

## Complementary Wet Cupping Therapy in Lowering Blood Pressure in Hypertension Patients

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### Abstract

More than 90 mmHg, which often causes complications in other body organs and causes various other complaints depending on the severity. Hypertension has risk factors including age and gender. Objective: This study aims to analyze the relationship between complementary wet cupping therapy and blood pressure in hypertensive patients. Method: The method in this research is an experimental research method with a pre-experiment design in a one group pretest posttest structure, data processing using SPSS Version 16.0 and statistical analysis using Wilcoxon Results: Research of 20 patients before carrying out wet cupping therapy, the degree of hypertension was found to be 15% pre-hypertension, 70% stage 1 and 15% stage 2. Meanwhile, after carrying out wet cupping therapy, it was found to be 65% pre-hypertension and 35% stage 1. Wilcoxon test results were obtained. The Z value is -3606 with a P-value (Asym p.Sig 2 tailed) of 0.000 which is less than the research critical limit of 0.05 so that H1 is accepted and H0 is rejected. Conclusion: There is a relationship between the application of cupping therapy in reducing blood pressure in hypertensive patients in the Islamic boarding school hamlet, Pajarakan Kulon Village, Probolinggo Regency.

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## 1. INTRODUCTION

Hypertension is a chronic disease that is a health problem in the world (Aditya & Syazili Mustofa, 2023), because hypertension is one of the entry points or risks for diseases such as heart disease, kidney failure, diabetes mellitus and stroke (Setiani & Wulandari, 2023). And if hypertension is not treated immediately, it will cause complications in the form of death (Utama, 2023). And it's not uncommon for someone to experience illness Hypertension is found without symptoms (Emdat Suprayitno, 2019).

The World Health Organization (WHO) states that 1 billion of the world's population knows hypertension, 2/3 of which are in developing countries with middle or lower middle-income levels. The prevalence of hypertension is always increasing and it is estimated that by 2025, 29% of the world's adult population will be exposed to or infected with hypertension. Hypertension causes approximately 8,000,000 people in the world to die every year and there are 1,500,000 people from Southeast Asia or a third of the population suffer from hypertension and this results in an increase in the health burden in the form of costs (Nadi, 2022). The prevalence of hypertension in Indonesia is in 8th position in the category of non-infectious sufferers (PTM) originating from cardiovascular sufferers.

Risk factors that cause hypertension are: *lifestyle* (current habit) divert stress by drinking alcohol and smoking or drinking coffee. The effect of alcohol on increasing blood pressure. Liquor causes the level of cortisol to increase, increasing the volume of red blood cells, namely the thickness of blood cells, cortisol levels and increasing the volume of red blood cells and blood viscosity have a role in increasing blood pressure. consuming excessive salt and foods that have high cholesterol levels (Ainurrafiq et al., 2019)

Non-pharmacological or alternative treatments are preferred by some people, related to people's perceptions about the side effects of consuming chemicals and their economic conditions (Asis, 2022). Alternative treatment is generally carried out using herbal medicines and traditional methods that are in accordance with their hereditary and religious beliefs. One alternative chosen as a complementary therapy is wet cupping. Apart from being very affordable with access to a comfortable and safe environment, this treatment is also highly recommended because of its efficacy and affordability (Syahputra et al., 2019). Wet cupping is a method of removing blood resulting from metabolism or contaminated with toxins and oxidants from the body through the surface of the skin. Cupping is considered effective for various diseases, especially diseases related to blood vessel disorders. Wet cupping can help treat more severe, acute, chronic or degenerative diseases, such as hypertension (Wahyu Widada, Teddy Ontoseno, 2019)

The benefits of wet cupping in hypertension are a process that lowers the sympathetic nervous system and helps control aldosterone hormone levels in the nervous system. Then, it stimulates the secretion of enzymes that act as a system *angiotensin* renin which can reduce blood volume, and release nitric oxide which plays a role in *vasodilation* blood vessels so that a decrease in blood pressure can occur. In addition, the nature of preventive therapy for hypertension is so strong that it is highly recommended as a complementary therapy for the prevention and treatment of hypertension (Rahman et al., 2020).

