

## Effectiveness of Ginger Warm Compress on Neck on Head Pain of Elderly Patients with Hypertension at UPTD Tresna Werdha Natar

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### Article Info

#### Keywords :

Warm Compress, Ginger, Headache, Hypertension, Elderly

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### ABSTRACT

**Background & Objective:** To determine "The effectiveness of warm ginger compress on the neck on the head pain of elderly patients with hypertension at UPTD Tresna werdha natar". **Method:** This type of research is a quantitative study that utilizes a pre-experimental approach, with a pretest-posttest design and applies a sample selection technique through total sampling. The population and sample were all elderly patients with hypertension totaling 15 respondents, the tools used in this study were standard operating procedures (SOPs), the data analysis used was the Wilcoxon Test. **Result:** The results obtained based on statistical tests showed that there was an effect of using warm compresses made of ginger on reducing the level of pain in the head p-value 0.000. **Conclusion:** It is concluded that the use of warm compresses of ginger in the neck area can reduce the head pain of the elderly who experience hypertension.

DOI: <https://doi.org/10.56359/igj.v4i2.598>



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### Introduction

Hypertension is a condition characterized by high blood pressure of at least 140/90 mmHg. This disease not only increases the risk of heart problems, but can also cause other health problems such as problems with the nervous system, kidney disease, and blood vessel disorders. With the increase in blood pressure, the higher the risk that will be faced (Abdul Kadir Hasan, 2023).

The phenomenon of hypertension is a health problem that requires special attention from the government. This disease can affect anyone, from young to elderly individuals, and can lead to serious complications such as GIK or stroke, and even potentially cause death (Kristiana, 2024).

Globally, the World Health Organization (WHO) projects that the prevalence of hypertension is expected to reach 33% by 2023, with two-thirds of that figure in poor and developing countries. (WHO, 2023). The number of people with hypertension is expected to continue to increase over time, and it is estimated that the number will reach 1.5 billion people worldwide by 2025 (WHO, 2023). The incidence rate of hypertensive disease in Indonesia shows a considerable increase with age.

According to information from Riskesdas 2018 shows that over the past five decades, the percentage of the elderly population in Indonesia has almost doubled, reaching 8.97% or around 23.4 million people. Of this total, the proportion of elderly women reached 9.47%, while elderly men only reached 8.48%. The elderly population continues to grow every year, in 2019 reaching 9.7 million people and is predicted to increase to 12.54 million people in 2025. In order to support global initiatives, there is a goal to reduce hypertension rates by 25% by 2025 (Afifah Salsabila, 2025).

In Lampung Province, data obtained from the Health Office in 2023 showed that the number of people with hypertension reached 21,797 people, this figure increased compared to 2022 which was recorded at 16,354 people. In 2024, the number of people with hypertension again experienced a surge to 41,647 people (Iskandar, 2025).

In South Lampung Regency, the estimated number of people suffering from hypertension reached 91. 522 cases, which then increased in 2021 to 130. 937 people, and rose again in 2022 to 189. 198 people. This shows an increasing trend of people with hypertension in the region (Roni Pratama, 2024).

Records from the Tresna Werdha Nursing Home polyclinic show an increase in hypertension cases among the elderly. In 2020, out of 83 elderly people studied, 35 individuals (29.75%) were diagnosed with hypertension. In 2021, this figure increased to 37 people (31.45%), and in 2022 it increased again to 39 people (33.15%) (Roni Pratama, 2024).

Patients with hypertension often experience pain in the nape of the neck. Pain or stiffness in the nape area is caused by increased pressure on the arterial walls in the neck area which causes blood flow to be disrupted (Sugiyanto, 2023).

Pain can be defined as a sensation or personal experience associated with damage to tissue. It is the body's natural response to stimuli that can cause harm, serving to protect itself and encourage the necessary actions to avoid or minimize adverse effects (Sumarsih, 2023)

In hypertensive patients, headaches are usually triggered by surging blood pressure. This occurs due to blockages in the blood circulation system, both from the heart and in the network of arterial and venous vessels that transport blood. As a result, blood flow is disrupted and causes an increase in blood pressure, resulting in decreased oxygen levels and increased carbon dioxide levels. Along with that, anaerobic metabolism will increase, producing lactic acid which can trigger headaches in the brain (Sugiyanto, 2023).

