

PENGARUH KOMBINASI PERENDAMAN KAKI AIR HANGAT DAN TERAPI MUROTAL AL-QUR'AN UNTUK MENURUNKAN TEKANAN DARAH PADA PENDERITA HIPERTENSI: TINJAUAN SISTEMATIS

The Effect of The Combination of Warm Water Foot Soaking and Murottal Therapy Of Al-Qur'an for Reducing Blood Pressure in Hypertensive Patients: A Systematic Review

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Abstrak

Pendahuluan: Hipertensi menempati proporsi terbesar dari semua penyakit tidak menular (PTM). Hipertensi diobati dengan dua cara: farmakoterapi dan non-farmakoterapi. Pengobatan non farmakoterapi adalah memberikan terapi komplementer yaitu terapi rendam kaki air hangat yang dikombinasikan dengan terapi murottal Al-Quran. **Tujuan:** mengetahui efektivitas terapi kombinasi rendam kaki hangat dan murottal Al-Qura'an dalam menurunkan tekanan darah. **Metode:** Metode penulisan tinjauan sistematis ini menggunakan narasi tinjauan sistematis dengan memilih artikel yang diterbitkan melalui enam basis data ilmiah, yaitu PubMed, EMBASE, Cochrane, CINAHL, Scopus, dan Google Scholar menggunakan kata kunci yang sama dan diterbitkan dalam lima tahun terakhir (2018–2022). **Hasil:** Melalui hasil penelitian sebelumnya, tujuan dari tinjauan sistematis ini adalah untuk mendeskripsikan dan menilai Pengaruh Kombinasi Perendaman Kaki Air Hangat dan Terapi Murottal Al-Qur'an Terhadap Penurunan Tekanan Darah. Empat artikel yang relevan diperoleh berdasarkan hasil analisis menggunakan 11 pertanyaan CASP. **Kesimpulan:** Kombinasi rendam kaki air hangat dan Terapi Murottal Al-Qur'an berhasil menurunkan tekanan darah pada pasien hipertensi, menurut kesimpulan semua artikel. Saran dari hasil penelitian ini antara lain adanya standar operasional prosedur (SOP) terapi agar mendapatkan hasil yang maksimal.

Abstract

Introduction: Hypertension occupies the largest proportion of all non-communicable diseases (NCDs). Hypertension is treated in two ways: pharmacotherapy and non-pharmacotherapy. Non-pharmacotherapeutic treatment is to provide complementary therapy, namely warm water foot soak therapy combined with Al-Quran murottal therapy. **Objective:** To determine the effectiveness of the combination of warm foot soak and Al-Qura'an murottal therapy in lowering blood pressure. **Methods:** This systematic review writing method uses a systematic review narrative by selecting articles published through six scientific databases, namely PubMed, EMBASE, Cochrane, CINAHL, Scopus, and Google Scholar using the same keywords and published in the last five years (2018–2022). **Result:** Through the results of previous studies, the goal of this systematic review is to describe and assess The Effect of The Combination of Warm Water Foot Soaking and Murottal Therapy of the Al-Qur'an for Reducing Blood Pressure. Four relevant articles were obtained based on the results of the analysis using CASP's 11 questions. **Conclusions:** The combination of warm water foot soaking and Murottal Therapy of the Al-Qur'an was successful in decreasing blood pressure in hypertension patients, according to the conclusion of all articles. Suggestions from the results of this study include a standard operating procedure (SOP) for therapy to get maximum results.

BACKGROUND

Hypertension, often known as high blood

pressure disease, is a chronic disorder marked by elevated blood pressure on the artery walls. The

heart has to work harder to circulate blood throughout the body through the blood arteries because of this illness. A systolic blood pressure of more than 140 mmHg or a diastolic blood pressure of more than 90 mmHg is considered hypertension (Sari, 2017 and Delacroix & Chokka, 2014). Hypertension is one of the most important risk factors in causing the development of Cardiovascular Disease (CVD). If blood pressure increases, there is a risk of myocardial infarction (MI), heart failure (HF), stroke, and renal disease (Hagler et al., 2020). Hypertension is a silent killer since it rarely causes any symptoms until a serious medical crisis such as a heart attack, stroke, or chronic kidney disease develops. Because most people are unaware of their high blood pressure, the only way to discover it is through measurement. Although the majority of hypertensive individuals are asymptomatic, some suffer from headaches, dizziness, vertigo, vision changes, or fainting (Singh et al., 2017).

