

Effect of Meditation Therapy to Reduce Blood Pressure in Elderly of Hypertension Patients

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ABSTRACT

Background: The aim of the study was determine effect of meditation therapy to reduce blood pressure in elderly of hypertension patients.

Methods: The study was conducted using a quasi experiment with one group pretest-posttest design. Data were collected in Tresna Werdha Social Institution Batusangkar West Sumatera Province Indonesia. The populations in this study were all elderly with sample size 15 respondents. Sampling technique with total sampling. Data analysis used paired sample T test. A two-tailed *P*-value of <0.05 was considered statistically significant. All data were analysed using SPSS 21.0 program.

Results: The results of the analysis showed that before the intervention most of the elderly had moderate hypertension (54.0%), the results after the intervention less than half of the elderly had mild hypertension (47.0%). There was an effect of meditation to reduce blood pressure in elderly of hypertension patients ($p < 0.05$).

Conclusion: This analysis confirmed effect of meditation to reduce blood pressure in elderly of hypertension patients. Based on the results of this study it is recommended to provide health education to the elderly about non-pharmacological therapies that are easily carried out by the elderly in order to find out prevention and reduce the disease they suffer as well as check the disease from the nearest health service.

Keywords: Blood Pressure, Hypertension, Meditation

INTRODUCTION

According to worldwide estimates, hypertension affects approximately 1 billion people, resulting in 7.1 million attributed deaths per year. ^[1] World Health Organization (WHO) data explains that the incidence of hypertension in 2016 around the world, around 972 million (26.4%), 333 million were in developed countries and 639 million were in developing countries. Estimated to increase to 1.15 billion cases in 2025 or around 29% of the total world population. ^[2] The prevalence of hypertension in Indonesia reaches 25.8% with a prevalence rate for Sumatra 20.8%,

Java- Bali 24.3%, and Eastern Indonesia 25.2%. ^[3]

Various treatments can be applied to these hypertensive patients. Starting from pharmacological therapy using drugs - non pharmacological therapies such as herbal therapy, music therapy, yoga, acupuncture and meditation. Among these therapies, meditation is a non-pharmacological therapy that is best used for hypertension. Meditation is an exercise in the soul that can balance the physical, emotional, mental and spiritual that requires calm and deep appreciation. This meditation can give a relaxed and refreshing sensation both mentally and physically, able to control

emotions, relieve stress, and control blood pressure (BP). This meditation can affect the central nervous system by relaxing blood vessels, making it easier for blood to flow and lowering blood pressure. Meditation is also able to balance the autonomic nerves which are responsible for helping the body maintain normal blood pressure. [3,4]

Previous study found that BP decreased with the use of meditation, and this effect varied in different age groups, scientifically measured outcomes indicate that these practices are safe alternatives in some case. [5] Another study known the effectiveness of stress management for hypertensive patients has not been thoroughly examined, public interest in meditation programs is increasing, and they are increasingly being used as methods of stress management. [6]

The aim of the study was determine effect of meditation therapy to reduce blood pressure in elderly of hypertension patients.

MATERIALS & METHODS

Study Design and Research Sample

The study was conducted using a quasi experiment with one group pretest-posttest design. Data were collected in Tresna Werdha Social Institution Batusangkar West Sumatera Province Indonesia. The populations in this study were all elderly with sample size 15 respondent. Sampling technique with total sampling.

Operational Definitions

The variables of this study included independent variable were meditation therapy. Dependent variable was blood pressure.

Data Collection Technique

Meditation in this study indicates transcendental meditation and mindfulness techniques. Immediately following baseline assessment, participants received 30–45 minutes of in-person meditation training. This study was approved by the Ethical Committee of Universitas Negeri Padang, West Sumatera Indonesia.

Data Analysis

The quantitative variables were recorded as frequency and percentage. Data analysis used paired sample T test. A two-tailed *P*-value of <0.05 was considered statistically significant. All data were analysed using SPSS 21.0 program.

RESULT

Characteristic of respondents based on sex (Figure 1).