Pain management can be divided into two main approaches, namely pharmacology and non-pharmacology. Pharmacological therapy is designed to manage pain with the utilization of painkillers and blood pressure lowering drugs. However, this approach can potentially lead to dependency when hypertension attacks reappear. The non-pharmacological way to relieve hypertension headache pain is by using a warm ginger compress (Kristiana, 2024).

Ginger compress is a combination of warm water mixed with ginger pieces, producing a hot and spicy effect, which can trigger vasodilation of blood vessels,

which in turn improves blood circulation and reduces pain caused by the release of substances (Kristiana, 2024).

This warm compress creates a sense of heat that promotes the body's physiological responses, including stabilizing blood flow, relaxing muscles, maintaining the balance of cellular metabolism, increasing the ability of tissues to absorb, and creating a sense of comfort and relieving anxiety. Red ginger, has more carbohydrates (52.0%), essential oils (3.9%), and alcohol-soluble extracts (9.93%) than elephant ginger and emprit ginger. (Kristiana, 2024).

Based on the survey results at UPTD Tresna Werdha Natar, the researcher was interested in conducting a study entitled "The effectiveness of warm ginger compresses on the neck on the head pain of elderly patients with hypertension at UPTD Tresna Werdha Natar".

## Objective

This study aims to investigate the impact of using a warm compress made of ginger on the neck area to reduce the level of headache pain in elderly patients suffering from hypertension at UPTD Tresna Werdha Natar.

## Method

This research is quantitative with a pre-experimental design with a one-group format involving measurements before and after the intervention. The focus of this study is on the effectiveness of warm ginger compresses on the neck on the head pain of elderly patients with hypertension at UPTD Tresna Werdha Natar. The participants in this study were elderly people with hypertension at UPTD Tresna Werdha Natar. The tool used is *Standard Operating Procedure* (SOP).

This research was conducted at UPTD Tresna Werdha Natar in April 2025. In this study, researchers involved 15 respondents using the total sampling method. Respondents will receive warm ginger compress therapy in the neck area to help reduce headache pain levels in the elderly suffering from hypertension for 10-15 minutes for three consecutive days. Before and after treatment, pain level assessment will be carried out using the *Numerical Rating Scale* (NRS) using the *Wilcoxon Test*.

## Results

### Univariate Analysis

TABLE 1. Respondent Characteristics

Variable	N	%
<b>Age</b>		
60-69	7	46,7%
70-79	8	53,3%
<b>Gender</b>		
Male	10	66,7%
Women	5	33,3%

Based on table 1, it can be seen that most of the respondents who participated in warm ginger compress therapy activities were those aged between 70 to 79 years with a total of 8 respondents (53.3%), while 7 respondents (46.7%) were in the age range of 60 to 69 years.

While the characteristics of respondents (gender) were male, namely 10 people (66.7%), while women totaled 5 people (33.3%).

**TABLE 2.** Distribution before intervention

<b>Pain Level</b>	<b>N</b>	<b>%</b>
No Pain	0	0
Mild Pain	0	0
Moderate Pain	13	86,7%
Severe Pain	2	13,3%
Extreme Pain	0	0
<b>Total</b>	<b>15</b>	<b>100%</b>

Based on table 2, the results of the level of head pain before therapy were that most respondents experienced moderate pain as many as 13 respondents (86.7%) and respondents who experienced severe pain as many as 2 respondents (13.3%).

**TABLE 3.** Distribution after intervention

<b>Pain Level</b>	<b>N</b>	<b>%</b>
No Pain	0	0
Mild Pain	11	73,3%
Moderate Pain	4	26,7%
Severe Pain	0	0
Extreme Pain	0	0
<b>Total</b>	<b>15</b>	<b>100%</b>

Based on table 3, the results of the level of head pain after therapy were obtained, namely most of the participants felt mild pain 11 people (73.3%), while 4 people (26.7%) felt moderate pain.

