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EFFECTIVENESS OF FAMILY MENTORING MODEL TO DECREASE BLOOD PRESSURE OF HYPERTENSIVE CLIENTS

Faisal Ibnu [1], Rina Nur Hidayati [1], Lutfi Wahyuni [2]

[1]Department of Community Nursing Universitas Bina Sehat PPNI Mojokerto
[2]Department of Medical Surgery Universitas Bina Sehat PPNI Mojokerto

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CONTACT

Ibnu Faisal
masfaizppni@gmail.com
Universitas Bina Sehat PPNI Mojokerto, Mojokerto, Indonesia

ABSTRACT

Introduction: Hypertension is the most common disease and usually arises without complaints so many clients do not know that they have suffered from hypertension. Until now Hypertension is still a major problem and is the first cause of death in the world. This study aims to find out the Effectiveness of Family Mentoring Model against decreased Blood Pressure of hypertensive clients.

Method: The research design used quasi-Randomized Control Group Pre-Test Post Test Design experiments on 120 hypertensive clients using purposive sampling. Model interventions are given for 8 weeks, and home visits are made once a week. Data analysis using independent and dependent t tests.

Result: The results showed that the model intervention effectively lowers the blood pressure of hypertensive clients. This was indicated by a systolic blood pressure decrease of 18.8 mmHg significantly after the model intervention and significantly different (p_value : 0.0001).

Conclusion: Diastolic blood pressure showed a significant decrease of 11.1 mmHg after model intervention and significantly different (p_value : 0.0001). This model is recommended to be implemented in all areas of work of public health centers as an effort to control hypertension.

Keywords: mentoring model; hypertensive client; blood pressure

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INTRODUCTION

Hypertension is a disease for most experienced people. Hypertension usually appears without any complaints so that many clients do not know that they had suffered from hypertension. Signs and symptoms are sometimes can't feel, so it is known as the *silent killer*. Hypertension also led to various complications of the blood vessels that can lead to coronary heart disease, kidney, and stroke later (Palmer & Williams, 2007; Setiati, et.al 2014). Complications or impacts that can be caused by hypertension vary widely, consist, have an impact on the physical, psychological, and socio-economic clients (Sutanto, 2010; Black & Elliott, 2012; Sugiharto, 2017; Palomo-Piñón S *et al.,* 2016).

Hypertension still be the main problem in the world, both in developed countries and in countries -

developing countries, including Indonesia. Based on the *Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure on VII (JNC-VII)*, nearly 1 (one) of the billion people suffer from hypertension in the world (WHO, 2010). According to the result of the World Health Organization (WHO) that hypertension is the number 1 cause of death in the world. based on data from the Ministry of Health Rl (2014) that in 2010 in the United States there are 28.6% of adults aged 18 years and over who suffer from hypertension, Meanwhile, *according to the American Heart Association (AHA)* that the American population older than age 20 years who suffer from hypertension has reached up to 74.5 million, but almost about 90-95% of cases of unknown cause. The prevalence of hypertension based on measurements in the population aged >18 years of growing the year 2007: 25.8%, in 2013; 31.7% and 2018: 34% (Riskesdas, 2018).

The prevalence of hypertensive clients in East Java Province is still quite high, namely 26.2% (Riskesdas, 2013), and has increased to 36.3% (Riskesdas, 2018). Based on data at the Puskesmas Bangsal Mojokerto, the number of hypertensive patients reached 29.30% (Dinkes Kab. Mojokerto, 2014). Meanwhile, the results of the coverage of high blood pressure checks aged > 15 years in Mojokerto Regency reached 38.27% (Riskesdas, 2018). Based on these data, it can be concluded that the prevalence of hypertension in Mojokerto Regency is still high when compared to the prevalence of hypertension nationally.

Various attempts have been made to control hypertension, but the prevalence of hypertension is still high, and many clients obtained various comorbidities hypertension or other complications. National program efforts have been made to control hypertension still led to preventive measures (prevention) and early detection of cases of hypertension, namely through the examination of blood pressure in the population aged over 15 years through an integrated coaching post activity (POSBINDU). It is closely associated with various causes that interrelated among them a lack of understanding and their wrong perceptions about hypertension, lack of awareness and willingness of individuals and families to care for hypertensive clients. The absence of efforts by local government programs to support the care of hypertension clients in the family and approach that is able to in the crease the participation of individuals and families in the care of hypertension clients is also the basic of this research (Dinkes Kab. Mojokerto, 2015; 2017).