This is in line with research conducted by Dita Amalia Lutfiana and Margiyati 2021. This research underwent a measurement process first, first providing intervention (pre-test) and undergoing a measurement process after providing intervention (post-test). The population in the study was 2 respondents who had the criteria for age are more than 60 years, indicated as grade 1 hypertension, and can be treated independently. The conclusion of this research is that the dry cupping therapy process has an influence on the process of reducing the blood pressure of elderly people who suffer from hypertension and is recommended as a nursing intervention in managing the blood pressure of elderly people with hypertension (Dita Amalia Lutfiana & Margiyati Margiyati, 2021).

Based on the background above, the author has an interest in conducting research on "the application of wet cupping therapy in reducing high blood pressure in people with hypertension.

## 2. RESEARCH METHOD

This research uses an experimental research method with a pre-experimental design using a one group pretest posttest design. This design does not involve a comparison group, but first tries to carry out preliminary research (pretest) which has the potential to carry out tests on differences after carrying out the experiment (program). Using 20 respondents

## 3. RESEARCH RESULTS AND DISCUSSION (12 Pt)

There were 20 respondents in this study. The frequency of high blood pressure before wet cupping therapy is carried out is as follows:

Table 1 Frequency distribution of high blood pressure before wet cupping therapy

<u>Tekanan Darah</u>	N	%
<u>Prahipertensi</u>	3	15%
Stage 1	14	70%
Stage 2	3	15%
Total	20	100%

From table 1, it can be seen the results of blood pressure analysis before cupping therapy was carried out with a total of 20 respondents, namely the majority had stage 1 hypertension (140-159 MmHg) as many as 14 (70%) respondents, stage 2 (>160 MmHg) as many as 3 (15%) respondents and prehypertension (120-139 MmHg) as many as 3 (15% of respondents). This is in line with Felicitas E. Henge's research, around a third of 60% of the German population experienced an increase in people with hypertension, because it was caused by age factors (Hengel et al., 2022) according to Antin nurul Laeliah 2023. One of the factors that plays a role in the high incidence of hypertension is lifestyle. High consumption of fatty foods, cigarettes and coffee (Laeliah et al., 2023). society and is closely related to the incidence of hypertension, especially in productive age. Unhealthy lifestyles such as diet (salt consumption), lack of physical activity, and smoking which cause hypertension (Malasari, 2020).

According to Elpiana Sari, the causes of hypertension are: Jgender, excessive salt consumption, age, heredity, and stress (Sari et al., 2023). High stress will have an impact on a person's hypertension (Ratna Dila, 2023). Meanwhile, according to the assumptions of researchers, hypertension is a condition where blood pressure increases excessively and continuously over a certain period of time, regularly in the condition of checking blood pressure because of the existence of 1 or more guidelines to pay attention to the risks of not maintaining the food consumed and lifestyle so that it can stabilize blood pressure. normal blood.

Table 2 Frequency distribution of high blood pressure after wet cupping therapy

<u>Tekanan Darah</u>	N	%
<u>Prahipertensi</u>	13	65%
Stage 1	7	35%
Stage 2	-	-
Total	20	100%

From table 2 how much can be seen from the results of blood pressure analysis after cupping therapy with a total of 20 respondents, namely the majority experienced stage 1 hypertension (140-159 MmHg) as many as 7 (35%) respondents, stage 2 (>160 MmHg) as many as 0 (0%) respondents and prehypertension (120-139 MmHg) were 13 (65% respondents).

According to previous research by Zahara Syifa Annisa, Rudiyanto, and Sholihin (2021), after cupping therapy, blood pressure changed categories. The results showed that blood pressure normalized by 20%, with an average systole of 128.54 mmHg and diastole

of 83 mmHg; normal high is 20, with an average systole of 133.35 mmHg and diastole of 84.64 mmHg; and mild grade 1 hypertension as much as 60%, with the average results showing that the systolic blood pressure obtained a p-value of 0.000 and the diastolic blood pressure obtained a p-value of 0.001, this means that there is an influence on systolic and diastolic blood pressure before and after being given dry cupping therapy (Annisa et al. , 2021)

