APPLICATION OF RESPIRATORY MEDITATION ON REDUCING BLOOD PRESSURE IN HYPERTENSION PATIENTS IN THE WORKING AREA OF SIMPANG IV SIPIN HEALTH CENTER, JAMBI CITY

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ABSTRACT

Hypertension is a non-communicable disease known as The Silent Killer because hypertension sufferers basically do not know that they are experiencing hypertension because there are no accompanying symptoms. The prevalence of hypertension in Indonesia based on 2018 Riskesdas data was 25.6% and increased to 34.1% with a total of 63,309,620 cases, while the death rate in Indonesia was 427,218. The aim of this research is to find out the effect of meditation on reducing blood pressure in hypertensive patients. This type of research uses quantitative research with a quasi-experimental design with a one group pre test and post test design method. Conducted on 18 hypertensive respondents 3 times a week for 4 weeks measured by counting systolic and diastolic blood pressure. Data analysis used the Wilcoxon test with a confidence level of $p < 0.05$. The results of the study showed that the average blood pressure in hypertension sufferers before being given meditation therapy was 155/98. The average blood pressure in hypertension sufferers after being given meditation therapy was 137/89 mmHg with a decrease of 18 mmHg (diastolic) with a percentage of 28% and 9 mmHg (systolic) with a percentage of 8.8%. The conclusion of this study is that there is a significant effect on reducing blood pressure before and after breathing meditation therapy in hypertension sufferers.

Keywords : Blood Pressure, Hypertension, Meditation

INTRODUCTION

Hypertension is a serious major problem and is often found in society, both in developed and developing countries, especially in Indonesian (Oktaviarini, 2019). Hypertension as one of the noncommunicable diseases is still known as The Silent Killer because hypertensive patients basically do not know that they are experiencing hypertension because there are no accompanying symptoms (Israfil, 2020). Hypertension is generally known when complications occur. WHO data in 2019 showed that around 1.13 billion people in the world experienced hypertension (WHO, 2019).

The prevalence of hypertension in Indonesia based on the latest Riskesdas data in 2018 was 25.6% and increased to 34.1% with an estimated number of cases of 63,309,620 people, while the death rate in Indonesia was 427,218 (Riskesdas, 2018). Based on Jambi Province Riskesdas data in 2018, the prevalence of hypertension in Jambi Province was previously 24.6% and increased 28.99% in 2018.

Based on data from the Jambi City Health Office in 2020, the number of hypertension incidents was 20,468 cases. Data from the Jambi City Health Office in 2020 shows that of the 20 health centers in Jambi City, the health center that has the highest cases of hypertension in 2020 is the Putri Ayu Health Center, which is 4136 cases, and the second is the Paal Lima Health Center, which is 2260 cases, then the third is the Simpang IV Sipin Health Center, which is 2253 cases (Dinkes, 2020).

One of the easy and practical complementary therapies of nursing is a necessary alternative in therapy to reduce complaints and lower blood pressure. One of the easy, practical physical exercises that can be done by patients with hypertension is by applying it through meditation (Fuad, 2012). Meditation therapy is the practice of concentrating on something to achieve higher consciousness so that one can feel more positive. When meditating, the frequency of brain wave vibrations decreases, breathing slows down and the oxygen used becomes concurrent (Effendi, 2012).

The advantages of meditation therapy over other therapies are that it must be applied by hypertensive patients because this therapy is very easy to do such as calming yourself while sitting still and practicing breathing, then meditation therapy can be done at any time and in addition to being able to lower blood pressure, meditation therapy also has many benefits (Apsari, 2019).

Meditation also provides comfort for the body because when it is calm, the body is in a state of complete rest, then the body experiences control of ventilation per minute, respiratory frequency and a decrease in lactic acid in the blood which aims to reduce blood pressure (Ponte et al, 2019). The focus of meditation actions that can be done is to put the body in a calm state, so that the body will experience a state of balance, then meditation that can be done.

