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Lowering Blood Pressure After Following Slow Deep Breathing Therapy In Elderly Group

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ABSTRACT

Hypertension in the elderly is a non-communicable disease which is one of the main causes of premature death in the world which results in complications in the elderly due to physical changes. This study aims to identify lowering blood pressure in the elderly with hypertension. This research method uses case study design and consists of four respondents. Data collection was carried out in the Duri Kepa Community Health Center Village, Kebon Jeruk District, West Jakarta on 26-29 May 2021. The results of the research carried out were a significant decrease on the 3rd and 4th days from Stage II (moderate) to Stage I (mild).) and from Stage III (severe) to Stage II (moderate). Conclusions from this research ApplicationSlow Deep Breathing therapy reduces blood pressure significantly, as evidenced by data on the characteristics of elderly people with hypertension.

Keywords : Hypertension, Slow Deep Breathing Therapy, Elderly.

INTRODUCTION

Hypertension in the elderly is a non-communicable disease that is one of the main causes of premature death in the world, hypertension is a health threat because of its potential to cause complications in the elderly, which is quite high with increasing age, including groups who experience hypertension problems due to physical changes and environmental social conditions. have an impact on health problems in general, the physical condition of a person who has entered old age will be susceptible to various diseases due to increasing age (World Health Organization, 2017). *World health organization* (2019) Stated that the number of people with hypertension is increasing every year, it is estimated that by 2025 there will be 1.5 billion people affected by hypertension, and it is estimated that 10.44 million people die from hypertension and its complications every year. The African region has the highest prevalence of hypertension at 27%, the second position is the Eastern Mediterranean at 26%, while Southeast Asia is in the third position at 25%, and the final position is the Americas at 18%.

The results of the Indonesian Ministry of Health (2018) in Indonesia, the hypertension rate occupies that a national percentage of 25.8% of the Indonesian population suffers from hypertension and currently the Indonesian population is 252,124,458 people, so there are 65,048,110 people who suffer from hypertension. The prevalence of hypertension in Indonesia at the age of >18 years reaches 13.2%, at the age of 25-34 years 20.1%, at the age of 35-44 years 31.6%, at the age of 45-54 45.3%, at the age of 55 -64 years 55.2%, at the age of 65-74 years 63.2% and at the age of 75 years reaching 69.5%. The DKI Jakarta Health Office (2013) estimates that the elderly aged 60-74 years reach 11.9% of the elderly who suffer from hypertension. Signs and symptoms of hypertension in the elderly according toKurniadi & Ulfa, (2015) showed the impact of hypertension into stroke and heart attack which resulted in the sufferer dying.

Efforts are being made to reduce hypertension by avoiding factors that trigger the onset of hypertension, therefore we as nurses are obliged to provide health education or health education about good prevention (stop high blood pressure), including reducing salt consumption, avoiding obesity, limiting fat consumption, regular exercise, eating lots of fresh vegetables, not smoking and not drinking alcohol as well as providing relaxation as a technique to reduce stress that can cause high blood pressure (Yulianto, et.al, 2017).

Research conducted by Anderson et al., (2012) regarding the Application of Therapy *Slow Deep Breathing* that the Slow Deep Breathing routine can reduce blood pressure with the average systolic blood pressure before being 153 mmHg and diastolic blood pressure after 96 mmHg. According to research by Amandeep (2015) regarding the Application of Therapy *Slow Deep Breathing*, Therapy exercises *Slow Deep Breathing* has a very beneficial effect on preventing high blood pressure. A new study shows that patients who routinely apply therapeutic *Slow Deep Breathing* have stopped taking hypertension drugs and turned to therapeutic exercises *Slow Deep Breathing.*

The results of research conducted by Yanti (2016) at Puskesmas I East Denpasar regarding the Application of Therapy *Slow Deep Breathing* has a very good effect on lowering blood pressure in the elderly which is done in one day 2 times for 5 minutes, reduces anxiety, relaxes and lowers systolic and diastolic blood pressure significantly after the application of therapy *Slow Deep Breathing* .

