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The Effect of Health Education on Reducing Blood Pressure of Hypertensive Patients at USU Hospital Medan in 2022

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ABSTRACT

Hypertension or high blood pressure is a disease of the heart and blood vessels characterized by an increase in blood pressure. Education is an increase in one's knowledge and abilities through learning techniques or instructions, with the aim of remembering real facts or conditions. The purpose of this research is the effect of health education on reducing patient's blood pressure. This type of research is a correlation analytic type with a quasi-experimental design. The sample in this study were hospitalized patients with a diagnosis of hypertension. The method used is observation. The results of the observation show that the blood pressure measurement of hypertensive patients uses a sphygmomanometer. The t-test obtained a significant value of 0.000, which is smaller than alpha 0.05 or 95% significant. So that Ho is rejected and Ha is accepted, it can be said that there is a significant effect between the blood pressure of hypertensive patients before and before being given health education or information. The conclusion that can be drawn is that education is very influential in reducing the patient's blood pressure because it can increase the patient's sense of comfort. This is a consideration for the health team to provide an in-depth understanding of hypertension.

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INTRODUCTION

Blood pressure is the pressure at which blood circulates in the blood vessels. This pressure is constantly in the blood vessels and allows the blood to flow constantly. Blood pressure in the body is basically a measure of the pressure or force in the arteries that must be balanced with the heartbeat, through the heart the blood will be pumped through the blood vessels and then carried to all parts of the body if the blood pressure exceeds 140/90 mmHg it is said to be hypertension (Rusdi, 2009). in Suprayanto 2014).

Hypertension is a disease that occurs due to increased blood pressure. Hypertension is a persistent increase in blood pressure 140/90 mmHg (Dharmeizar, 2012). According to Yogiantoro (2006), hypertension with no known cause is defined as essential hypertension or primary hypertension. Essential hypertension is 95% of all cases of hypertension. The rest is secondary hypertension, namely high blood pressure whose causes are classified, including organic disorders

such as kidney disease, abnormalities in the adrenal cortex, use of drugs such as corticosteroids and others (Anggraini, et al 2009).

According to WHO and the International Society of Hypertension (ISH), currently there are 600 million people with hypertension worldwide and 3 million of them die each year. Seven out of every 10 patients do not receive adequate treatment (Rahajeng and Tuminah, 2009). According to the American Heart Association (AHA) in America, high blood pressure is found in one out of every three people or 65 million people and 28% or 59 million people have prehypertension. Of all people with hypertension, only one third know their condition and 61% receive treatment (Purnomo, 2009).

In Indonesia, one in five people (20%) suffer from hypertension. However, this ratio seems to vary in various cities in Indonesia (Mariono, 2009). According to Basic Health Research (RISKESDAS, 2013), the prevalence of hypertension in Indonesia at the age above 18 years reaches 29.8%. This prevalence increases with age. The prevalence of hypertension in the age group 55-64 years, 65-74 years and >75 years, reached 53.7%, 63.5% and 67.3%, respectively. (Dharmeizar, 2012).

The prevalence of hypertension in North Sumatra ranges from 19.5 to 46.1% (average 30.2%) especially North Aceh 30.6% (Riskesdas, 2012). Data from RS USU , North Sumatra Regency, with hypertension.

Hypertension is also a disease that requires therapy in its treatment, it is very necessary to manage hypertension based on adherence to therapy. The goal of hypertension therapy is to achieve and maintain systolic blood pressure below 140 mmHg and diastolic blood pressure below 90 mmHg and control risk factors (Ganiswarna, 2007). According to Katzung & Betram (2007), there are two therapies used to treat hypertension, namely pharmacological therapy and non-pharmacological therapy. Pharmacological therapy is therapy with antihypertensive drugs that have been shown to reduce blood pressure, while non-pharmacological therapy or also called lifestyle modification includes quitting smoking, reducing excess weight, avoiding alcohol, diet modification and psychologically including reducing stress. , exercise and rest (Astawan, 2002 in Anggraini 2008).

Hypertension is often given the title The Silent Killer because hypertension is a hidden killer. Hypertension can also cause various complications to several other organs such as causing heart disease, stroke, and impaired kidney function (Ministry of Health, 2007). Hypertension requires knowledge about lifestyle modifications to prevent cardiovascular disease. The best therapy for controlling blood pressure is when the patient is motivated. Motivation increases when patients have good experiences and trust their doctors and health information or education (National Institutes of Health, 2003 in Zahri 2010).

Health education is needed for patients provided by nurses and doctors. Education in health care also refers to client education. Clients are increasingly aware of health and want to be involved in health care. The nurse or health team must provide health education in a place that is comfortable and known to the client (Potter & Perry, 2009). Meanwhile, the place for the implementation of health education can be done in service institutions, including health centers, hospitals, clinics, schools or in the target community (Rocahdi, 2011). Meanwhile, low educational barriers, personal character of students, hoptalization effects, stress due to disease, anxiety, decreased body functions (Pancaindra), lack of time to learn, complexity of targets to be achieved, discomfort, fragmentation, inhumanity of the treatment system which often causes frustration and indifference. (Bastable, 2002).

This is related to the research conducted by Munthe (2010) about the effect of health education on hypertension on the behavior of hypertension sufferers at the Sioban Health Center, South Sipora District, Mentawai Islands Regency in 2010. This study was pre-experimental, taken a sample of 34 people using a questionnaire. The results showed that a high level of knowledge before being given health education (38.2%) and after being given health education increased to (94.1%), a positive attitude before being given health education (73.5%) increased to (100%) and good before (91.2%) increased to (66.7%) . The results of the Wilcoxon test showed that there was an effect of health education on knowledge, attitudes and actions with p value < 0.05.

