APPLICATION OF AUTOGENIC RELAXATION THERAPY FOR ACUTE PAIN IN HYPERTENSIVE PATIENTS IN THE KRISAN WARD OF ARIFIN ACHMAD REGIONAL HOSPITAL RIAU PROVINCE

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Abstract

Background: Hypertension remains a leading cause of death worldwide and is often accompanied by headaches due to increased cerebral vascular pressure. To address pain in hypertensive patients, relaxation techniques can be administered, one of which is autogenic relaxation therapy. **Objective:** This study aims to evaluate the effectiveness of autogenic relaxation therapy in reducing headaches in hypertensive patients**. Method:** This study employed a case study method. The sample in this case study consisted of two individuals: patient 1, aged 49 years, who experienced headaches, and patient 2, aged 40 years, who also experienced headaches. Autogenic relaxation therapy was administered once a day for three consecutive days, with each session lasting 15 minutes. The instruments used were the Numeric Rating Scale (NRS) and an observation sheet. **Results:** The results showed a decrease in pain levels in hypertensive patients. Patient 1 had a score of 6 before treatment and a score of 2 after treatment. Patient 2 had a score of 5 before treatment and a score of 2 after treatment. **Conclusion:** Autogenic relaxation therapy has been proven effective in reducing the intensity of acute pain in hypertensive patients. The mechanism of pain reduction occurs through muscle relaxation, increased blood circulation, and decreased sympathetic nerve activity. Thus, this therapy can be used as a simple, safe, and effective non- pharmacological nursing intervention in the management of acute pain in hypertensive patients.

Keyword: Hypertension; Autogenic relaxation therapy; Acute pain

INTRODUCTION

Non-communicable diseases (NCDs) are a health problem whose prevalence continues to increase every year. The WHO (2021) reported 41 million deaths due to NCDs, equivalent to 74% of global deaths. The most common types of NCDs include stroke, heart disease, diabetes mellitus, hypertension, cancer, and chronic kidney disease (Asmin et al., 2021). Hypertension is the leading cause of death among NCDs, with 17.9 million deaths per year. In Indonesia, hypertension is also the leading cause of death from NCDs. SKI (2023) data shows that the prevalence of hypertension decreased from 34.1% in 2018 to 30.8% in 2023.

Hypertension is a cardiovascular disease known as *a silent killer* because it can cause permanent disability and sudden death (Marlita et al. 2022). This condition occurs when blood pressure is ≥140/90 mmHg in adults, while normal blood pressure is below 130/85 mmHg (Oktaria et al., 2023). Hypertension can damage blood vessels and trigger further increases in blood pressure. Risk factors include age, gender, family history, smoking, obesity, lack of physical activity, stress, estrogen use, and a diet high in salt, caffeine, and *monosodium glutamate (*MSG) (Maftuha et al., 2024).

Based on its cause, hypertension is divided into two types: primary hypertension and secondary hypertension. Primary hypertension is more commonly found in the general population (Furqani et al. 2020). Primary hypertension is hypertension whose cause is unknown (Cahyanti et al., 2024). A common problem experienced by people with primary hypertension is headaches. Headache is the most common symptom complained of by people with hypertension (Saputra & Huda 2023), usually in the form of a spinning or throbbing sensation due to narrowing of the blood vessels and increased cerebral vascular pressure (Ashari & Kurniyanti, 2023). This condition causes discomfort and requires appropriate management. One effective non-pharmacological method is autogenic relaxation therapy, which has been proven to reduce headaches in hypertensive patients (Brigita & Wulansari, 2022).

One treatment for relieving pain using non-pharmacological medicine is autogenic relaxation therapy. Autogenic relaxation techniques are therapies that originate from within oneself and body awareness by controlling muscle and heart tension. This autogenic relaxation therapy can provide a relaxing effect where patients will feel comfortable, muscle tension will decrease, stress symptoms will be reduced, thereby reducing the headaches experienced by hypertensive patients (Ramadhan et al., 2023).

A study conducted by Saputra and Huda (2023) on the reduction of headaches through autogenic relaxation techniques in hypertensive patients found that the average headache pain of respondents before autogenic relaxation was on a scale of 6 (range 0- 10) and the average pain after relaxation was on a scale of 3 (range 0-10). This aligns with the study by Deswita et al. (2025), which found a reduction in pain levels among hypertensive patients. Before the relaxation intervention, clients reported headaches at a level of 6 on the scale, and after the intervention, the pain level decreased to 2 on the scale.

RESEARCH METHOD

The research method used was a case study. The case study was conducted from September 30, 2025, to October 2, 2025. The subjects of this case study were inpatients experiencing headaches at Arifin Achmad Provincial Hospital in Riau. Inclusion criteria were: 1) Patients who were willing to be respondents and had agreed to *informed consent,* 2) Patients suffering from hypertension, 3) Patients experiencing acute pain (headache). Exclusion criteria were: 1) Patients with impaired consciousness, 2) Patients with severe respiratory disorders, 3) Patients with psychiatric disorders. The sequence of the analysis process was data collection using an observation sheet containing patient identity (initials, medical record number, age, gender, surgical history, analgesic administration). Pain measurement assessment uses the NRS pain scale. *Numeric Rating Scale (*NRS), in this case, clients are asked to assess pain using a scale of 0-10. NRS is claimed to be easier to understand, more sensitive to gender, ethnicity, and dosage. A pain scale of 0 means no pain, 1-3 indicates mild pain such as itching, electric shock, throbbing, or stinging, while 4-6 indicates moderate pain such as cramps, stiffness, burning, or stabbing, 7-9 indicates severe but controllable pain, and 10 indicates very severe uncontrollable pain. This is followed by an assessment indicator for pain reduction measured by pain complaints, grimacing, protective posture, restlessness, and sleep difficulties.

