Effect of Autogenic Relaxation on Blood Pressure Reduction in Elderly Patients with Hypertension

Pipin Sumantrie[1*,] Martalina Limbong[1]

[1]Lecturer of Nursing Academy Surya Nusantara Pematangsiantar

[*]Correspondence Author: pipin.sumantrie@suryanusantara.ac.id

Abstract

The large number of people who do not know that the mind is not calm or relaxed is closely related to the rise in blood pressure or hypertension. Hypertension until now is still one of the major health problems in public health in developed countries and in developing countries. Hypertension can be treated with pharmacological and nonpharmacological treatments. One of nonpharmacology treatment is autogenic relaxation to hypertension blood pressure. The method used by the writer is Quasi Eksperimen Design with pre and post, which is a design that gives treatment to the group, then observed before and after implementation. The population of all elderly with hypertension, the sample consists of 10 respondents. Independent variable is autogenic relaxation and dependent variable is hypertension in parent or elderly. The data collected through observation was analyzed by paired t-test statistic with significance level $\alpha = 0,05$. The result of the analysis showed that there was a change of mean pressure between before and after autogenic relaxation therapy with significant systole value at p - Value = 0,04 ($\alpha < 0,05$) and diastol significant value at p - Value = 0,01 ($\alpha < 0.05$) so that there is an autogenic relaxation effect on the decrease in blood pressure in the elderly patients with hypertension. In conclusion seeing the results of this study then this autogenic relaxation therapy can be used as an alternative therapy in treating blood pressure problems in elderly or parents in addition to treatment therapy.

Keyword: Hypertension, Autogenic Relaxation, Elderly

Background

In health examinations, many people come to health services, and they feel shocked when getting a diagnosis that they have hypertension. Those who come from all ages, never thought they had this problem, because they felt that they had perfect health, and there were no symptoms that they had high blood pressure. This problem, when it occurs in a protracted manner without countermeasures, it can lead to dangerous situations such as stroke, heart attack, and other problems that are also very serious.

There are several factors that can affect blood pressure, namely age, stress, race, medication, diurnal variation and gender (Potter & Perry, 2005). According to Potter & Perry (2005) blood pressure describes the interrelation of cardiac output, peripheral vascular resistance, blood volume, and blood viscosity and arterial elasticity.

Many people who deal with hypertension are mostly done pharmacologically, beside practice this method is also effective. However, the stability and effectiveness of the treatment of hypertension is not only given with pharmacology, but also with non-pharmacological therapy, especially handling of stress (Marliani, 2008). Stress has been known as one of the main trigger factors of hypertension (Setiawan, 2008). Therefore one of the alternative therapeutic attempts that can be performed to stabilize the stress condition is the provision of modality therapy in the form of autogenic relaxation therapy, so it can be expected to improve the quality of life of parents or elderly (Beevers, 2002).

Hypertension is an increase in blood pressure that gives continuous symptoms for a target organ, such as a stroke for the brain, coronary heart disease for the heart's blood vessels and for heart muscle (Guyton & Hall, 2007). The disease which known as high blood disease is a major risk factor for the development of heart disease and stroke. Hypertensive disease is also often called the "silent killer" because we can not its signs and its symptoms from the outside. The development of hypertension runs slowly, but potentially very dangerous (Martuti, 2009). This disease is one of the major health problems in public health in developed and developing countries because it is estimated that about 80% increase in cases of hypertension mainly occurs in developing countries. It is estimated that from 2000 to 2025, about 80% of cases of hypertension, especially in developing countries, increased from 639 million to 1.15 billion. Hypertension more attacked to 2.6% (7,224). Furthermore, in 2006 to 2007 again increased by 2.6% so that the total hypertension sufferers is 7,514 people. Hypertension in Indonesia averages 17% to 21% of the total adult population. It means that one of five adults suffers from hypertension, and hypertension is more prevalent in female, ie 37% than males, which is 28%. Hypertension in Indonesia shows that in rural areas there are still many hypertension sufferers that have not been reached by health services due to the absence of complaints from most of the patients (Ardiansyah, 2012 in Wardani 2015).

One of the treatment of hypertension disease is by doing non-pharmacological therapy. Lifestyle modification is one of the most important forms of non-pharmacological management to prevent blood pressure to hypertension of the next level. Relaxation techniques are one form of stress management in an effort to make lifestyle modifications. Psychological relaxation has health benefits that enable the delivery of energy for repair and

recovery, and provides relaxation for habitual tension (Goldbert, 2007). This relaxation therapy has a variety - one of which is autogenic relaxation (Potter & Perry, 2006)

Autogenic relaxation is a comprehensive and comprehensive relaxation technique (Saunders, 2007). Autogenic has its own regulatory significance, and it is one of relaxation techniques based on passive concentration and uses body perception (eg, heavy and warm hands) which facilitated by self-suggestion (Kanji et al, 2006; Saunders, 2007). The passive procedure of relaxation is developed by training the individual to master the emergence of a vibrant emotion, so that the patient is no longer dependent on his therapist but patient can make changes in himself (Saunders, 2007). Furthermore, Widyaastuti (2004) adds that autogenic relaxation helps the individual to be able to control some body functions such as blood pressure, heart frequency and blood flow.