In Khomsah and Nuraini's research, they stated that the way to lower blood pressure is with wet cupping. Applying cupping to hypertensive patients makes it easier for patients to maintain their body health. (Khomsah & Nurani, 2024), the same opinion is also explained in the 2023 Sasmi Padli research revealing Cupping therapy is one of the alternatives that people choose to treat hypertension at a cheaper cost compared to medical treatment in hospitals. One of the factors that influences the choice of cupping is economic status (Padli et al., 2023). Currently, many people like complementary therapies among the public because they are relatively affordable, lack of chemicals and the healing effect is quite significant, and one of the complementary therapies that can treat hypertension is cupping therapy (Sucipto et al., 2023).

Table 3 Distribution of the Relationship between Wet Cupping Therapy and Blood Pressure

<u>Variabel</u>	<b>Z</b>	<b>P-Value (Asym p.Sig 2 tailed)</b>	<b>Batas Kritis</b>	<u>Keterangan</u>
<u>Pengaruh Terapi Bekam Basa</u>	3.606	0.000	<0,05	H <sub>1</sub> Di Terima

In table 3 using the test *wilcoxon* obtained a Z value of -3606 with a P-value (Asym p.Sig 2 tailed) of 0.000 which is less than the research critical limit of 0.05 so that H<sub>1</sub> accepted and H<sub>0</sub> rejected. Thus, it can be concluded that there is a relationship between wet cupping therapy and lowering blood pressure

Based on the results of statistical tests using the test *wilcoxon* before and after complementary wet cupping therapy *obtained* a Z value of -3606 with a P-value (Asym p.Sig 2 tailed) of 0.000 which is less than the research critical limit of 0.05 so that H<sub>1</sub> accepted and H<sub>0</sub> rejected. Thus, it can be concluded that there is a relationship between wet cupping therapy and blood pressure in people who have hypertension.

The results of the analysis show that there is a strong influence on the reduction in blood pressure. According to Lanna (2021), research results prove that if cupping is carried out at one point, the skin (cutis), subcutaneous tissue (subcutis), fascia and muscles will cause damage to mast cells or other things (Lanna, 2021)

The effects of wet cupping on hypertension include: Cupping plays a role in calming the sympathetic nervous system (*simpatico nervous system*). This upheaval in the sympathetic nervous system stimulates the secretion of enzymes that act as the angiotensin renin system. Once this system calms down and its activity decreases, blood pressure will fall. Wet Cupping plays a role in reducing the volume of blood that flows from the blood vessels, thereby reducing blood pressure (Zahara Syifa Annisa et al., 2021)

Cupping therapy is a non-pharmacological therapy that has a physiological effect on parts of the body or internal organs, namely the heart and the hydrostatic pressure of water on the body pumps blood flow from the feet into the chest cavity and the blood accumulates in the large blood vessels and heart. According to nursing planning in overcoming the dangers of Ineffective Peripheral Perfusion, the duration of the cupping process is that the

application of cupping therapy is carried out for 20-30 minutes once a week (Fildayanti, 2020)

Based on research according to (Al-Tabakha 2018), entitled “*Evaluation of Bloodletting Cupping Therapy in the Management of Hypertension*”. This research contained 60 samples, divided into 2 parts, namely the study part and the control part. Resulting in a low SPB value from the results of the research. The difference, namely 10 mmHg between the 2 parts, is declared sig in the research results. The sample was calculated based on the body's immune system, the study was 85% with an error percentage of  $\alpha=0.05$ , and the population Std deviation for hypertension was 13mmHg (Al-Tabakha et al., 2018).

#### 4. CONCLUSION

Based on the research that has been carried out, it can be concluded that the blood pressure of the respondents before the wet cupping procedure was carried out was still high. namely, prehypertension (3 people), hypertension stage 1 (14 people) and hypertension stage 2 (3 people). The blood pressure of the respondents after the wet cupping therapy was carried out decreased. Namely, Prehypertension 13, Hypertension Stage 1 (7 people) and hypertension Stage 0. There is a relationship in the application of cupping therapy in reducing blood pressure in hypertensive patients.

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