolic blood pressure of 10.5 mmHg (from 153.2 mmHg to 142.7 mmHg) and an average decrease in diastolic blood pressure of 7.4 mmHg (from 94, 8 mmHg to 87.4 mmHg). This decrease was statistically significant

($p < 0.05$), indicating that murottal therapy was effective in reducing blood pressure in menopausal women with hypertension. In the control group who did not receive therapy, there was an average decrease in systolic blood pressure of 3.2 mmHg (from 152.8 mmHg to 149.6 mmHg) and an average decrease in diastolic blood pressure of 2.8 mmHg (from 95, 3 mmHg to 92.5 mmHg). This decrease is not statistically significant ($p > 0.05$).

Listening to the murottal of the Al-Qur'an Surah Ar-Rahman has several mechanisms that can reduce blood pressure, one of which is through the effect of relaxation and mental calm. The human body has two main nervous systems that regulate responses to stress, namely the sympathetic nervous system and the parasympathetic nervous system. The sympathetic nervous system is responsible for the "fight or run" response when faced with stress, which increases heart rate, blood pressure, and breathing. On the other hand, the parasympathetic nervous system is responsible for the "rest and digest" response, which slows the heart rate, lowers blood pressure, and calms the body. Listening to the murottal of Al-Qur'an Surah Ar-Rahman, with its beautiful melody and calm meaning of the verses, can activate the parasympathetic nervous system. This activation will reduce the activity of the sympathetic nervous system so that Heart rate and breathing become slower, blood pressure decreases, body muscles relax, and the mind becomes calmer.^{6,7}

When stressed, the body releases stress hormones such as cortisol and adrenaline, increasing blood pressure. Listening to the murottal of the Al-Qur'an Surah Ar-Rahman can help reduce levels of this stress hormone, so that blood pressure decreases. However, if stress persists for a long time, these stress hormones can be continuously produced, which can lead to High blood pressure, Damage to blood vessels, and Increased risk of heart disease, stroke, and kidney disease. Listening to the murottal of the Al-Qur'an Surah Ar-Rahman with its beautiful melody and peaceful meaning of the verses can help: Reduce levels of stress hormones such as cortisol and adrenaline, increase relaxation and calmness of mind and lower blood pressure. Several studies show that listening to murottal Al-Qur'an can help reduce stress hormone levels and blood pressure. A study shows that listening to murottal Al-Qur'an for 30 minutes per day for 8 weeks can reduce cortisol levels and blood pressure in hypertensive patients. Another study showed that listening to murottal Al-Qur'an for 20 minutes per day for 4 weeks can reduce stress levels and blood pressure.^{8,9}

Oxytocin is a hormone produced by the brain and pituitary. This hormone is known as the "love hormone" because it plays a role in various social and emotional functions, including relaxation and calmness, love and affection, trust and social bonds, empathy, and caring. Research shows that oxytocin may also play a role in lowering blood pressure. Oxytocin can cause the release of nitric oxide (NO) in the blood vessels. NO is a vasodilator, which means it can dilate blood vessels and lower blood pressure. Oxytocin can decrease the activity of the sympathetic nervous system, which is responsible for the "fight or run" response. This reduction in activity can help lower blood pressure. Oxytocin can increase the activity of the parasympathetic nervous system, which is responsible for the "rest and digest" response. This increase in activity can help lower blood pressure. Several studies show that listening to murottal Al-Qur'an can increase oxytocin production. A study shows that listening to murottal Al-Qur'an for 30 minutes can increase oxytocin levels in patients with depression. A study in Egypt showed that listening to murottal Al-Qur'an for 15 minutes can increase oxytocin levels in pregnant women.^{10,11}

The human brain produces various types of brain waves, including alpha, beta, theta, and delta waves. Each type of wave is associated with a different mental state. Alpha waves (8-12 Hz) are associated with a state of relaxation and calm. When a person is in a state of relaxation, alpha wave activity in the brain increases. Some studies show that increasing alpha wave activity in the brain can help lower blood pressure. A study shows that 8 weeks of mindfulness meditation can increase alpha wave activity and reduce blood pressure in hypertensive patients. Another study showed that listening to calming music for 30 minutes can increase alpha wave activity and lower blood pressure in healthy adults.¹²

4. Conclusion

Al-Qur'an murottal therapy Surah Ar-Rahman can be an effective alternative non-pharmacological therapy for lowering blood pressure in menopausal women with hypertension.

5. References

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