Focusing on breathing will increase the flow of oxygen to the muscles, then the muscles will relax and blood pressure will decrease US$ 11. Meditation has many benefits for health, including, it can lower blood pressure, cause relaxation or make rest conditions better, reduce stress, reduce pain and maintain mental health US$ 12. This is line with research conducted by Marthin and Mardian (2016), stating that the meditation action applied is very good for reducing blood pressure, where the action in the study is carried out with deep breathing exercises. The results of the study were obtained before the meditation action, the average systole blood pressure was 148.25 mmHg and the average diastolic blood pressure was 92.25 mmHg. After the meditation action was carried out, there was a decrease in blood pressure to an average of 140.75 mmHg and an average diastole blood pressure of 86.75 mmHg, this was evidenced by a decrease in blood pressure in the sistole of 7.5 mmHg and diastole of 5.5 mmHg (Sukmono, 2011).

Based on interviews with staff The Simpang IV Sipin Health Center and several people with hypertension who visited found that at the Simpang IV Sipin Health Center Meditation Therapy had never been carried out as an effort or basis for developing standards to lower blood pressure in hypertensive patients, so the researcher was interested in conducting research on the application of respiratory meditation to reduce blood pressure in hypertensive patients in the working area of the Simpang IV Sipin Health Center, Jambi City in 2022. The general purpose of this study is to find out how the application of meditation affects the reduction of blood pressure in hypertensive patients.

METHODS

The research used in this research is quantitative research with a Quasi Experimental research design using One Group Pre Test and Post Test design with meditation therapy intervention. Characteristic from this research is revealing cause and effect relationship by involving one group of subjects. The subject group was observed before it was carried out intervention. Then observed again after the intervention. In this study, hypertensive sufferers were selected, starting with blood pressure observation (pretest), then given meditation therapy treatment 3 times a week for 4 weeks. After being given treatment, another observation of blood pressure is carried out (post test). The instruments used in this research were a stethoscope, sphymomanometer, observation sheet and meditation procedure. To find out whether there are differences between the pre-test and post-test, a data normality test was carried out first using Shapiro-Wilk. If the data is not normally distributed then use a non-parametric test, namely the Wilcoxon test with a confidence level of 95% (α=0.05) if $p \leq 0.05$ means there is an effect of giving meditation therapy on reducing blood pressure in people with hypertension and conversely, if the p value ≥ 0.05 is significant.

RESULTS

Univariate Analysis

Table 1.Frequency Distribution of Respondents Suffering from Hypertension (n=18)

No.	Characteristics	F	%	N
1	Gender Male			
	female	5	28	18
		13	72	

2	Age			
	26-35 Years	0	0	18
	36-45 Years	1	6	
	46-55 Years	2	11	
	56-65 Years	6	33	
	>65 Years	9	50	
3	Last education was			
	Elementary school	5	28	18
	Junior High School	3	17	
	S1	7	39	
		3	17	
4	Housewife jobs	4	22	18
	Self-employed	2	11	
	Doesn't work	12	67	

Based on the table above, it shows that the majority of respondents in the Simpang IV Sipin Health Center working area in the gender group are female with a percentage of 13 respondents (72%). Based on age group, most of the respondents wer had the highest age, namely >65 years old with a percentage of 9 respondents (50%). Based on educational group, the majority of respondents had a high school education with a percentage of 7 respondents (39%). Based on occupational group, the majority of respondents were not working with a percentage of 12 respondents (67%).

