Review Article: Systematic Review, Meta-Analysis, Integrative Review, Scoping Review

THE EFFECT OF AUTOGENIC RELAXATION ON PAIN RELIEF IN HYPERTENSION PATIENTS: A SYSTEMATIC REVIEW

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Abstract

Background: Hypertension can be treated with non-pharmacological treatment. Comprehensive chronic pain treatment involves a combination of methods and therapies. Relaxation effectively reduces muscle tension, improves well-being, and reduces symptomatic stress in individuals experiencing various situations. Autogenic relaxation therapy carried out for ± 10 minutes scientifically has a physiological impact on the body.
Objective: This literature review aimed to identify the effect of autogenic relaxation on pain reduction in hypertensive patients
Design: This research design was a literature review.
Data Sources: Search for articles using three journal databases, namely Google Scholar, PubMed, and ScienceDirect.
Reviews Methods: Used PRISM flow diagram to find a total of 6 articles that meet the inclusion criteria reviewed.
Result: The literature search results found 2 articles that met the inclusion criteria that were published in 2023.
Conclusion: One of types of relaxation is an autogenic relaxation on reducing pain in hypertensive patients. Continue to do relaxation routinely and regularly both independently and with guidance from experts, and continue to take medication according to doctor's recommendations and carry out routine checks with doctors, for symptom improvement.

Keywords: *Autogenic Relaxation, Hypertension, Pain Reduction*

INTRODUCTION

Hypertension is still the number one killer disease in Indonesia. Around one billion people worldwide suffer from this disease (Vambheim et al., 2021). Hypertension can be treated with pharmacological and non-pharmacological treatments, and its prevalence continues to increase with age and unhealthy lifestyle factors. One of the problems that often arise in hypertensive patients is pain, which can be caused by various factors, including hypertension itself, comorbidities, or side effects of medication (Imamah, 2020). Although antihypertensive drugs can help control blood pressure, the use of painkillers in hypertensive patients should be done with caution because some types of drugs can worsen hypertension. Therefore, it is important to find effective non-pharmacological approaches to reduce pain without increasing

the risk of hypertension (Sutrisno & Nursalam, 2022). Headache is the most common symptom complained of by hypertension sufferers due to increased intracranial pressure. The most common location of headache is in the occipital area. Dizziness is also often complained of, this is caused by vasoconstriction of blood vessels resulting in decreased cerebral tissue perfusion (Kohlert et al., 2022).

According to WHO Prevalence data, around 1.13 billion people worldwide suffer from hypertension. This means that 1 in 3 people in the world have been diagnosed with hypertension, and only 36.8% of them are taking medication. The number of people with hypertension in the world continues to increase every year; it is estimated that by 2025 there will be 1.5 billion people suffering from hypertension, and every year 9.4 million people die from hypertension and its complications (WHO, 2015). Data on the prevalence of hypertension in Indonesia was obtained through blood pressure measurements at the age of ≥18 years, and the highest prevalence of hypertension was in Bangka Belitung at 30.9%, followed by South Kalimantan at 30.8%, and East Kalimantan was in third place with a prevalence reaching 29.6% (Riskesdas, 2018). According to WHO (2015) hypertension or high blood pressure is an increase in pressure in the arteries that is systemic or long-lasting, where systolic blood pressure is equal to or above 140 mmHg, and diastolic pressure is equal to or above 90 mmHg. The classification of hypertension according to WHO (2015) includes prehypertension with systolic blood pressure of 120-139 mmHg and diastolic 80-89 mmHg, stage 1 hypertension systolic 140-159 mmHg and diastolic 90-99 mmHg, stage 2 hypertension systolic≥160 mmHg and diastolic ≥100 mmHg, and hypertensive crisis systolic > 180 mmHg and diastolic ≥ 110 mmHg (Novitasari & Wirakhmi, 2018).

Comprehensive chronic pain treatment involves a combination of methods and therapies. Pharmacological treatment alone has limited effects and increases the risk of

dependence (Imamah, 2020). According to the biopsychosocial model, pain occurs due to a complex interaction between biological, psychological and social factors. Pain can be understood as an interaction between activated pain fibers, pain interpretation and pain behavior. Thus, pain is a subjective experience and physical sensation that has large individual differences. Individual differences can be caused by the interaction between context, interpretation and understanding of pain, and the psychological condition of the person experiencing pain (Kusuma et al., 2015). Brain imaging studies have shown that afferent activity and activity in descending pain pathways are influenced by attention and emotional valence, factors that are not directly related to the pain stimulus (Kohlert et al., 2022).

Hypertension that is not treated immediately will cause complications, including stroke and coronary heart disease, where stroke and coronary heart disease contribute to around 9.4% of deaths worldwide each year. This complication is most often experienced by the elderly. This is due to the aging process in the elderly. Another study conducted by (Surmarliyah & Nasrullah, 2018) on the effect of autogenic relaxation techniques on blood pressure levels showed a significant effect on blood pressure in people with hypertension. Autogenic relaxation therapy carried out for ± 10 minutes scientifically has a physiological impact on the body. Relaxation effectively reduces muscle tension, improves well-being, and reduces symptomatic stress in individuals experiencing various situations (Mardiono, 2018). Therefore, the author is interested in conducting an article review on the effect of autogenic relaxation on reducing pain in hypertensive patients.