Based on the background of this problem, the author is interested in compiling and analyzing how to apply Slow Deep Breathing Therapy to the elderly with hypertension in the Duri Kepa Village, Kebon Jeruk District, West Jakarta.

METHOD

This type of research is a case study design research, according to Basuki Case Study is a form of research on a problem that has a specific nature with individual or group targets, even the wider community. In this study, researchers analyzed the Intervention of Slow Deep Breathing Therapy in Elderly Patients with Hypertension, namely that all four patients were given Slow Deep Breathing Therapy.

RESULTS

Table1. Distribution of Respondents Characteristics (n=4) in the Duri Kepa Village Health Center, Kebon Jeruk District, West Jakarta, West Jakarta for 4 days

Respondent	Age	Gender	Blood pressure	Information
Respondent 1	63 Years	Woman	177/100 mmHg	Stage II (moderate)
Respondent 2	61 years old	Woman	160/100mmHg	Stage I (Medium)
Respondent 3	60 Years	Woman	161/98 mmHg	Stage I (Medium)
Respondent 4	73 years old	Woman	180/109 mmHg	Stage III (Heavy)

The results of Table 1 show the characteristics of Respondents 1,2,3 Stage II (moderate) and Respondent 4 Stage III (severe).

Table 2. Distribution of the First Meeting of Respondents Blood Pressure Measurement and Application of Slow Deep Breathing Therapy (n=4) Before and After Slow Deep Breathing Therapy

Date	Respondent	Blood pressure		Information
		Before Slow Deep Breathing Therapy	After Slow Deep Breathing Therapy	
Wednesday 26 May 2021	Respondent 1 9:20 a.m.	170/95 mmHg	165/93 mmHg	Down
	Respondent 2 09.40	160/95 mmHg	157/95 mmHg	Down
	Respondent 3 10:20	155/92 mmHg	162/96 mmHg	Rise Because Can't Sleep
	Respondent 4 10.40	160/95 mmHg	155/92 mmHg	Down

The results of Table 2 The first day showed a decrease in Respondents 1.24 and Respondent 4 experienced an increase because they could not sleep.

Table 3. Distribution of the second meeting of Respondents Blood Pressure Measurement and Application of Slow Deep Breathing Therapy (n=4) Before and After Slow Deep Breathing Therapy

Date	Respondent	Blood pressure		Information
		Before Slow Deep Breathing Therapy	After Slow Deep Breathing Therapy	
Thursday 27 May 2021	Respondent 1 9:20 a.m.	160/95 mmHg	155/90 mmHg	Down
	Respondent 2 09.40	165/95 mmHg	171/95 mmHg	Rise Because The Mind Is Stressed
	Respondent 3 10:20	150/90 mmHg	149/90 mmHg	Down
	Respondent 4 10.40	160/89 mmHg	163/90 mmHg	Rise Because Not Taking Drugs

The results of Table 3 on the second day show a decrease in Respondents 1 and 3, Respondent 2 experienced an increase because the mind was stressed, Respondent 4 experienced an increase because they did not take medication.

Table 4. Distribution of the Third Meeting of Respondents Blood Pressure Measurement and Application of Slow Deep Breathing Therapy (n=4) Before and After Slow Deep Breathing Therapy

Date	Respondent	Blood pressure		Information
		Before Slow Deep Breathing Therapy	After Slow Deep Breathing Therapy	
Friday 28 May 2021	Respondent 1 14.20	159/90 mmHg	155/90 mmHg	Down
	Respondent 2 14:40	165/90 mmHg	162/89 mmHg	Down
	Respondent 3 15:20	155/95 mmHg	152/90 mmHg	Down
	Respondent 4 15:40	170/99 mmHg	160/95 mmHg	Down

The results of Table 4 show a decrease in Respondents 1,2,3 and 4 .

Table 5. Distribution of the Fourth Meeting of Respondents Blood Pressure Measurement and Application of Slow Deep Breathing Therapy (n=4) Before and After Slow Deep Breathing Therapyin

Date	Respondent	Blood pressure		Information
		Before Slow Deep Breathing Therapy	After Slow Deep Breathing Therapy	
Saturday 29 May 2021	Respondent 1 14.20	163/90 mmHg	149/89 mmHg	Down
	Respondent 2 14:40	160/95 mmHg	155/93 mmHg	Down
	Respondent 3 15:20	155/95 mmHg	151/90 mmHg	Down
	Respondent 4 15:40	169/98 mmHg	160/94 mmHg	Down

The results of Table 5 Day four show a decrease in Respondents 1,2,3 and 4.