Table 2. Initial Blood Pressure Before Giving Meditation Therapy to Hypertension Sufferers

Respondent	Variable	Pressure Blood	N
1	Systolic	150	18
	Diastolic	100	
2	Systolic	145	
	Diastolic	95	
3	Systolic	150	
	Diastolic	95	
4	Systolic	160	
	Diastolic	100	
5	Systolic	145	
	Diastolic	95	
6	Systolic	170	
	Diastolic	110	
7	Systolic	150	
	Diastolic	100	
8	Systolic	155	
	Diastolic	95	
9	Systolic	155	
	Diastolic	100	
10	Systolic	160	
	Diastolic	95	
11	Systolic	150	
	Diastolic	95	
12	Systolic	150	
	Diastolic	95	

13	Systolic Diastolic	160 100
14	Systolic Diastolic	150 100
15	Systolic Diastolic	145 100
16	Systolic Diastolic	170 100
17	Systolic Diastolic	160 95
18	Systolic Diastolic	150 95
Mean	Systolic Diastolic	155 98
Minimum	Systolic Diastolic	145 95
Maximum	Systolic Diastolic	170 110

Based on the table above, it is found that the average blood pressure in hypertension sufferers before being given meditation therapy was 155/98 mmHg with a standard deviation of 8.042. The lowest blood pressure is 145/95 mmHg and the highest is 170/110 mmHg in the working area of Simpang IV Sipin Community Health Center, Jambi City in 2022.

Table 3. Initial Blood Pressure After Giving Meditation Therapy to Hypertension Sufferers

Respondent	Variable	Pressure Blood	N
1	Systolic Diastolic	130 90	
2	Systolic Diastolic	140 90	
3	Systolic Diastolic	140 90	
4	Systolic Diastolic	150 90	
5	Systolic Diastolic	140 80	
6	Systolic Diastolic	150 100	
7	Systolic Diastolic	140 95	
8	Systolic Diastolic	150 90	
9	Systolic Diastolic	150 90	
10	Systolic Diastolic	130 85	18
11	Systolic Diastolic	120 80	
12	Systolic Diastolic	130 90	
13	Systolic Diastolic	140 90	
14	Systolic Diastolic	140 95	
15	Systolic Diastolic	130 80	

16	Systolic Diastolic	140 90
17	Systolic Diastolic	140 90
18	Systolic Diastolic	120 90
Mean	Systolic Diastolic	137 89
Minimum	Systolic Diastolic	120 80
Maximum	Systolic Diastolic	150 100

Based on the table above, it was found that the average blood pressure in hypertension sufferers before being given meditation therapy was 137.78/89 mmHg with a standard deviation of 9.428. Blood pressure. The lowest is 120/80 mmHg and the highest is 150/100 mmHg in the working area of Simpang IV Sipin Community Health Center, Jambi City in 2022.

Bivariate Analysis

Table 1.Differences Before and After Giving Meditation Therapy to Reduce Blood Pressure in Hypertension Sufferers

Variable		Mean	Std. Deviation	Standard Error	P Value
Pressure Systolic Blood	Before	155.00	8,042	1,980	0.001
	After	137.78	9,428	2,222	0.001
Blood pressure Diastolic	Before	98.06	3,888	0.916	0.001
	After	89.17	5,216	1,229	0.001

Based on table 4.4, it shows that after carrying out the Wilcoxon test, the average systolic blood pressure in respondents before administering meditation therapy was 155.00 mmHg with a standard deviation of 8.042. Meanwhile, the average systolic blood pressure in respondents after giving meditation therapy was 137.78 mmHg with a standard deviation of 9.428, a decrease of 18 mmHg with a percentage of 28%. The statistical test results showed that the p value was 0.001, meaning there was an influence between systolic blood pressure on respondents before and after being given meditation therapy. Meanwhile, the average diastolic blood pressure in respondents before administering meditation therapy was 98.00 mmHg with a standard deviation of 3.888.

DISCUSSION

Based on the results of the Wilcoxon signed test on systolic blood pressure, p value = 0.001 ($p<0.05$) and on diastolic blood pressure, p value = 0.001, which means there is a significant effect on reducing blood pressure before and after being given breathing meditation therapy to hypertension sufferers in the working area of Simpang IV Sipin Health Center, Jambi City in 2022.

