



## The Effectiveness of Back Massage Therapy to Reduce Acute Pain in Hypertension in the Work Area of Kading Health Center, Bone Regency

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### Abstract

World Health Organization (WHO) explained that the prevalence of hypertension in the world is 1.13 billion. The prevalence of hypertension in Indonesia is 8.36% from several provinces in Indonesia. The increasing number of hypertension sufferers can be caused by several factors, including: environment, behavior, and heredity so that it can cause patients to experience headaches. Purpose: This study aims to assess the effectiveness of back massage therapy in reducing pain in hypertensive patients. This research is a Quasy experiment with a pretest-posttest control group. A sample of 30 respondents who were divided into 2 groups. The intervention group ( $n = 15$ ) received back massage treatment and the control group received deep breath relaxation techniques ( $n = 15$ ). The analysis of research conducted in the intervention group using independent sample  $t$  test showed a significant reduction in the pain scale in hypertensive patients with a value of  $p = 0.000$ , while in the control group showed a value of  $p = 0.082$  by providing deep breath relaxation therapy. The conclusion in this study that back massage is effective in reducing pain in hypertensive patients.

## Introduction

According to the American Heart Association (AHA), hypertension is a disease that occurs because of an increase in systolic blood pressure  $> 140$  mmHg or diastolic blood pressure  $> 90$  mmHg. Hypertension is a condition without symptoms, where abnormal blood pressure in the arteries increases the risk of stroke, kidney failure, heart attack and kidney damage (Nasution, 2017; Manurung, 2018).

According to the World Health Organization (WHO), the prevalence of hypertension in the world is 1.13 billion. The prevalence of hypertension in Indonesia is 8.36% from several provinces in Indonesia (WHO, 2014). Riskesdas data states that the prevalence of hypertension in South Sulawesi is 7.22% (Riskesdas, 2018). The prevalence of hypertension in Bone Regency is 5.04% (BPS Kabupaten Bone, 2018).

The increasing number of people with hypertension can be caused by several factors, including: environment, behavior, and heredity so that it can cause the patient to experience headaches. Headache occurs due to spasm of atherosclerosis in the blood vessels (arteries) and decreased (oxygen) in the brain. As for complications that can arise, including stroke, kidney failure, heart failure (Manurung, 2018).

Management of hypertension in clients to prevent further complications can be in the form of pharmacological therapy and non-pharmacological therapy. Pharmacological therapy in the form of diuretics, beta blockers, Ca antagonists, ACE inhibitors. Meanwhile, non-pharmacological therapy can be in the form of a healthy lifestyle, controlling diet, increasing consumption of potassium and magnesium, exercise and massage therapy. One of the therapies provided is massage therapy (back massage), back massage aims to reduce the pain scale, provide comfort that can relieve tension, relax the patient and improve circulation (Manurung, 2018).

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Based on the results of the study entitled The Effectiveness of Back Massage from Shoulder to Head on Headache Levels in Hypertension Patients, in 7 people with hypertension, it was found that patients had a change in pain level reduction, from moderate pain (100%) to mild pain (70%) and moderate pain (30%); From giving massage from shoulder to head. There is a change in the level of pain, with the results of the data analysis test calculated for  $P: 0,000$  which is smaller than the value of  $\alpha: 0.05$ , which means that  $H_0$  is rejected and  $H_1$  is accepted (Haris & Nurwahidah, 2017).

The results of a study conducted by Adibah (2015) showed that massage relaxation techniques could reduce headaches in hypertensive patients in the ICU Emergency Room Dr. Ramelan Surabaya. The aim of this study was to assess the effectiveness of back massage therapy in reducing pain in hypertensive patients.

## Methods

The research design used in this study was Pre Experimental with the research design used was One group Pre and Post test design. This research was conducted in July 2020 in the Work Area of the Kading Community Health Center, Bone district.

The population in this study were hypertensive patients who experienced pain in Wialayh Kerja Kading Health Center. Sampling using purposive sampling technique. The sample in this study were patients who had hypertension with acute pain problems. The number of respondents used in this study were 30 respondents consisting of 15 intervention groups and 15 control groups in the Kading Community Health Center, Bone Regency. The type of intervention given in this study was massage in the back area. The massage method used is a technique (petrissage) or what is known as a short stroke rub, a long stroke technique (friction), a technique (Efflurage) and a technique (Tappotement) or percussion. This massage technique is carried out for 20 which is done 2 times a day for 3 days. The intervention group was given back massage treatment while the control group was given deep breath relaxation therapy treatment. Before being given the intervention, the patient's pain scale was first measured in both the intervention group and the control group. By selecting patients who experience moderate pain.