METHODS
Design

This literature review selected articles that discuss about autogenic relaxation on reducing pain in hypertensive patients.
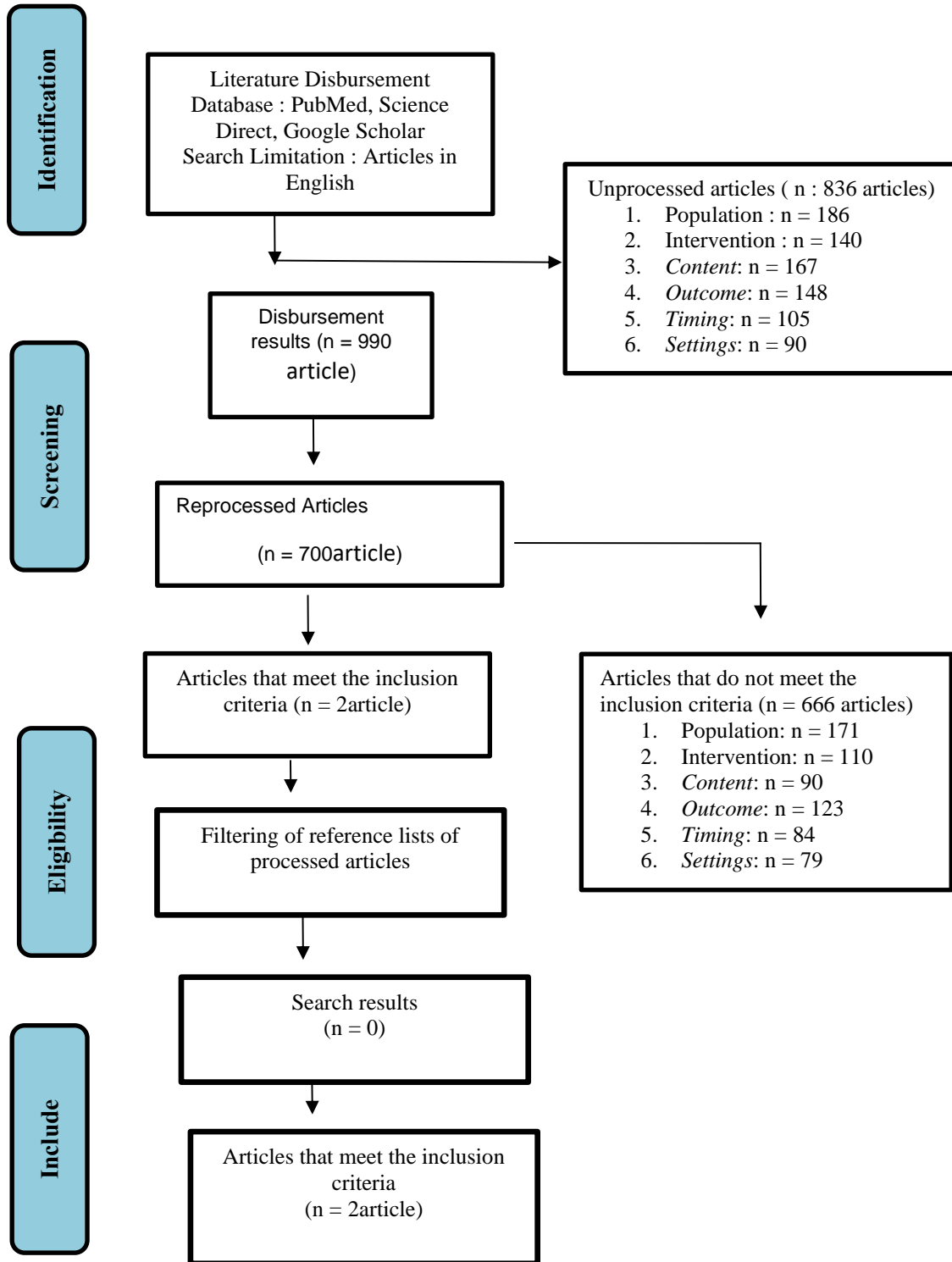
Identification

Literature Disbursement
Database : PubMed, Science
Direct, Google Scholar
Search Limitation : Articles in
English

Unprocessed articles (n : 836 articles)
1. Population : n = 186
2. Intervention : n = 140
3. *Content*: n = 167
4. *Outcome*: n = 148
5. *Timing*: n = 105
6. *Settings*: n = 90

Screening

Disbursement
results (n = 990
article)

Reprocessed Articles

(n = 700article)

Eligibility

Articles that meet the inclusion
criteria (n = 2article)

Articles that do not meet the
inclusion criteria (n = 666 articles)
1. Population: n = 171
2. Intervention: n = 110
3. *Content*: n = 90
4. *Outcome*: n = 123
5. *Timing*: n = 84
6. *Settings*: n = 79