Table 6. Results of Respondents Before Relaxation and After (n=4) Performing Slow Deep Breathing Therapy

Data	Before Doing Slow Deep Breathing Therapy		After Doing Slow Deep Breathing Therapy	
	Frequency	%	Frequency	%
Stage I (Mild)	0	0	3	75
Stage II (Medium)	3	75	1	25
Stage III (Heavy)	1	25	0	0
Amount		100		100

Results Table 6 before doing Slow Deep Breathing Therapy Respondents 1,2,3 Stage II (moderate), Respondent 4 Stage III (severe), after implementing Slow Deep Breathing Therapy decreased in Respondents 1,2,3 Stage I (mild) and Respondent 4 Stage II (moderate).

DISCUSSION

The data from the analysis regarding the application of slow deep breathing therapy shows that from 4 respondents before the application of slow deep breathing therapy, blood pressure measurements were carried out in respondents 1, 2 and 3 stage II (moderate), respondents 4 stage III (severe). After applying Slow Deep Breathing Therapy on the first day there was a decrease in Respondents 1,2 and 4, Respondent 3 experienced an increase because they could not sleep. This study is in line with Padila (2017), hypertensive patients who increase the quality and amount of sleep time, reduce stress, create a sense of peace, there will be a change in the blood pressure value in each respondent between systolic 10-15 mmHg and diastolic blood pressure between 10-20 mmHg.

The second day after the application of Slow Deep Breathing Therapy, there was a decrease in Respondents 1 and 3, Respondent 2 experienced an increase because the mind was stressed, Respondent 4 experienced an increase because they did not take medication, This study is in line with Sutomo (2015), one of the causes of hypertension is due to diet, the tendency to consume high-carbohydrate and low-fiber foods. which causes stress and increases anxiety. The third day after the application of slow deep breathing therapy was found to decrease in the four respondents. On the 4th day after the application of Slow Deep Breathing Therapy there was a decrease in the four respondents.

This research is in line with Mahtani et al (2016), the application of Slow Deep Breathing Therapy has a very good effect on lowering blood pressure in the elderly which is carried out 2 times a day for 5 minutes to reduce anxiety, relax and significantly

lower systolic blood pressure. 10-15 mmHg and 10-20 mmHg diastolic. the decrease in blood pressure causes a sense of relaxation and comfort after the application of Slow Deep Breathing Therapy which is carried out on day 3.

CONCLUSION

Application Slow Deep Breathing therapy reduces blood pressure significantly, as evidenced by data on the characteristics of elderly people with hypertension. The application of the Slow Deep Breathing Therapy intervention for 4 days experienced a significant decrease in blood pressure on days 3 and 4 which made Respondents 1,2 3 in Stage II (moderate) become stage I (mild) while Respondent 4 stage III (severe) became stage II (moderate), for 4 days the application of Slow Deep Breathing Therapy for a period of 5 minutes in each therapy, the results are shown by respondents who feel comfortable. The relaxed and anxiety that is resolved shows that the Slow Deep Breathing Therapy that is done more often will reduce the pressure more significantly for the elderly with hypertension.

SUGGESTION

For the Duri Kepa Kebon Jeruk Health Center, they can consider doing this Slow Deep Breathing Therapy intervention as the management of hypertension patients in the puskesmas service program. Can provide information as a reference for nursing interventions in the application of slow deep breathing therapy for elderly health problems, especially people with hypertension. The application of Slow Deep Breathing Therapy can be one of the materials that can be given to students to broaden their horizons in gerontic nursing interventions, especially in the elderly with hypertension.

For the next researcher There needs to be additions to the Slow Deep Breathing Therapy intervention process in the context of developing and perfecting nursing interventions in preventing hypertension sufferers as an effort to prevent hypertension sufferers in the elderly.

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