RESEARCH RESULTS

The application of Autogenic Relaxation Therapy was conducted on Tuesday, September 30, 2025 – October 2, 2025, during the afternoon shift from 7:00 PM WIB until completion.

Graph 1. Graph of the results of the application of Autogenic Relaxation Therapy

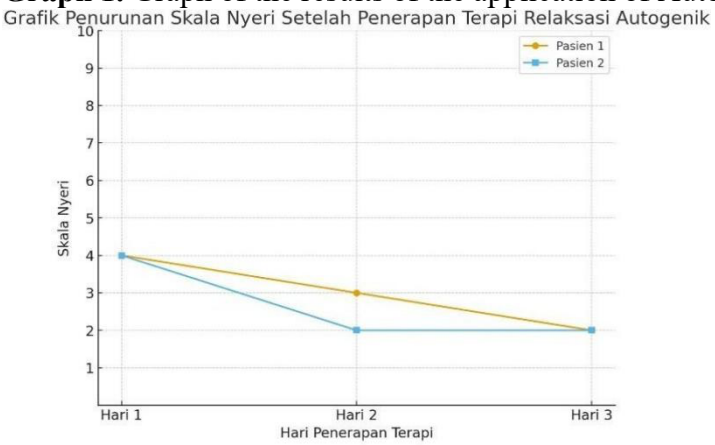

Table 1. Changes in pain scale before and after implementation

Day	Patient 1		Patient 2	
	Before	After	Before	After
1	6	4	5	4
2	5	3	4	2
3	5	2	5	2

This graph shows changes in the percentage of pain scale indicators. All indicators show that the application of autogenic relaxation therapy is effective in reducing acute pain. In indicator 1, the patient's pain decreased from a scale of 6 to a scale of 2, while in indicator 2, the patient's pain decreased from a scale of 5 to a scale of 2.

Figure 1. Application of autogenic relaxation therapy on patient 1.

Figure 2. Application of autogenic relaxation therapy on patient 2

DISCUSSION

According to *the International Association for the Study of Pain* (IASP), acute pain is a sensory or emotional experience associated with actual or functional tissue damage, which arises suddenly or gradually and ranges in intensity from mild to severe, lasting less than 3 months (IASP, 2020). Acute pain also serves as a warning signal for ongoing pathological processes, such as trauma or acute medical conditions (Liu & Kelliher, 2022). In patients with medical conditions, acute pain complaints are the most common symptom, one of which is in patients with hypertension. During *hypertensive urgency,* patients typically experience headaches, followed by dizziness, neck pain, and abdominal discomfort (Pratama et al., 2023). Headaches are caused by narrowing of small arteries and arterioles that interfere with blood flow to the brain. This condition reduces oxygen supply, increases carbon dioxide levels, and triggers anaerobic metabolism that produces lactic acid, thereby stimulating pain (Saputra & Huda, 2023). Headaches impact quality of life by reducing sleep quality, triggering excessive sleepiness, and interfering with concentration and daily activities (Habel et al., 2019). If left unresolved, these complaints can increase stress and even pose a risk of suicidal ideation (Rahmanti et al., 2022).

One non-pharmacological treatment for pain relief is autogenic relaxation therapy. Autogenic relaxation techniques are self-directed therapies that involve body awareness and control of muscle tension and the heart. Autogenic relaxation therapy can provide a relaxing effect where patients feel comfortable, muscle tension decreases, stress symptoms are reduced, and headaches experienced by hypertensive patients are alleviated (Ramadhan et al., 2023).

To optimize the effectiveness of autogenic relaxation therapy, the room should be quiet and free from noise and external disturbances, with dim lighting or soft-intensity lamps. The room temperature should be kept cool at around 24– 26°C and not stuffy, supported by good ventilation to ensure smooth air circulation. In addition, the room must be clean, comfortable, and free from visual and auditory distractions so that patients can achieve optimal relaxation (Wardani et al. 2022).

Autogenic relaxation therapy involves several parts of the body, namely the arms, shoulders, back, neck, and legs. It is performed by relaxing the mind, adopting a relaxed position, and regulating breathing patterns using words or short sentences. This therapy can be repeated up to six times in each therapy session. The implementation was conducted for 15 minutes over three consecutive days on two hypertensive patients experiencing acute pain. Based on the results of the relaxation therapy applied over three consecutive days on two patients, an improvement in pain scale was observed. This aligns with the study conducted by Salsabila et al. (2022), which demonstrated that autogenic relaxation can reduce the intensity of headaches in hypertensive patients through the mechanism of reducing sympathetic nervous system activity.

CONCLUTIONS

The results of autogenic relaxation therapy showed a significant decrease in pain scores in both patients based on the Numeric Rating Scale (NRS), which is a subjective assessment scale from 0 to 10, where 0 indicates no pain and 10 indicates severe pain. In the first patient, the pain scale before therapy was 6 (moderate pain) on the first day, 5 (moderate pain) on the second and third days, then decreased to 4 (mild pain), 3 (mild pain), and 2 (mild pain) after therapy. In the second patient, the pain scale before therapy was 5 (moderate pain), 4 (mild pain), and 5 (moderate pain), then decreased to 4 (mild pain), 2 (mild pain), and 2

(mild pain) after therapy. This decrease indicates that the routine application of autogenic relaxation therapy is effective in reducing the intensity of acute pain in hypertensive patients through the mechanisms of muscle relaxation, improved blood circulation, and decreased sympathetic nervous system activity. Thus, this therapy can be used as a simple, safe, and effective non-pharmacological alternative in the management of acute pain in hypertensive patients.

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