According to WHO data from 2015, around 1.13 billion people worldwide suffer from hypertension, which translates to one in every three people. The number of people affected by hypertension continues to rise every year, and it is estimated that by 2025, 1.5 billion people will be affected by hypertension, with 9.4 million people dying each year as a result of hypertension and its complications. In 2013, the prevalence of hypertension in Indonesia was 25.8%, and it grew to 34.1 percent in 2018. (Riskasdas Kemenkes RI, 2013; 2018). According to the prevalence of hypertension, which was 34.1 percent in 2018, 8.8 percent of those diagnosed with hypertension did not take medicine, 13.3 percent did not take medication frequently, and 32.3 percent did not take medication at all. This demonstrates that the majority of persons with hypertension are unaware of their condition and thus do not seek therapy (Riskasdas Kemenkes RI, 2018).

Non-pharmacological treatment/complementary therapy is one method of managing hypertension with few adverse effects. This supplementary therapy is divided into five categories by the National Center for Complementary and Alternative Medicine (NCCAM). namely mind-body therapy, alternative service systems, biological therapy, manipulative therapy, and body systems & energy therapy. Of the five categories, two combination therapies have been researched, namely alternative therapy of foot soaking in warm water (manipulative therapy and body systems) with a combination of murottal (mind-body therapy)

(Rufaida, 2018). Warm water foot soak therapy at 39-40°C has numerous physiological effects on the body, the first of which is on the blood vessels, where the warm water improves blood circulation, stabilizes blood flow, and strengthens the heart, as well as the loading factor in the water, and ligaments that influence the body's joints (Lalage, 2015). Likewise with Al-Qur'an, murottal there the therapy has various benefits for anyone who listens to it, this has been proven by several research results, One of these studies was carried out by the director of the Islamic Medicine Institute for Education and Research in Florida. The results of his research show and confirm that listening to someone reading the Qur'an can affect the listener's form of psychological calm such as peace of mind, decreased depression and sadness as well as warding off various diseases that a person feels, peace of mind, and a decrease in depression will create a relaxed feeling, relaxed feeling. What is obtained by a person will have an impact on a decrease in the frequency of the heart rate and a decrease in the rate of respiration which will cause a decrease in blood pressure (Hidayah, 2013). According to Ernawati (2013), listening to the Koran has a relaxing impact on the body due to the meditation, autosuggestion, and relaxation aspects present within it. The Qur'an has revealed the following verse: "And when the Qur'an is recited, then listen carefully and pay attention quietly so that you may receive mercy." (Al-A'raf: 204).

The calmodulin-dependent system induces an increase in brain dopamine levels as a result of sound treatment. This increase in dopamine levels reduces sympathetic activity via dopamine-2 receptors, lowering blood pressure and directing sound to a person's sense of a more pleasant emotional state, causing sensations of physical and mental relaxation.

It can also trigger good feelings linked to limbic system activation, resulting in the release of endorphins that influence a person's physiological system (Kuhlmann, 2016). Because of the characteristics of meditation, autosuggestion, and relaxation, the sound of the Koran has a calming impact on the body. positive perception so that it can stimulate the hypothalamus to secrete endorphins and then stimulate the activation and control of the autonomic nerves consisting of the sympathetic nerves and parasympathetic nerves (Wirakhmi, 2016).

Not many know the relationship between psychological conditions and physical conditions.

But recently, many have started to realize the relationship between psychological stress and physical health conditions, so the term Psychoneuro-Immunology appears which simply means the relationship between the mind, nervous system, and bodywork system. Both therapies have a positive impact on people with hypertension if they are carried out continuously and correctly, and will be maximized if the two are combined. Nurses' health workers have a strategic role in providing nursing care to individuals, families, or communities in handling health problems independently. By providing the right understanding and empowering families and patients to participate in being able to carry out self-care independently. Various complications that may arise can be controlled and the patient has an optimal level of health. Nursing services provided by a nurse greatly affect the quality of nursing care that will be received by patients. Therefore, treatment solutions are needed that can help improve health care for hypertensive patients in ancient, control, and reduce t, the risk of complications due to hypertension.

