

COMBINED RELAXATION AND MUSIC THERAPY (AUTORESIC) LOWERED BLOOD PRESSURE AMONG HYPERTENSION ELDERLIES

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ABSTRACT

Background: Elderly is someone who has reached the age of over 60 years and has experienced changes, both natural changes or changes resulting from disease processes. The elderly are more at risk or more likely to experience various diseases, especially degenerative diseases. One of the degenerative diseases that is often experienced by the elderly is hypertension. Non-pharmacological management with complementary therapies that can be used to treat high blood pressure is autogenic relaxation therapy, progressive muscle relaxation and music therapy. This study aims to determine the effect of a combination of autogenic relaxation therapy, progressive muscle relaxation and music therapy (Autoresis) to reduce blood pressure in the elderly.

Objective: To determine the effect of providing a combination of autogenic therapy, progressive muscle relaxation and music therapy (Autoresik) on clients with uncontrolled hypertension.

Method: The research method used was a case study method and used a quantitative approach with a quasi-experimental pretest-posttest design. This intervention was given for 6 days with a duration of $\pm 20 - 30$ minutes per day. This intervention is given for 6 days with a duration of $\pm 20 - 30$ minutes per day. The data analysis used in this research is the Wilcoxon test.

Results: The client's blood pressure after being given the intervention decreased with an average blood pressure of 167 mmHg (systolic) and 93 mmHg (diastolic). The results of the Wilcoxon test showed that the Sig (2-tailed) value for systolic and diastolic was 0.001, where this value was <0.05 .

Conclusion: There is a significant effect of giving a combination of autogenic relaxation therapy, progressive muscle relaxation and music therapy (Autoresik) on blood pressure in the elderly who experience hypertension

KEYWORDS

Hypertension, elderly, autogenic therapy, progressive muscle relaxation, music therapy

INTRODUCTION

Elderly is someone who has reached the age of over 60 years and has experienced changes, both natural changes and changes due to the disease process (Alfiani and Fijianto, 2022). The elderly are more at risk of possibly experiencing various diseases, especially degenerative diseases. One of the degenerative diseases that is often experienced by the elderly is hypertension (Akbar et al., 2020).

Hypertension or high blood pressure is a condition that causes high blood pressure where the systolic and diastolic pressures are >140 mmHg and >90 mmHg, respectively (Anggraini, Sitorus and Damanik, 2022). Hypertension can cause a person

to have a higher risk of other more severe health conditions such as cardiovascular disease including coronary heart disease, kidney failure, and can even cause death (Imelda, Sjaaf and Puspita, 2020).

Prevalence of hypertension in Indonesia according to the results of Riskesdas 2018, which is 34.11% of hypertensive patients while in Central Java Province it is 37.57% in hypertensive patients. In Banyumas Regency in 2020, there were 396,658 cases of hypertension or 26.0%. While hypertension patients at Sumbang 1 Health Center had the highest number of 3,942 hypertension patients consisting of 1,105 men and 2,837 women (Dinkes Banyumas, 2020).

Management that can be done in patients with hypertension can be given by pharmacology and non-pharmacology (Machus et al., 2020). Pharmacological management is by administering antihypertensive drugs. While nonpharmacological, namely by carrying out a healthy lifestyle such as diligent exercise, reducing salt consumption, low-fat diet, and cholesterol diet. In addition, non-pharmacological therapy can also be done by using complementary therapies (Aulia, Inayati and Immawati, 2023). Complementary therapies that can be used are autogenic relaxation therapy, progressive muscle relaxation and music therapy (Gultom and Batubara, 2023).

Autogenic relaxation therapy is an example of a relaxation technique based on the use of body perception (e.g., hands feel warm and heavy) facilitated by self-suggestion (Setiawan, 2021). Several studies have shown that practicing autogenic relaxation techniques regularly for 15 minutes in 6 days can reduce blood pressure (Retnowati, Andrean and Hidayah, 2021).