Based on the results of the analysis above, the difference between before and after breathing meditation therapy for 4 weeks showed a decrease in blood pressure starting from the stage 1 hypertension category down to the pre-hypertension category. This is in line with the results of research by Lende (2019), stating that the results obtained were p value = 0.000 ($p<0.05$) meaning that there was a difference before and after being given breathing meditation relaxation therapy to elderly people with

stage 1 hypertension in Wee Kokora Village, Wewewa District. Central District of Southwest Sumba-NTT (Lende, 2017). This is supported by research by Hermanto (2014), stating that the results obtained were p value = 0.000 (p<0.05) which means that there is an effect of meditation therapy on reducing blood pressure in hypertension sufferers before and after being given meditation therapy (Hermanto, 2014).

According to Susilo and Wulandari (2011), one of the non-pharmacological therapies can be used to reduce pressure blood is a meditation therapy. Meditation is one of the principles that is carried out into the subconscious, not only calming the mind, meditation is also beneficial for the health of the body (Susilo, 2011). The advantage of meditation therapy over other therapies is that it must be applied by hypertension sufferers because this therapy is very easy to do, such as calming yourself while sitting still and practicing breathing, then meditation therapy can be done at any time and apart from lowering blood pressure, meditation therapy also has many benefits. Quoted from the Environment & Development journal article, Wicaksana meditation has many benefits, such as increasing physical calm and relaxation, improving psychological balance, overcoming disease, improving the ability to think, feel and desire in a positive, intelligent and creative direction which will naturally be able to overcome every problem well, according to natural law and always peaceful (Apsari, 2019).

The act of breathing meditation has good benefits for the body especially to lower blood pressure so this action is highly recommended for hypertension sufferers. This action will help reduce blood pressure in hypertension sufferers by inhibiting the work of the sympathetic nervous system from releasing the hormones epinephrine and norepinephrine as factors that trigger stress and tension which stimulate an increase in blood pressure. In this way, you can achieve a relaxed condition, the effect of which is a decrease in blood pressure (Gathright et al, 2019).

This is supported by the theory of Rudianto (2013) which states that doing breathing meditation is able to focus concentration on regular, dynamic and harmonious breathing rhythms, by doing breathing exercises with focused thoughts can make blood vessels more elastic, circulation and blood flow smoother which results in the body becomes warm, the heart's work becomes lighter, the body's muscles rest, the need for oxygen to the tissues becomes better, thus the need for oxygen use in the blood is more adequate then with lots of oxygen it will improves circulation throughout the body and helps the heart pump more regularly so that blood pressure decreases.

Based on the description above, researchers are of the opinion that breathing meditation therapy can reduce blood pressure in hypertension sufferers, which is because meditation is an action that calms and focuses a person's mind, where the body relaxes and the heart's work becomes lighter, which can reduce blood pressure. Breathing meditation therapy was chosen as an alternative because this therapy can be done independently, the movements are simple and easy to learn, does not require costs, saves time and is safer when applied at home. This reduction in blood pressure was also supported by respondents' compliance in carrying out regular therapy as well as reducing high salt consumption, physical activity and controlling stress. According to researchers, the weaknesses of this meditation therapy are basically meditation is not meant for health physical but to increase self-awareness.

CONCLUSIONS

The average blood pressure in hypertension sufferers before being given meditation therapy is 155/98 mmHg in the Simpang IV Sipin Community Health Center Working Area, Jambi City in 2022 and the average blood pressure in hypertension sufferers after being given meditation therapy is 137/89 mmHg in the Working Area of the Community Health Center Simpang IV Sipin, Jambi City in 2022. There is a significant effect between reducing the blood pressure of hypertension sufferers before and after being given meditation therapy in the Simpang IV Sipin Health Center Working Area, Jambi City in 2022, where systolic blood pressure was obtained p value = 0.001 and diastolic blood pressure with p value = 0.001.

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