METHOD

This research used quasi experiment design through Non-Randomized Control Group Pre-Test Post Test Design approach[14]. The population in this study was the entire family with hypertensive clients in Mojokerto district health center area which amounted to 120 respondents. Samples are taken with purposive sampling techniques. 60 respondents were taken from families with hypertension clients in the Dlanggu health center area as an intervention group and 60 families with hypertensive clients in the Bangsal health center area as a control group. The instrument used in this study was a sphygmomanometer. Supporting instruments in this research used workbooks, evaluation books and flyers on hypertension. This research starts from preparation, preliminary data collection (pretest), implementation of model intervention and final data collection (posttest). Model interventions are given for 8 weeks, and home visits are made once a week. The first 4 weeks are given health education and mentoring about hypertension and hypertension prevention efforts by giving flyers about hypertension and workbooks. The next 4 weeks are self-learning and evaluation is conducted in the last week. Data analysis techniques using dependent t test.

RESULTS

Characteristics of Respondent

Table 1. Characteristics of Hypertension Clients by Gender, Education, Age and Long Knowing about Hypertension (n = 120)

Characte ristics	Category	Interv.		Control		Total	Homogeneous Sig
		Sum	%	Sum	%	%	
Gender	Female	52	55.9	41	44.1	**93 (77.5)**	
	Male	8	29.6	19	70.4	**27 (22.5)**	**0.707**
level of education	SD	4	33.3	8	66.7	**12 (10.0)**	
	SMP	22	52.4	20	47.6	**42 (35.0)**	**0.775**
	SMA	34	57.6	25	42.4	**59 (49.2)**	
	PT	0	0	7	100	**7 (5.8)**	

Characteristics	Interv.		Control		Sig
	Mean	SD	Mean	SD	
Age	45,08	5,47	45,66	4,70	0,341
Long Knowing of HT	3,93	2,55	2,28	1,71	0,042

Table 1 shows that the sex of hypertensive clients is mostly women, namely 77.57% and the two groups are equivalent (p_value: 0.707). Almost half of the hypertension clients have a high school education, namely 49.2%, and the two groups are equivalent (p_value: 0.775). Based on age, it shows that in the intervention group the average age is 45.08 and the control group is 45.66, the results of the analysis show that the two groups are equal (p_value: 0.341). Based on the length of knowing about hypertension, the intervention group had an average of 3.93 years, the control group was 2.55 and the results of the analysis showed that the two groups were not equal (p_value: 0.042). Based on table 1, it is found that most of the respondents are 21-25 years old (92%) with female gender (64%). Most of respondents did not work (82%), and the reason for studying from own desire (80%). Almost one hundred percent of them received the good parental support (96%), good practical facilities support (66%), and sufficient funds (76%).

Client's blood pressure before intervention

Table 2. Client's Blood Pressure Value Before Intervention (n : 120)

Variable	Group	n	Mean	SD	SE	*p_Value*
TD Sistolic	Interv.	60	154,2	8,9	1,15	**0,007**
	Control	60	149,9	8,1	1,05	
	Total	120	**152,0**	**8,7**	**0,79**	
TD Diastolic	Interv.	60	93,4	4,8	0,62	**0,556**
	Control	60	92,9	4,4	0,57	
	Total	120	**93,1**	**4,6**	**0,42**	

Table 2 shows that the client's systolic blood pressure before the intervention averaged 152 mmHg and both groups (intervention and control) had no equivalent p_value: 0.007. Intervention average diastolic blood pressure of the client before the intervention was 93.1 mmHg and both groups (intervention and control) were equivalent to p_value: 0.556.

Changes in Client's Blood Pressure Before and After Intervention

Table 3. Client's Blood Pressure Value Before and After Intervention (n : 120)

Variable	Group	N	Pre		Pot		Diff. Mean	*p_ Value*	Efektife ness (%)
			Mean	SD	Mean	SD			
TD Sistolic	Interv.	60	154,2	8,9	135,4	5,7	**-18,8**	0.0001	**18.8**
	Control	60	149,9	8,1	147,6	8,4	**-2,3**	0.029	
TD Diastolic	Interv.	60	93,4	4,8	82,3	4,2	**-11,1**	0.0001	**11.1**
	Control	60	92,9	4,4	92,6	5,4	**-0,3**	0.616	

Table 3 illustrates that the systolic blood pressure (systolic BP) of hypertensive clients showed a decrease of 18.8 mmHg (from 154.2 mmHg to 135.4 mmHg) significantly after the intervention model and was significantly different (p_value: 0.0001). In the control group, there was a significant decrease of 2.3 mmHg (from 149.9 mmHg to 147.6 mmHg) after the intervention model and was significantly different (p_value: 0.029). The effectiveness of the model on the reduction of systolic blood pressure in hypertensive clients was 18.8%.