Progressive muscle relaxation therapy is one of relaxation technique that combines deep breathing exercises and a series of specific muscle contractions and relaxations (Rahayu, Hayati and Asih, 2020). Based on the results of research conducted by Margiyati and Setiawan (2023), it shows that there are differences in blood pressure values in pre and post-administration of progressive muscle relaxation therapy after being given autogenic relaxation therapy for 6 days on blood pressure in the elderly.

RESEARCH METHODS

The research method used in this scientific paper is a case study in the form of the application of Evidence Based Practice (EBP) using a quantitative approach with a pre-experimental pretest-posttest design. Respondents were given therapy for 6 days with a duration of $\pm 20 - 30$ minutes per day. Data collection was carried out every day during the intervention period (6 days) by conducting pretest and posttest blood pressure checks before and after therapy. The data analysis that will be used is the Wilcoxon test using computer software.

RESULT AND DISCUSSION

Blood Pressure Overview

The following are the statistical results of changes in the client's blood pressure before and after therapy Autoresic for 6 days of intervention. Table 1 shows the average decrease in client blood pressure on pre and post-administration of a combination of Autoresic therapy for six days, namely, an average decrease in systolic blood pressure by 9.5 mmHg and diastolic blood pressure by 3 mmHg. The average blood pressure of the three clients before the intervention was 176.5 mmHg (systolic) and 96 mmHg (diastolic). After being given the Autoresic therapy intervention for 6 days, the average blood pressure of the three clients decreased to 167 mmHg (systolic) and 93 mmHg (diastolic).

Based on the blood pressure monitoring table, after giving therapy on the third day, Mrs. N's blood pressure was 189/104 mmHg. However, on day 4 there was an increase in blood pressure of

209/103 mmHg. After being assessed Mrs. N said there was something that disturbed her mind. But after being given Autorexic therapy intervention to Mrs. N, Mrs. N's blood pressure decreased again, which was 190/100 mmHg. According to Tyas and Zulfikar (2021) who state that the level of stress experienced by a person will affect their psychological condition and stress can trigger hormones in the body that control a person's mind so that it can increase blood pressure.

Based on the results of the assessment there is one elderly person who has less physical activity. Physical activity is one of the causes of high blood pressure due to changes in the structure of blood vessels such as narrowing the lumen, and the walls of blood vessels become stiff and their elasticity decreases, thereby increasing blood pressure (Pratama, Fathnin and Budiono, 2020). This is in line with research conducted by Jasmin, Avianty and Prastia (2023) which shows that there is a relationship between physical activity and the incidence of hypertension in the elderly.

In addition to the symptoms that arise in the three clients such as pain or stiffness in the nape of the head (back of the neck) and headaches. At the time before the intervention the client looks less relaxed and comfortable and looks to hold the pain felt. Therefore, efforts will be made by the author to overcome these problems, one of which is by providing a combination of autogenic relaxation therapy, progressive muscle relaxation techniques and music therapy (Autoresik). The purpose of giving Autorexic therapy is to reduce blood pressure in elderly people with hypertension. Implementation of Autorexic therapy is given for 6 days with a duration

Table .1 Client's blood pressure monitoring (n=3)

Day	Name	BP		BP		Decrease	
		Systolic		Diastolic		Systolic	Diastolic
		Pre	Post	Pre	Post		
1	Mrs.N	224	209	113	111	15	2
	Mrs.S	199	184	101	99	15	2
	Mrs.D	189	183	105	102	6	3
2	Mrs.N	206	199	110	108	7	2
	Mrs.S	183	173	98	95	10	3
	Mrs.D	182	171	100	97	11	3
3	Mrs.N	197	189	105	104	8	1
	Mrs.S	171	169	94	90	2	4
	Mrs.D	170	165	95	93	5	2
4	Mrs.N	209	190	103	100	20	3
	Mrs.S	165	155	89	86	10	3
	Mrs.D	160	149	90	89	11	1
5	Mrs.N	189	166	99	95	23	4
	Mrs.S	150	144	85	83	6	2
	Mrs.D	143	135	87	81	8	6
6	Mrs.N	165	160	94	88	5	6
	Mrs.S	143	135	82	78	8	4
	Mrs.D	132	130	80	76	2	4
Average reduction in blood pressure						9.5	3

Table 2 Effect of Autogenic Therapy on Blood Pressure

BP	Variable	Median	Min-Max	N	Z	Sig.(2-Tailed)
Systolic	Pre-test	176	132-224	3	-3.728	0,001
	Post-test	167	130-209	3		
Diastolic	Pre-test	96	80-113	3	-3.747	0,001
	Post-test	93	76-111	3		

of \pm 20-30 minutes per day. After being given a combination of autogenic relaxation therapy, progressive muscle relaxation techniques and music therapy, clients say they feel more comfortable and relaxed.