Based on the explanation above, the authors are interested in summarizing interventions and developments to improve the quality of independent nursing care services for nurses that have been implemented in their entirety. This research is important because it can provide knowledge and information for nursing science about the most effective trends and interventions so that they can provide optimal services, especially in reducing blood pressure in patients with hypertension.

METHOD

A complete evaluation of the research on the effects of combining warm water foot soak therapy with murottal Al-Qur'an therapy in decreasing blood pressure in hypertension patients. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses were used in the protocol and evaluation of the literature review (PRISMA). The literature review took place in February and March of 2022. The data used in this study is secondary data gathered from

the outcomes of earlier research rather than firsthand observation. PubMed, EMBASE, Cochrane, CINAHL, Scopus, and Google Scholar were utilized to conduct the literature search for this literature review. Use keywords and boolean operators to find articles or journals (AND, OR NOT or AND NOT). In this literature review, keywords have been modified to Medical Subject Headings (MeSH). The PICOS framework was utilized to search for papers, which stands for Population, Intervention, Comparison, Outcome, and Study Design. The papers were also examined using CASP's 11 questions.

Based on the results of a literature search through publications in six databases and using keywords that have been adjusted to MeSH, the researchers found 10 articles that matched these keywords. The search results that have been obtained are then checked for duplication, It was for the removal of similar articles, and the remaining 5 items were. The researcher then did a screening based on the title ($n = 5$), abstract ($n = 1$), and full text ($n = 4$) that were all adjusted to the literature review's theme. Based on the feasibility of the inclusion and exclusion criteria, as many as four articles were found that could be used in the literature review. Google Scholar yielded four articles that met these requirements.

DISCUSSION

1. Characteristics of Respondents

Characteristics of respondents shown in the literature include age, gender, family history of genetics, and length of time suffering from hypertension. Age is one of the internal factors in a person that has an important role in causing hypertension. several articles review the age most susceptible to hypertension are those aged over 40 years. Based on the analysis, the youngest age of hypertension is above 40 years, with the oldest being 90 years. With an average age of 50 years. This study is in line with (Zhang et al., 2021). Who conducted research on risk factors for hypertension, one of which was age >40 years. Which states that with increasing age, body functions experience degenerative, as well

The results of the selection of study articles can be illustrated in the Flow Diagram below:

Research identified through databases : PubMed,
EMBASE, Cochrane, CINAHL, Scopus and Google
Scholar ($n = 10$)

Duplicates were eliminated from the records ($n = 8$)

(Yuningsih, et al, 2022)

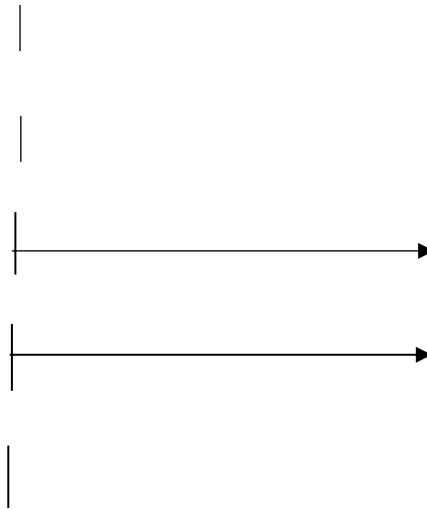


Image 1. Flowchart Literature Review Based on PRISMA 2009
(Polit and Beck, 2013)

Extraction of data from various types of literature is carried out, and the results are presented in the table below.