Research on autogenic relaxation has been widely practiced. Testing the effectiveness of autogenic relaxation in an effort to decrease anxiety in sleep problems and autogenic relaxation in decreased anxiety in nursing students (Kanji, et al., 2006; Bowden, et al., 2012), decrease pain (Ishinova, et al., 2009; Prato and Yucha, 2012), improved sleep by combining multi-modal and relaxation techniques (Simeit, et al., 2004), decreased headache (Zsombok, et al., 2003), increased Irritable bowel syndrome, and improved quality of life (Sutherland , et al., 2005). In Indonesia, autogenic relaxation research has also been conducted. Setyawati (2010) states that autogenic relaxation can reduce blood glucose levels and blood pressure in patients with diabetes mellitus and hypertension. The purpose of this study was to determine the effect of Aoutogenic relaxation on blood pressure reduction in elderly people with hypertension.

Materials and Method

The method in this research is the Experiment Design with pre and post, which is a design that gives treatment to the group, then observed before and after the implementation (Polit & Back, 2006). The design in this study is the one - group pretest - posttest design and this design used to compare the results before and after the intervention (Notoatmodjo, 2010). This design also has no comparison group (control), but the first observation (Pretest) allows testing the changes that occurred after the experiment. The population in this study are the parents or elderly who suffer from hypertension disease in Dusun Lorong Baja, Jln Rakutta Sembiring, Pematangsiantar. The researchers took samples with inclusion criteria by Accidental Random technique.

Results

The result of this research is to find out whether autogenic relaxation has an effect on blood pressure drop in elderly or elderly people ?, "then data is processed by using SPSS 21 for windows. Then the data is processed by statistical test. Before determining the test, it is first determined whether the data is normally distributed or not by using Kolmogorov Smirnov test, as in Table 1.

Table 1 Kolmogorov-Smirnov Normality Test

		sistolpre hari 1	sistolpost hari 3
N		10	10
Normal Parameters[a,b]	Mean	163.00	146.00
	Std. Deviation	14.944	14.298
Most Extreme Differences	Absolute	.208	.168
	Positive	.208	.168
	Negative	-.180	-.136
Kolmogorov-Smirnov Z		.657	.533
Asymp. Sig. (2-tailed)		**.781**	**.939**

After the data was found with Kolmogorov-Smirnov Normality Test with p-value pre and post value was 0.781 and 0.939. The probability value shows that p-Value> 0,05, it can be concluded that the data in this study is normally distributed, then after the data is normally distributed the researchers do the t test by using Paired t-test, to find whether there is a relationship between autogenic relaxation decreased blood pressure in elderly or parents of hypertensive patients. To see the results of t test can be seen in table 2 below.

Tabel 2. Paired sample test

		Paired Differences					T	Df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	sistolpee hari 1 - sistolpost3	23.000	18.88	5.972	9.490	36.510	3.851	9	.004
Pair 2	diastolpre hari 1 -diastolpost3	13.000	8.233	2.603	7.111	18.889	4.993	9	.001

Discussion

From the data, it was found that blood pressure before intervention was obtained an average value of 163/90 mmHg. Meanwhile, after the intervention obtained the average value decreased with a value of 140/77 mmHg. Based on the result of paired sample test that analyzed through SPSS that significant value of systole (pValue) = 0,04 under 0,05 and significant value of diastole (pValue) = 0,01 below 0,05. So it can be concluded that there is a significant effect of autogenic relaxation on blood pressure decrease in the elderly or elderly people with hypertension in Dusun Lorong Baja, Jalan Rakutt Sembiring, Pematangsiantar. The result is supported by previous researcher theory, Supadi (2000) to know the meaning of the research result can be done by comparing the p value and it obtained $0,01 \leq p <0,05$, so the result is meaningful and next theory stated by Widyastuti (2004) that relaxation Autogenic helps the individual to be able to control some body functions such as blood pressure, heart frequency and blood flow. Furthermore Setyawati (2010) states that autogenic relaxation can

lower blood glucose levels and blood pressure in patients with diabetes mellitus and hypertension.

Furthermore to know how the response of hypertensive patients after autogenic relaxation obtained data from the results of interviews conducted by researchers to hypertensive respondents obtained subjective data stating that after doing relaxation autogenik heart frequency becomes relaxed that makes the feelings of respondents to be peaceful and calm, tension stress respondents become can be controlled, the body feels warm, which is the result of peripheral arteries that undergo vasodilation and all that causes the feelings of respondents to be more calm. It is supported by a theory by previous researchers that autogenic relaxation is self-sustaining relaxation in the form of words or short sentences or thoughts can make the mind calm (Greenbarg, 2002 in Setyawati 2010) and the autogenic term implies that we have the ability to control various body functions, such as the heart frequency of blood flow and blood pressure.