Effect of Autorexic Therapy on Blood Pressure

The following are the results of the effect of Autorexic therapy to reduce blood pressure. Table 2 shows the results of the analysis using the Wilcoxon test, the Sig. (2-tailed) value for systolic and diastolic is 0.001 where this value is <0.05 , which means that

there is a difference in the client's blood pressure value between the results of pre and post therapy so that it can be concluded that there is an effect of giving a combination of autogenic relaxation therapy, progressive muscle relaxation and music therapy (Autoresik) on blood pressure in the elderly. This is in line with research conducted by Margiyati and Setiawan (2023) that the application of progressive muscle relaxation therapy for 6 days with a duration of \pm 20-30 minutes per day was able to reduce blood pressure as evidenced by the decrease in systolic and diastolic in both respondents. The results of another study conducted by Retnowati, Andean and Hidayah (2021) who provided autogenic relaxation therapy for 6 days with a duration of 15 minutes per day were able to reduce blood pressure in the elderly.

Autogenic relaxation therapy, progressive muscle relaxation and music therapy (Autoresik) are complementary therapies that are included in the mind-body therapy classification (Rizky, Insani and Widiastuti, 2020; Dewi Ngaisyah et al., 2022; Ferry and Wijonarko, 2023). The reason researchers combine the three different therapies, namely autogenic relaxation therapy and progressive muscle relaxation is able to help reduce stress levels and physical tension (Langelo, 2022). Based on the effects of relaxation on the cardiovascular system, autogenic therapy and progressive muscle relaxation can stimulate a relaxation response in the autonomic nervous system, which can help lower blood pressure. In the elderly, stress management is very important because stress can contribute to increased blood pressure (Riskia, 2021).

Based on the results of data analysis, it was

found that the elderly blood pressure had an average of 176.5 mmHg (systolic) and 96 mmHg (diastolic). The results of blood pressure measurements before therapy indicated that these three elderly people had hypertension. According to Anggraini, Sitorus and Damanik (2022) a person is indicated to have hypertension when the systolic and diastolic pressures are more than 140 mmHg and 90 mmHg respectively. After being given a combination intervention of autogenic relaxation therapy, progressive muscle relaxation and music therapy for 6 days with a duration of \pm 20 - 30 minutes. Blood pressure measurements were taken again after the intervention, it was found that the average blood pressure of the three elderly people decreased to 167 mmHg (systolic) and 93 mmHg (diastolic). The average decrease in systolic blood pressure was 9.5 mmHg diastolic blood pressure decreased by 3 mmHg.

Autogenic relaxation therapy is a relaxation technique that uses body perception (e.g., hands feel warm and heavy) facilitated by self-suggestion. Autogenic relaxation techniques have the benefit of increasing concentration, being able to provide a sense of comfort and not causing any side effects. In addition, autogenic relaxation can reduce heart rate, blood pressure, and breathing rate as well as reduce muscle tension and metabolic rate (Setiawan, 2021). This is in line with research conducted by Ashari, Kurniyanti and Patemah (2023) which shows there are differences in systolic and diastolic blood pressure values after being given an autogenic relaxation therapy intervention.