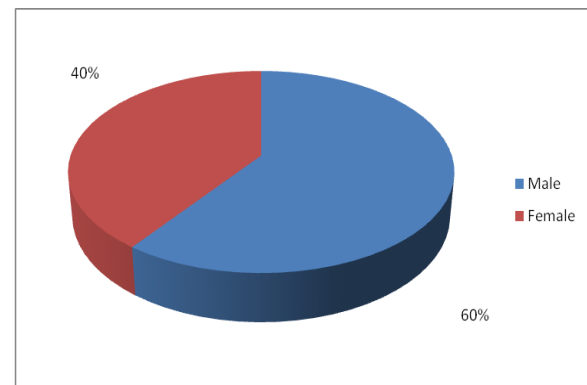


Figure 1: Characteristic of respondents based on sex

Figure 1 known more than half of respondents were male (60%) and less than half of respondents were female (40%).

Frequency distribution of elderly diastolic and systolic blood pressure before and after meditation (Table 1).

Table 1: Frequency distribution of elderly diastolic and systolic blood pressure before and after meditation

Categories	Sistolic Blood Pressure (n=15)		Diastolic Blood Pressure (n=15)	
	Pretest (f/%)	Posttest (f/%)	Pretest (f/%)	Posttest (f/%)
Normal	0	2 (13.0)	0	6 (40.0)
Mild	5 (33.0)	9 (60.0)	11 (73.3)	7 (47.0)
Moderate	8 (54.0)	3 (20.0)	3 (20.0)	2 (13.0)
Heavy	2 (13.0)	1 (7.0)	1 (6.7)	0

Table 1 known before the intervention most of the elderly had moderate hypertension (54.0%), the results after the intervention less than half of the elderly had mild hypertension (47.0%).

Table 2: Effect of meditation therapy to reduce blood pressure in elderly of hypertension patients

Variables	ΔMean±SD	SE	p-value
Pretest-posttest systolic blood pressure	12.00±6.76	1.75	<0.001
Pretest-posttest diastolic blood pressure	1.33±3.52	0.91	0.046

Table 2 known there were an effect of meditation to reduce blood pressure between systolic blood pressure and diastolic blood pressure in elderly of hypertension patients (p<0.05).

DISCUSSION

The results of the analysis showed that before the intervention most of the elderly had moderate hypertension, the results after the intervention less than half of the elderly had mild hypertension. There was an effect of meditation to reduce blood pressure in elderly of hypertension patients.

Current popular types of stress management include meditation, breathing exercises, biofeedback, and progressive muscle relaxation. Research has reported that the use of the relaxation response for stress management has increased on the assumption that it can decrease BP by inhibiting the sympathetic nervous system's stress response. Variable factors such as age, BP, and lifestyle habits account for inconsistent results. [7-10]

Cochrane conducted 25 research studies in attempts to verify the effects of relaxation therapy as applied in hypertensive patients; in addition to progressive relaxation therapy, the studies included biofeedback, cognitive behavioral therapy, and yoga for stress management. [10] The Agency for Healthcare Research and Quality (AHRQ) also tested the effects of relaxation therapy twice, in 2007 and 2014. In a 2007 review, a meta-analysis of patients with hypertension showed a significant reduction in BP. [11]

Previous study found given that BP decreased with the use of meditation, and this effect varied in different age groups, scientifically measured outcomes indicate that these practices are safe alternatives in some case. [5] Another study known the effectiveness of stress management for

hypertensive patients has not been thoroughly examined, public interest in meditation programs is increasing, and they are increasingly being used as methods of stress management. [6]

Currently, hypertension treatment based on compliance and medication has reached its realistic limits, especially compared with diabetes or kidney disease. For hypertension treatment not be restricted to medication alone, it is recommended that patients integrate various daily adjuvant therapies such as diet, exercise, meditation, and yoga into their healthcare regimens. [12,13]

Meditation has been proven to help reduce high blood pressure, if this meditation is carried out routinely and carried out in accordance with the procedure, it is very beneficial for health, especially for hypertension. This therapy is very good for the elderly because this treatment is done without a large expense and can be done at home. Meditation therapy is supposed to be done by the elderly, especially the elderly who suffer from hypertension, because based on the results of research conducted by researchers for seven days it turns out that this method can reduce blood pressure experienced by the elderly. In addition to reducing headaches, meditation is also beneficial for the body, the body becomes more relaxed, getting rid of aches and the mind becomes calmer.

CONCLUSION

The conclusion of this study confirmed an effect of meditation to reduce

blood pressure in elderly of hypertension patients. Based on the results of this study it is recommended to provide health education to the elderly about non-pharmacological therapies that are easily carried out by the elderly in order to find out prevention and reduce the disease they suffer as well as check the disease from the nearest health service.

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