Conclusion

After the researchers completed the research in Lorong Baja, Pematangsiantar, the researchers can draw conclusions and suggestions that build and beneficial to improve the quality of nursing, especially improve the health of parents and the elderly. The conclusion can be obtained from the results of research that has been done that, there is the difference between the average blood pressure before and after autogenic relaxation and it proves that the effect of autogenic relaxation on blood pressure decrease in elderly or elderly who suffer from hypertension, with significant sistole (pValue) = 0,04 below 0,05 and significant value of diastole (pValue) = 0,01 below 0,05, then result of observation done by researchers that after respondent do autogenic relaxation, responder feel comfort, calm, relax, and also controlled breathing, heart rate and body temperature.

Suggestion

Based on the results of the study, the advice given is as follows: Patients with hypertension to check blood pressure regularly in accordance with the doctor's advice without waiting for any symptoms that appear. In addition, for the elderly to change the life of style that became factors - factors causing which hypertension and patients with hypertension can make autogenic relaxation to be one way to facilitate patients in coping with high blood pressure in a more effective and efficient way to create a state of relaxation to control the nervous system that ultimately can lower blood pressure.

Especially for the friends of the nursing profession based on the results of this study is expected to autogenic relaxation into one form of self-nursing intervention for a nurse in providing nursing care in patients with hypertension and become the main alternative to treatment in overcoming the problem of blood pressure and minimize the use of drugs (pharmacological) or collaborative actions. Particularly for subsequent researchers, this result could be the baseline data for subsequent researchers relating to autogenic relaxation, thus outogenic relaxation therapy can be developed to address other nursing problems, so that the nursing world will have an evident base in applying nursing orders.

References

Beevers, D.G. (2002). Health Series: Health Guidance on Blood Pressure. Printed I. Jakarta: Dian Rakyat.

Bowden, A., Lorenc, a., And Robinson, N (2012). Autogenic Training as a behavioral approach to insomnia: a prospective cohort study. Primary Healt How Research & Develooptment 13: 175 - 185

Greenbarg, J.S. (2002). Comprehensive stress management (7th ed). New York: The McGraw - Hill companies.

Guyton, A.C and J.E. Hall. 2007. BuKu Ajar Physiology of Medicine - Ed 11. Jakarta: EGC

Kanji, N., White, A. & Ernest. (2006). Autogenic training to reduce anxiety in nursing students: randomized controlled trial. Journal of Advance Nursing 53 (6), 729 - 735

Marliani. (2008). 100 Question And Answer: Hypertension. Jakarta: PT Elex Media Computindo

Martuti, A. (2009). Treat and Cure Hypertension: High Blood Pressure Disease. Bantul: Creation Discourse

Notoatmodjo, S. (2010). Health Methodology. Jakarta: EGC.

Perry, G. A., & Potter, A.P. (2006). Fundamental of nursing, (6 th Edition). Elsevier Mosby

Polit D. F & Beck C. T. (2006). Nursing Research Methods, Your Apprasial Utilization (6 th Ed). Philadelphia: Lippincot William & Wilkins

Prato, C. A & Yucha, C. B. (2013). Biofeedback-assisted relaxation tarining to dcrease anxiety test is nursning students. Nursing Education Perspective March Pudiastuti Ratna Dewi. (2011). Stroke-triggering disease. Yogyakarta: Nuha Medika Ramayulis, R. 2010. Recipes Menu for Hypertension Patients. Jakarta: Penebar Plus

Saunders, S. (2007). Autogenic therapy: short term therapy for long term gain. British autogenic Society.

Setiawan & et al. (2008). Care Your Self, Hypertension. Printed I. Jakarta: Spreader Plus

Setyawaty, A. (2010). The effect of autogenic relaxation on blood pressure decrease and decreased blood sugar levels in DM type 2 clients with hypertension in IRNA Hospitals in Yogyakarta and Central Java (Thesis).

Simeit, R., Deck, R., Conta - Max, B. (2004). Sleep management training for cancer patients with insomnia. Support Care Cancer 12: 176 - 183

Sutherland, G., Andersen, M. B., & Morris, T. (2005). Relaxtion and healt-related quality of life in multiple sclerosis: the example og autogenic training. Journal of Behavioral Medicine, Vol. 28.

Wardani, Dian Wisnu. (2015). The Effect of Relaxation Techniques Breath In As Extra Therapy on Reducing Blood Pressure on Patients with Hypertension Level I, Thesis, Degree Program of Health Faculty of UNNES. Semarang

Widyaastuti. P. (2004). Stress Management. Jakarta: EGC

Zsombok, T., Juhasz, G., Budavari, A., Vitrai, J., Bagdy, G (2003). Effect of Autogenic Training on Drug Consumption in Patients With Primary Headache: An 8 - Month Follow - up Study. Headache 43: 251 - 257