Table 1
Data Extraction

No	Author & Tahun Publikasi	Study Design, Sample, Analysis, Instrumen	Details of Interventions Performed	Summary of Results
1	2	3	4	5
1	Novitasari R (2021)	This study used a quasi-experimental design with a pretest-posttest design with a control group. The sampling technique used purposive sampling with a total sample of 30 samples. Statistical analysis was used in univariate and bivariate analysis with Mann Whitney. Instruments: Spigmomanometer, stethoscope, warm water, and observation sheet	The combination of warm water foot soaks with a temperature of 38-40°C and murottal al-Qur'an: ar-Rahman therapy in the intervention group for 15 minutes. Observations were made for 1 week and 3x meetings	The results showed that there was an effect of the combination of a warm water foot soak and ar-Rahman murottal al-Qur'an therapy on systolic blood pressure (p-value 0.004) and diastolic blood pressure (p-value 0.009). Patients with hypertension are expected to intervene with foot soaks and murottal therapy routinely and independently to lower blood pressure
2	Adhitama Indah Chrisnanda, I. A. C. (2020)	This is a quantitative study, and the research method is a Quasy Experiment with One Group Pretest-Posttest Design. The study's population was 77 people, and the sample method was purposive sampling of 44 respondents without a control group.	With warm water monitoring, performed for 15 minutes one time for three days.	The combination of a warm water foot soak and ar-Rahman murottal al-Qur'an therapy had an effect on systolic blood pressure (p-value 0.004) and diastolic blood pressure (p-value 0.009), according to the findings. Patients with hypertension are advised to use foot soaks and murottal therapy to reduce blood pressure on a regular basis and independently.

No	Author & Tahun Publikasi	Study Design, Sample, Analysis, Instrumen	Details of Interventions Performed	Summary of Results
1	2	3	4	5
		Spigmomanometer, stethoscope, warm water, and a sheet of observation		
3	Oktalina, R., Antoro, B., & Maryuni, S. (2020)	This study is quantitative, and the method utilized is a one-group approach (pretest-posttest). Purposive sampling is used to take up to 21 samples from the sample. Spigmomanometer, stethoscope, warm water, and a sheet of observation	With warm water monitoring, performed for 15 minutes one time for three days.	Analysis of the data used is the paired sample t-test. Statistical test results obtained a p-value of 0.000
4	Afrizal, D. K. I. (2021)	This study used a pre-experimental design with a pre-post-test design group (one-group pre-post test design). Purposive sample with 35 respondents was utilized as the sampling technique. The blood pressure of the participants was measured before and after they received therapy in this study. Sphygmomanometer, stethoscope, warm water, and a sheet of observation	Foot soak therapy in heated water (between 30-40°C) for 5 minutes, alternating with listening to the murottal Al-Qur'an	The results of this study indicate that the overall systolic and diastolic blood pressure of the respondents before therapy was stage I hypertension (100%), whereas after therapy most of the respondents decreased their hypertension range to the prehypertension range with a percentage of 69%. The results of statistical analysis using the sign test with a p-value of 0.000, meaning that there is a difference in blood pressure before and after warm water foot soak therapy with a combination of murottal Al-Qur'an in patients with hypertension.

blood pressure increases. Where the arterial walls will experience thickening due to the accumulation of collagen in the muscle layer, resulting in blood vessels becoming narrow and stiff after the age of 40 years (Amanda & Martini, 2018).

After tracing from several studies that have been carried out, the female sex is more prone to hypertension than the male. This could be because after menopause, women are at a greater risk of high blood pressure, which is protected by the hormone estrogen, which plays a role in boosting HDL levels. Low HDL cholesterol levels and high LDL cholesterol levels contribute to atherosclerosis and high blood pressure. However, in some articles it is stated that men are more at risk of developing hypertension, this is caused by an unhealthy lifestyle compared to women.

For genetic variables, it was found that there was a strong family history association between the risk categories of first-degree family history of hypertension in Chinese families living in rural Beijing, even within the normal range of blood pressure. It also provides additional evidence that family history is more closely related to the risk of developing hypertension in women than men. The above statement is supported by the results of the aggregated hypertension group showing that in a population of positive parents, the prevalence rate of brothers and sisters in offspring is 20 to 66%, and a pand plurality of twin studies estimate the probability of offspring being more than 50%. This shows that more than half of changes in blood pressure can be attributed to the accumulation of genetic effects (Li et al., 2019). Researchers conclude that genetic factors are very influential, due to the same lifestyle and habits as parents so other factors can support hypertension to occur. such as the habit of using exercise and others.