Filtering of reference lists of
processed articles

Include

Search results
(n = 0)

Articles that meet the inclusion
criteria
(n = 2article)

Figure 1. PRISM Diagram

Table 1. Characteristics of Eligible Literature (n=2)

Title, author	Year	Sample	Variables	Design	Analysis	Results
Reducing headaches through autogenic relaxation techniques in hypertension patients Suanda saputraa, syaefunnuril anwar huda	2023	30 people	Dependent variable: autogenic relaxation technique Independent variable: decrease in headaches	Quasi-experimental with one-group pretest-posttest.	Univariate and bivariate using the Paired T-Test statistical test	The results of the study showed that the average headache of respondents before authegenic relaxation was on a scale of 5 (range 0-10), and the average headache of respondents after authegenic relaxation was on a scale of 3 (range 0-10).
The effect of autogenic relaxation on headaches in hypertensive patients in the internal medicine ward of Sultan Imanuddin Hospital, Pangkalan Bun Mulyo, Wiwi Handoko	2023	30 people	Dependent variable: headache Independent variable: autogenic relaxation	Pre-experimental with one-group pre-post test design type	Wilcoxon test	Headaches in hypertensive patients obtained an average value of the pre-test pain scale before autogenic relaxation was given a mean of 4.40 and the post-test after 5 minutes of autogenic relaxation was given the mean value was 2.77 after 5 minutes of autogenic relaxation in the internal medicine room of Sultan Imanuddin Hospital, Pangkalan Bun.

Search Methods

Literature searching this systematic review using Systematic Review and Meta-Analysis (PRISMA) standards are used to conduct systematic reviews. There are seven steps including writing a review question, determining eligible criteria, conducting a thorough search of various sources of information, identifying relevant literature sources, selecting relevant literature sources, assessing the quality of relevant literature sources, and synthesizing the literature sources (Septianingrum, Nurjanah, Yusuf, & Pandin, 2021).

Search Outcome

A search through four databases yielded 990 citations, which were then screened to exclude duplicates, filtered with a focus on hypertension cases, resulting in 2 articles obtained based on PICO, namely P (Population): Hypertensive Patients, I (intervention): Exposure related to Pain reduction in Hypertensive patients, C (Comparison): No comparison factor used, O (Outcome): This study aims to measure the ability of patients to reduce pain, A total of seven full-text articles were assessed for eligibility.

Quality Appraisal

Researchers analyze every incoming literature that meets the criteria. Data were analyzed by summarizing the main results selected to obtain topics and subtopics. After that, the researcher combined the data analysis and analyzed it to find subthemes. To achieve the objectives of this literature review, the literature regarding factors influencing the use of the Autogenic Relaxation method in Hypertension patients was reviewed thoroughly. Using the PRISMA technique, researchers selected 2 articles for review.

Data Abstraction

Literature search found 990 articles, of which 9 articles were duplicates, leaving 700 articles. A total of 666 articles were then screened and from the results of the screening, 666 articles were excluded because full text articles were not available (not fully accessible), the type of article did not meet the criteria (RCT, quasi-experiment, pre-experiment, and case study) and the results of the screening were 166 articles. The remaining articles were then selected according to the criteria, namely those that clearly and specifically discuss the factors that influence the use of the Autogenic Relaxation method in Hypertension patients, namely 2 articles, which were then reviewed.

Data Analysis/ Synthesis

In this study, the author analyzes articles by assessing and reading articles thoroughly by analyzing the title, abstract, method, data collection method and results obtained from each article then linked to the research topic to be discussed. In this study, there are 2 articles that meet the criteria of the 2 articles, data analysis is carried out so that the data obtained is in accordance with the research topic.

RESULTS

The literature search results found 2 articles that met the inclusion criteria. 2 articles were Cross Sectional. All articles were published in 2023 (Table 1).

DISCUSSION

The search results for Interventions to reduce patient pain from the literature review found 2 articles that met the inclusion criteria. Among the 2, the quantitative method is a commonly used method, this method is very important to determine the success and importance of post-stroke rehabilitation in the hope of restoring the patient's physical abilities to their original state of the disease in the shortest possible time. Because quantitative research presents a complete proposal, details, specific procedures, complete literature and clearly articulated hypotheses. The purpose of hypertension relaxation is to relieve pain and provide a feeling of comfort, reduce stress especially mild and moderate, provide calm, reduce tension. This treatment can be done individually or in combination.

CONCLUSION

This should not be a summary/repetition of the findings. Clarify the contribution of the review to existing knowledge, highlight gaps in knowledge and understanding, outline future research, report implications/ recommendations for policy/ practice/ research/ education/ management as appropriate, consistent with the limitations.

AUTHOR CONTRIBUTION

Risti Puji Listari: Main author, conceptualization, methodology, analysis, and resources.

Agus Sulistyowati: Generating ideas, conceptualization, formal analysis, and data curation.

Dini Prastyo Wijayanti: Validation, formal analysis, and data curation.

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