Diastolic blood pressure (diastolic BP) of hypertensive clients showed a decrease of 11.1 mmHg (from 93.4 mmHg to 82.3 mmHg) significantly after the model intervention and significantly different (p_value: 0.0001). In the control group there was a significant reduction of 0.3 mmHg (from 92.9 mmHg to 92.6 mmHg) but not significantly different (p_value: 0.616). The

effectiveness of the model to decrease diastolic blood pressure in hypertensive clients was 11.1%.

DISCUSSION

Intervention model for 8 weeks through the learning process with mentoring, namely through the provision of health education, mentoring by providing leaflets and flyers hypertension and home visits once a week is able to lower blood pressure Systolic and Diastolic hypertensive clients. This following the research of Hamilton, et al. (2017) explaining that the Health Coaching management provided to hypertensive patients can increase client knowledge of hypertension and be able to reduce blood pressure both systole and diastole. Fauzia (2017) research on hypertensive patients in the work area of the Medan City Health Center explained that providing education can improve the implementation of healthy behavior and control of blood pressure in hypertensive patients. The results of Erci et al. (2013) showed that the intervention of the Caring Watson model for 3 months and home visits for once a week showed an increase in the quality of life of hypertensive patients and a decrease in blood pressure in hypertensive patients. This is also by the results of research (Maryati & Praningsih, 2019) which show that family assistance for 1 month and assisting every week can reduce the client's blood pressure.

CONCLUSION

Intervention Model mentoring family effectively lowers the blood pressure of hypertensive clients, both systolic blood pressure and diastolic blood pressure.

REFERENCES

Dinkes Kab. Mojokerto. (2014). Health Profile of Mojokerto Regency.

Dinkes Kab. Mojokerto. (2015). Health Profile of Mojokerto Regency.

Dinkes. (2017). Mojokerto Health Profile.

Elliot, W. J., & Black, H. R. (2012). Angiotensin Receptor Blockers. In *Hypertension: A Companion to Braunwalds Heart Disease*. Elsevier. https://doi.org/10.1016/B978-1-4377-2766-1.00001-6.

Erci, B. at all. (2013). The effectiveness of Watson's Caring Model on the quality of life and blood pressure of patients with hypertension. *Journal of Advanced Nursing*, 130–139.

Fauzia, Wilda. (2017). The influence of self-management education on healthy behaviors and blood pressure of hypertensive patients in the working area of medan city health center. Thesis : repository.usu.ac.id.

Hamilton, et al. (2017). Health Coaching and the Management of Hypertension. JNP : Journal for Nurse Practitioners. Volume 13, Issue 5, mei 2017 Hal. E237-e239.

Maryati, H., & Praningsih, S. (2019). Effectiveness of Family Assistance In Self-Care Against Blood Pressure Stability of Hypertension Sufferers. *Journal of Ners Community*, *10*(1), 53–66.

Ministry of Health RI. (2014). Hypertension. Ministry of Health RI.

Palomo-Piñón, M, R.-P., & JR, P.-S. (2016). *Treatment of Hypertension in Chronic Kidney Disease*.

Palmer & Williams. (2007). *High Blood Pressure. Erlangga Publishers*.

Riskesdas. (2013). Basic Health Research ministry of The Republic of Indonesia.

Riskesdas. (2018). Basic Health Research Ministry of the Republic of Indonesia.

Sastroasmoro, S., & Ismail, S. (2011). *Basics of Clinical Research Methodology. Segung Seto Publisher.*

Setiati, S., Alwi, I., Sudoyo, A. W., Simadibrata, K. M., Setyohadi, B., & Syam, A. F. (2014). *Teaching Book of Internal Medicine (Volume II Edition VI).* Interna Publishing.

Sugiharto, A. (2007). Risk factors for grade II hypertension in the community (case study in Karanganyar district). Diponegoro University Postgraduate Program.

Sutanto. (2010). BLOCK Modern Diseases Hypertension, Stroke, Heart, Cholesterol, and Diabetes. ANDI Publisher.

World Health Organization. 2010.