Progressive muscle relaxation therapy is a method used to achieve a state of relaxation where

the method is determined through a series of movements with a series of contractions and relaxations of certain muscles (Ekarini, Heryati and Maryam, 2019). The purpose of progressive muscle relaxation therapy is to get a sense of comfort so that it can stimulate the hypothalamus in the pituitary release that can calm the mind, resulting in a decrease in epinephrine and norepinephrine levels in the blood which will cause the pulse frequency to decrease, the frequency of breathing decreases, muscle stiffness decreases, vasodilation and increased temperature in the extremities so that the muscles become more relaxed and reduce stress levels and treatment to lower blood pressure in patients with hypertension (Rimadia et al., 2023). This is in line with research conducted by Gultom and Batubara (2023) showing that there is an effect of giving progressive muscle relaxation therapy accompanied by music on lowering blood pressure.

Music therapy is the use of music as a therapeutic tool to repair, maintain, improve mental, physical and emotional states through auditory stimuli consisting of melody, rhythm, harmony, timbre, form and style (Dewi and Kunci, 2023). Classical music will produce supersonic waves in the form of rhythmic stimuli that will be received by the sense of hearing through the auditory nerve to the brain. The brain will stimulate the hypothalamus to activate the autonomic nerves, which will activate the parasympathetic nerves and inhibit the sympathetic nerves, besides that the stimuli produced by classical music respond to the release of endorphin, serotonin, and stress-released hormones. These stimuli will reduce sympathetic nerve activity which causes systemic vasodilation and a decrease in

heart muscle contractility, so that heart rate, cardiac output, and stroke volume decrease so that it will cause a decrease in blood pressure (Larasati, Sutajaya and Dewi, 2019). This is in line with research conducted by (Sidik, 2021) showing that there is an effect of providing music therapy on lowering blood pressure.

Three clients said that after Autogenic therapy the client felt more comfortable and relaxed. The three clients said that this therapy was easy to practice again independently, the client said that if the client forgot the sequence of movements to perform progressive muscle relaxation then the client would see the poster that had been given by the author. The results of observations during this Autogenic therapy are that clients look calmer and more relaxed. After being given therapy, the three clients experienced a decrease in blood pressure. The three clients felt grateful because they could find alternative ways to overcome their high blood pressure.

LIMITATIONS

The limitations of this study there is one elderly who does not have a cellphone, radio and television so that clients cannot apply a combination of autogenic relaxation therapy, progressive muscle relaxation and music therapy independently because there is no media to play classical music after the intervention period is complete. In addition, the lack of family involvement during the provision of therapy was due to the family having their own personal affairs. Family involvement can provide emotional support to the elderly.

CONCLUSION AND SUGGESTION

Conclusion

Based on the results of the case study on the Effect of the Combination of Autogenic Relaxation Therapy, Progressive Muscle Relaxation and Music Therapy (Autoresic) on Blood Pressure in the Elderly, it can be concluded:

The description of elderly blood pressure after being given a combination of autogenic relaxation therapy, progressive muscle relaxation and music therapy for 6 days is a decrease in average pre and post blood pressure by 9.3 mmHg in systolic blood pressure and by 3 mmHg in diastolic blood pressure.

The results of the analysis using the Wilcoxon test obtained the Sig. (2-tailed) value for systolic and diastolic is 0.001 where this value is <0.05 which means that there is a difference in the client's blood pressure value between the results of pre and post therapy so that it can be concluded that there is an effect of giving a combination of autogenic relaxation therapy, progressive muscle relaxation and music therapy (Autoresik) on blood pressure in the elderly.

Suggestion

Educational institutions are expected to utilize the research results as teaching materials for complementary nursing and gerontic nursing courses.

For clients, it is hoped that they can independently practice a combination of autogenic relaxation therapy, progressive muscle relaxation and music therapy (Autoresik) as an effort to overcome high blood pressure.

For families of patients with hypertension, especially elderly patients, it is hoped that they can

provide family support in the implementation of therapy in the form of providing motivation, helping guide therapy, and providing the necessary infrastructure such as cellphones or other media to play music therapy.

For nurses, It is hoped that Autoresic therapy can be used as a complementary therapy or alternative intervention for hypertensive patients. In addition, nurses are expected to educate patients regarding antihypertensive treatment routinely at the nearest health facility.

For future researchers, it is hoped that the application of music therapy can use a headset or similar tool for clients, so that clients can focus more when doing Autoresic therapy.

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