With a rate of 45.5%, the bulk of respondents had suffered for 12-23 months. According to research in the journal Nurhidaya long-suffering suffering from hypertension between 12 - 23 months causes cardiac physiology in the aging process to experience hypertrophy or called heart enlargement, while other people experience shrinkage or shrinkage as in the case of blood vessels getting smaller due to aging, the walls of the heart chambers. thickens, the heart valves begin to thicken and stiffen, so that the pumping power of the heart

muscle decreases causing the elderly to experience the risk of coronary heart disease, hypertension, and heart rhythm disorders

2. Changes in mean blood pressure pre-test and post-test

The average systolic and diastolic blood pressure of the respondents fell following the combination therapy of warm water foot bath and murottal Al-Quran therapy, according to the results of the four articles' study. The average systolic decreased in the range of 10-20 mmHg and Diastole 5-10 mmHg. The statistical results show that the p-value of systolic blood pressure is smaller than the value of (0.05) and which means that H₀ is rejected and H_a is accepted, which means that there is a significant effect between the administration of a combination of a warm water foot soak and Al-Quran marital therapy on systolic blood pressure in the treatment group.

3. The blood pressure effects of combining a foot bath and murottal treatment

In the literature on combination therapy, foot soaks in warm water, and mutual Al-Qur'an therapy, the warm water used ranges from 30-40°C with 10-15 minutes listening to mutual-Quran (Afrizal, D. K. I. 2021 and Adhitama, 2020). The combination therapy was carried out 1 time for 3 consecutive days with warm water monitoring (Adhitama, 2020). A basic and inexpensive type of nursing care is a warm water foot bath and Murottal Al-Quran. The flexus venosus nerve stimulates the baroreceptors, which are the most essential reflex in determining the regulatory control of the pulse, heart, and blood pressure. Meanwhile, mutual Al-Qur'an therapy stimulates the hypothalamus to secrete endorphins to activate autonomic nerves to control the hormones epinephrine and norepinephrine which inhibit angiotensin, resulting in a decrease in blood pressure (Adhitama, 2020).

According to Oktalinas research (2020), a combination therapy of Al-Qur'an murottal and foot bathing in warm water can lower blood pressure in the elderly because murottal can activate natural endorphins in the human body, which can soothe a person's circumstances while also lowering blood pressure. Warm water foot soak therapy can dilate blood vessels because when someone does warm water immersion, warm water enters the body by conduction,

which can widen blood vessels and smooth blood flow, lowering blood pressure. By combining murottal and soaking the feet in warm water, it will be effective because both are very beneficial for reducing blood pressure.

Both of these therapies have a positive impact on people with hypertension when used consistently and correctly, because each of these therapies has scientifically proven benefits for lowering blood pressure in people with hypertension, where warm water widens blood vessels and murottal Al-Qur'an reduces stress, resulting in a decrease in blood pressure (Afrizal, 2020).

The use of combination therapy in hypertension patients may lower the incidence of illness complications, albeit the evidence is moderate due to research design problems and the large heterogeneity of the studies included. With changes in the duration and frequency of intervention, the minor effect on lowering blood pressure may not be substantial, and more research is needed to answer this topic. Non-pharmacologic treatment efforts in patients with hypertension with a warm water foot bath and murottal therapy representative, acceptable, and require not too much cost in their implementation can be done independently.

This review has limitations, including the possibility of publication bias and the lack of a search for gray literature. Other flaws included a lack of scientific rigor among the research included, with many employing uncontrolled before and after study designs, the absence of a control group, and failure to provide proper randomization methodologies. Furthermore, statistical synthesis was hampered when studies' outcomes and interventions became increasingly diverse.