## Result and Discussion

Table 1. Characteristics of respondents based on age, education, occupation, smoking habits and alcohol consumption (n = 15)

Respondent Answer	Group 1 (n=15)	Group 2 (n=15)
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Variable	f	%	f	%
<b>Age</b>				
35-45 years	5	33,3	5	33,3
45-55 years	3	20,0	3	20,0
55-60 years	7	46,7	7	46,7
<b>Education</b>				
No School	3	20,0	5	33,3
Elementary School	3	20,0	4	26,7
Junior School	4	26,7	4	26,7
High School	3	20,0	2	13,3
Higher Education	2	13,3	0	0
<b>Employment</b>				
Farmer	7	46,6	7	46,6
Civil Servant	1	6,7	0	0
General employees	1	6,7	0	0
House Wife	6	40,0	8	53,4
<b>Habit</b>				
Smoking	0	0	2	13,3
Not Smoking	15	100	13	86,7
<b>Consumption of alcohol</b>				
Nothing	27	100	27	100

Description: Ex. 1 Back massage

Ex. 2 Control

Table 1 shows that most of the 55-60 years age range has hypertension. In the education variable, there is a difference in each group where most of group 1 has junior high school education and group 2 does not go to school. In the job variable, it can be seen that most of them are farmers. In the habit of not being seen, the respondents who smoke and drink alcohol.

Table 2. Effect of intervention on pain reduction in 2 groups (n = 30)

Variable	t	P-Value
<b>Group 1 (n=15)</b>		
pain <i>Pretest</i>	5.292	0,000
pain <i>Posttest</i>		
<b>Group 2 (n=15)</b>		
pain <i>Pretest</i>	1.871	0,082
pain <i>Posttest</i>		

Description: ex. 1 back massage, kel. 2 controls.

The results of the independent sample t test back massage between the intervention group obtained a t-value of 5,292 (p-value 0,000), while the control group obtained a t-count value of 1,871 (p-value 0.082).

### Effect of Back Massage Intervention on Pain Reduction

Based on the results of data analysis in table 2, the intervention group showed a p value <0.05, meaning that back massage intervention had a significant effect on pain reduction. Therefore, it can be concluded that there were changes in the pain scale before and after back massage intervention was given to reduce acute pain in hypertensive patients. Whereas in the second group or the control group the results of the independent sample t test showed no effect on reducing pain on the provision of deep breath relaxation techniques. It can be concluded that there is no difference in pain before and after deep breath relaxation techniques.

One of the studies on the effectiveness of back massage Slow Back Massage on anxiety and shoulder pain in elderly stroke. The results of this study indicated that the massage intervention significantly reduced the patient's pain and anxiety level. The authors suggest that SSBM is the recommended intervention for reducing shoulder pain, and anxiety in elderly stroke patients (Mok & Woo, 2004) .

In the results of the study entitled The Effectiveness of Back Massage to Reduce Headaches in Hypertension Patients, the results of the study on three respondents were that all three respondents experienced a decrease in the scale of severe and moderate pain to a mild pain scale. So it can be concluded that the provision of non-pharmacological back massage therapy is effective in reducing the scale of headaches in hypertensive patients (Purwandari & Sari, 2016).

Another study on the effect of back massage on the reduction of headaches during normal labor. The results of this study indicate that there is an effect of back massage on the reduction of pain intensity during the first stage of normal delivery of primigravida mothers (Sofia, 2015). research is relevant to nursing care conducted by Sumadi et al. (2020) regarding the use of back massage relaxation techniques in reducing pain in hypertension patient care. The results of this study indicate that back massage intervention given to the three patients with hypertension pain can be reduced from a scale of 4-6 (moderate) to 1-2 (mild).

The results of this study can be supported by some of the research literature that has been done before. According to (Ardyansah, 2018), that back massage can reduce systolic and diastolic blood pressure and there is a difference in decreasing systolic blood pressure status in the two groups and there is no difference in decreasing diastolic blood pressure status before being given intervention.

This study is also in line with research on the effect of foot and back massage on blood pressure levels in the elderly anti-Werdha Dipper in the Surakarta area. The results of this study indicate that there are differences in blood pressure levels in the group before and after giving foot and back massage to the blood pressure level in the elderly (Nurhanifah et al., 2018).

One of the studies on the effect of slow back massage and lavender aroma therapy on reducing blood pressure in patients. The results of this study indicate that after giving slow back massage and lavender therapeutic aroma can reduce blood pressure in the elderly (Sumadi et al., 2020). There was a decrease in the frequency and intensity of headaches after massaging. This suggests that the action of massase stimulates the parasympathetic branch of the autonomic nervous system thereby inducing relaxation and reducing stress.

Therefore, it can be based on the research results obtained and from several previous studies it can be concluded that back pain can reduce pain in hypertensive patients. Meanwhile, the control group showed insignificant results in reducing pain by providing deep breath relaxation therapy for 3 days.

## **Conclusion**

Based on the results of research and discussion of the effectiveness of back massage therapy to reduce pain in hypertension, it can be concluded that back massage affects the pain scale by reducing pain after intervention. There were differences in pain status before and after the intervention was given.

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