The same study was also conducted by Sutrisno (2013) on the Effect of Nurse Education on Blood Pressure Reduction in Elderly with Hypertension in the Work Area of Purwodadi Public Health Center, Grobogan Regency. The results of the study using the Wilcoxon Match Pair Test in the experimental group showed that the mean systolic blood pressure before being given education was 164.91 and the mean systolic blood pressure after being given education was 148.75 (p = 0.000), the average diastolic blood pressure before being given education was 96.48, while the mean pressure value was 96.48. diastolic blood after being given education was 88.21 (p = 0.000). The results of the study in the control group showed that the mean pre-test systolic blood pressure was 162.46, while the post-test mean systolic blood pressure was 151.29 (p= 0.000), the pre-test mean diastolic blood pressure was 94.05, while the post-test mean diastolic blood pressure was 88.93 (p=0.000).

Phenomenon at RS USU North Sumatra Regency based on an initial survey conducted by interviewing 15 patients who were hospitalized at RS USU North Sumatra. It was found that 10 patients (66.7%) stated that they did not know specifically about hypertension and decreased blood pressure. and they said they had never received health education from health workers. However, 5 other people (33.3%) said they knew about hypertension and they often listened to health education given by health workers.

RESEARCH METHOD

This type of research is using correlation analytic with Quasi experimental design. The approach taken in this research is to use the technique of one group pre test and post test design or also called time series design, which is a study conducted to assess only one group as a whole (Notoatmodjo, 2005).

RESULTS AND DISCUSSIONS

Univariate Analysis

Patient's blood pressure before being given Information

Table 1. Distribution of Blood Pressure in Hypertension Patients Before Information Is Given

TD Pasien	Kata Gori	Frekuensi	Persentese %	Mean	SD
Pre Hipertensi	190/90 mmhg	2	13,3		
Hipertensi Tahap I	210/100 mmhg	8	53,3	2,20	0.676
Hipertensi Tahap II	300/100 mmhg	5	33,3		
Total		15	100		

Table 1 shows that the blood pressure of hypertensive patients before being given Health Education or information was the majority of patients with Stage I hypertension with 8 patients (53.3%) while stage II hypertension was 5 (33.3%) and pre-hypertensive patients were 2 (13). ,3%). The mean values and standard deviation values of blood pressure in hypertensive patients before being given information were 2.20 and 0.676.

Patient's blood pressure After being given Information

Table 2. Distribution of Blood Pressure in Hypertension Patients After Information Is Given

TD Pasien		Frekuensi	Persentese %	Mean	SD
Pre Hipertensi	150/80 mmhg	8	53,3	1,47	0.516
Hipertensi Tahap I	190/100 mmhg	7	46,7		
Total		15	100		

Table 2 above shows the blood pressure of hypertensive patients after being given Health Education or the most information is patients with Pre Hypertension with 8 patients (53.3%) and the blood

pressure of patients with Stage I hypertension with 7 patients (46.7%). Obtained the Mean value and the Standard Deviation value of the patient's anxiety after being given information, namely 1.46 and 0.516.

Bivariate analysis

Table 3. Effect of Health Education on reducing blood pressure in hypertensive patients

Kategori	N	Mean	T.tabel	T.hitung
Tekanan Darah Pre	15	2,20	2,131	4,785
Tekanan Darah Post	15	1,47		

Tabel 3 describes the results of observing blood pressure measurements of hypertension patients using a sphygmomanometer. The t-test obtained a significant value of 0.000, which is smaller than alpha 0.05 or 95% significant. So that Ho is rejected and Ha is accepted, it can be said that there is a significant effect between the blood pressure of hypertensive patients before and before being given health education or information.

Discussion

Blood Pressure Before being given Health Education

The results showed that the blood pressure of hypertensive patients before being given Health Education or Information was the majority of patients with Stage I hypertension with 8 patients (53.3%) while stage II hypertension was 5 (33.3%) and pre-hypertensive patients were 2 (13,3%). 3%). The mean values and standard deviation values of blood pressure in hypertensive patients before being given information were 2.20 and 0.676.

Blood Pressure After being given Health Education

The results showed that the blood pressure of hypertensive patients after being given Health Education or information was mostly 8 patients (53.3%) and 7 patients (46.7%). Obtained the Mean value and the Standard Deviation value of the patient's anxiety after being given information, namely 1.46 and 0.516.

Effect of Health Education on reducing blood pressure in hypertensive patients

The results showed the results of the observation of blood pressure measurements of hypertension patients using a sphygmomanometer. The t-test obtained a significant value of 0.000, which is smaller than alpha 0.05 or 95% significant. So that Ho is rejected and Ha is accepted, it can be concluded that there is a significant effect between the blood pressure of hypertensive patients before and after being given Health Education or information.

CONCLUSION

Shows the blood pressure of hypertensive patients before being given Health Education or Information, the majority are patients with Stage I hypertension as many as 8 patients (53.3%) while stage II hypertension is 5 (33.3%) and Pre-hypertensive patients are 2 (13.3%)). The mean values and standard deviation values of blood pressure in hypertensive patients before being given information were 2.20 and 0.676. Shows the blood pressure of hypertensive patients after being given Health Education or the most information is patients with Pre Hypertension with 8 patients (53.3%) and the blood pressure of patients with Stage I hypertension with 7 patients (46.7%). Obtained the Mean value and the Standard Deviation value of the patient's anxiety after being given information, namely 1.46 and 0.516. Shows the results of observations of blood pressure measurements of hypertension patients using a sphygmomanometer. The t-test obtained a significant value of 0.000, which is smaller than alpha 0.05 or 95% significant. So that Ho is rejected and Ha is accepted, it can be concluded that there is a significant effect between the blood pressure of hypertensive patients before and after being given Health Education or information.

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