CONCLUSION

The end results of the study showed that there was a combination of foot soak therapy with warm water and murottal therapy for blood pressure, based on the results of a literature analysis of the complete article. Where this became an opportunity to maximize the provision of independent nursing care to patients with hypertension. Some of the recommendations given to health agencies are expected to be carried out and made in the form of Standard Operating Procedures (SOP) / checklist for the administration of combination

therapy. The next suggestion is to do further research such as using other appropriate interventions or looking for factors related to reducing high blood pressure so that the results of this study can support developments in nursing science in community nursing courses, especially studies on non-pharmacological therapy/complementary therapy. There is no conflict of interest in the writing of this comprehensive summary or literature review because it is written independently.

REFERENCES

- Adhitama Indah Chrisnanda, I. A. C. (2020). The Effect of Combination of Warm Water Foot Soak and Murottal Al-Qur'an Therapy: Ar-Rahman on Blood Pressure Changes in Emergency Prevention of Hypertensive Urgency Patients (Doctoral Dissertation, Kusuma Husada University Surakarta).
- Afrizal, D. K. I. (2021). Differences in Blood Pressure Before and After Warm Water Foot Soak Therapy with a Combination of Murottal Al-Qur'an in Hypertension Patients in Glagah Wero Village, Panti Jember (Doctoral Dissertation, Dr. Soebandi University).
- Anggraini, D. C. (2020). The Effectiveness of Murottal Al-Quran Therapy and Warm Water Foot Soak Therapy on Blood Pressure Changes in Malang City Health Center (Doctoral dissertation, University of Muhammadiyah Malang).
- Annisa, T. 2017. The Effect of Listening and Reading Al-Quran on Blood Pressure Reduction in Hypertension Elderly At Tresna Werdha Mabaji Social Institution Gowa. Essay. Faculty of Medicine and Health Sciences Alauddin State Islamic University Makassar
- Delacroix, S., & Chokka, R. G. (2014). Hypertension: Pathophysiology and Treatment. *Journal of Neurology & Neurophysiology*, 05(06). <https://doi.org/10.4172/2155-9562.1000250>
- Ernawati. 2013. The Effect of Listening to Murottal Q.S. Ar Rahman Against Blood Pressure Patterns in Hypertensive Patients. Scientific papers. Yogyakarta Muhammadiyah University Hidayah.
2013. The Effect of Giving Murottal Al-Qur'an on Pain Levels in Patients Post

- Extremity Fracture Surgery at Prof.Dr.R Soeharso Orthopedic Hospital Surakarta. Thesis of the Department of Nursing, Faculty of Health, University of Muhammadiyah Surakarta
- Kuhlmann. et al. (2016). Systematic review and meta-analysis of music interventions in hypertension treatment: a quest for answers Netherlands: Department of Cardiothoracic Surgery, Erasmus University Medical Center.
- Lalage, (2015) Lalage, Z. (2015). Healthy Living By Applying Water. Yogyakarta: Abata Press.
- Oktalina, R., Antoro, B., & Maryuni, S. (2020). The Effect of Combination Therapy of Al-Qur'an Murotal and Warm Water Foot Soak on Changes in Blood Pressure. *Journal of Nursing Media Research*, 3(1), 24-29
- Riskesdas. (2013). RI Health Information and Data. Jakarta: Indonesian Health Information and Data Center.
- Riskesdas. (2018). RI Health info and data center. Indonesia: Ministry of Health RI.P2PTM Ministry of Health RI, 2019
- Sari, Y. N. I. (2017). Coming to terms with Hypertension. Medic Earth. Jakarta
- Rufaida, (2018). Rufaida, Zulfa, Sri L, Diyah P. Sari. 2018. Complementary Therapy. Mojokerto: Stikes Majapahit.
- Syam, N. 2016. The Effect of Warm Water Soak on Feet and Cucumber Juice Consumption on Hypertension in the Elderly. Essay. Nursing Study Program, Faculty of Medicine and Health Sciences Uin Alauddin Makassar.
- Wirakhmi, H. (2016). The effect of ar-Rahman murRahmantherapy on patients after cesarean section at RSUD DR.R. Goeteng Tarunadibrata Purbalingga, 421–426.
- WHO. 2015. A Global Brief Hypertension: Silent Killer, Global Public Health Disease. Switzerland: WHO Press.