### Bivariate Analysis

**TABLE 4.** Wilcoxon test

Headache before and after being given a warm ginger compress

<b>Pain Level</b>	<b>Pretest</b>	<b>%</b>	<b>Posttest</b>	<b>%</b>	<b>P-Value</b>
No Pain	0	0	0	0	<b>0,000</b>
Mild Pain	0	0	11	73,3%	
Moderate Pain	13	86,7%	4	26,7%	
Severe Pain	2	13,3%	0	0	
Extreme Pain	0	0	0	0	
<b>Total</b>	<b>15</b>	<b>100%</b>	<b>15</b>	<b>100%</b>	

Based on Table 4. Data from the results of the Wilcoxon test obtained a P-value of 0.000 <0.05. It is concluded that the use of warm compresses made from ginger in the neck area has an effect on the intensity of head pain of hypertensive elderly people at UPTD Tresna Werdha Natar.

## Discussion

### Headache Before Ginger Warm Compress

Based on research analysis, the level of head pain before being given a warm compress of ginger, there were 13 respondents (86.7%) who experienced moderate pain, and 2 respondents (13.3%) experienced severe pain.

Based on Syiddatul's research (2022), it shows that most participants experienced headaches with moderate severity, as many as 20 participants (55.6%), while people who experienced headaches with severe severity amounted to 7 participants (19.4%).

Hypertension is a state of increased blood pressure that exceeds normal limits. The way to relieve head pain is by applying a warm compress of ginger (*zingiber officinale*) (Sugiyanto, 2023).

It was found that in the Natar nursing home, warm ginger compress therapy had never been carried out to reduce elderly headaches with hypertension. So the researcher argues that it would be better if the warm ginger compress therapy is given to the elderly with hypertension to reduce the head pain scale.

#### Head pain after being given a warm compress of ginger

Based on research analysis, the level of head pain after being given a warm compress of ginger is that most participants feel mild pain, with a total of 11 people (73.3%) of the total respondents, while 4 people (26.7%) experience moderate pain.

This is in accordance with what is revealed by Sugiyanto (2023) The cause of headache experienced by patients with hypertension is the increase in blood pressure that arises due to a blockade in blood circulation, which involves the heart and all veins and arteries that carry blood. Meanwhile, pain can be divided into five levels, namely 0 (no pain), 1-3 (mild pain), 4-6 (moderate pain), 7-9 (severe pain), and 10 (severe pain).

Based on the results of the study, the authors argue that the warm ginger compress therapy given has a positive impact because there is a decrease in the head pain scale of the elderly with hypertension.

#### Effect of Ginger Warm Compress

Based on the results of the study, there is an effect of giving warm ginger compresses on the head pain of elderly patients with hypertension at UPTD Tresna Werdha Natar, indicated by the analysis test using the Wilcoxon P-Value test  $0.000 < 0.05$ . This means that there is a significant effect on reducing the head pain scale of the elderly with hypertension.

Based on the results of the study, elderly respondents where they dominantly experienced a decrease in head pain after being given a warm compress of ginger because the hot and spicy sensation produced by ginger can trigger vasodility of blood vessels, which serves to stabilize blood viscosity, make the body relax, and foster a sense of comfort and reduce pain (Sugiyanto, 2023).

According to researchers, the therapy provided is effective for reducing the head pain scale of hypertensive patients because it utilizes the main ingredient ginger which gives a hot and spicy sensation and is easily available. This can be seen from the results of the study which showed a decrease in the respondent's head pain scale after being given a warm ginger compress. It is hoped that the decrease in the head pain scale of the elderly with hypertension can reduce pain complaints and increase comfort in the elderly.

#### Conclusion

It can be concluded that there is an effect of warm ginger compresses on the head pain of elderly patients with hypertension at UPTD tresna werdha natar which is indicated by a p-value of 0.000, before the application of warm ginger compresses, there were 13 respondents (86.7%) who experienced head pain in the moderate category and 2 respondents (13.3%) in the severe category. After the application of warm ginger compress, 11 respondents (73.3%) reported headache pain in the mild category, while

4 respondents (26.7%) were in the moderate category. Suggestions It is hoped that it can be a foundation for further research using different methods.

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