

Relaxed Music Can Reduce Blood Pressure In Hypertension Patients

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Abstract: One health service facility located in West Aceh district that provides services to hypertensive patients is Cut Nyak Dhien Meulaboh Regional General Hospital. Based on the initial survey the number of visits of hypertensive patients who underwent outpatient in 2016 were 713 people in the first quarter, 802 people in the second quarter, 648 people in the third quarter and 673 in the fourth quarter. While for hospitalization amounted to 139 people in the first quarter, 163 people in the second quarter, 43 people in the third quarter, and 111 people in the fourth quarter. This study aims to assess the effectiveness of religious music therapy to decrease blood pressure in hypertensive patients at Cut Nyak Dhien Meulaboh General Hospital in 2017. Type pre experimental research with One Group pretest-posttest, ie research designed to test changes that occur after an experiment without a comparison group. The sample size is 19 people. The results showed that after being given religious music therapy a decrease in blood pressure in hypertensive patients both sistole and diastole blood pressure. For blood pressure systole from wilcoxon test result obtained value of $z = 3.683$ ($Z > 1.96$) and value $p = 0,001$ ($p < 0,05$), whereas for blood pressure diástole obtained value $Z = 3,624$ ($Z > 1,96$) and p value = $0,001$ ($p < 0,05$). It is suggested to RSUD Cut Nyak Dhien Meulaboh to provide support to nurses who are in charge of applying religious music therapy to hypertension patients.

Index Terms: religious music therapy, hypertension, Aceh.

1 INTRODUCTION

Hypertension is a state of increased systolic blood pressure greater than or equal to 140 mmHg and diastolic over or equal to 90 mmHg. Hypertension can be classified into two types: primary or essential hypertension whose cause is unknown and secondary hypertension can be caused by kidney disease, endocrine disease, heart disease, and kidney kidney disorders. Hypertension is a major cause of heart failure, stroke, and kidney failure. Called a silent killer because people with hypertension often do not show symptoms (Smeltzer, 2004). According to Riskesdas 2013 data, the prevalence of hypertension in Indonesia is 26.5%. This shows a decrease when compared with the Riskesdas in 2007 that amounted to 31.7%. Although there has been a decline, hypertension must remain aware because it can affect other body systems. Aceh is a province with a high incidence rate. In 2007 Aceh was ranked 17th with the incidence of hypertension in Aceh province as much as 30.2%. While the results of Riskesdas in 2013 decreased by 21.5%. West Aceh regency is one of the districts located in Aceh Province. Hypertension is one of the health problems that is also greatly felt by the West Aceh District Government, especially for the District Health Office of West Aceh. The number of people with hypertension in the district of West Aceh in 2016 is 9.285 and ranks second after ispa. Management of hypertensive diseases can be pharmacological and nonpharmacological therapy. Pharmacological therapy in the form of drug therapy to lower blood pressure. While nonfarmakologis therapy is a companion therapy to accelerate the decline in blood pressure, such as music therapy. Music therapy is a skill using music or musical elements (Potter, 2005). In medicine, music therapy is referred to as complementary therapy (Complementary Medicine), Potter also defines music therapy as a technique used to cure a disease by using a particular sound or rhythm. Bustami, Meulaboh Nursing Program, Aceh, Email: bustami@poltekkesaceh.ac.id. The results of triyanto (2002) showed that classical music is effective for lowering vital signs such as blood pressure and pulse with $p = 0,000$. Even Dr. Raymon Bahr, director of the Heart Disease Unit at St. Agnes Hospital in Baltimore, uses special music to help patients overcome the crisis. Apparently, listening to the special music for 30 minutes can be soothing, equivalent to consuming 10 milligrams of valium (tranquilizers). One health

service facility located in West Aceh district that provides services to hypertensive patients is Cut Nyak Dhien Meulaboh Regional General Hospital. The number of visits of hypertensive patients who underwent outpatient in 2016 were 713 people in the first quarter, 802 people in the second quarter, 648 people in the third quarter and 673 in the fourth quarter. While for inpatient care was 139 people in the first quarter, 163 people on the second quarter, 43 people in third quarter, and 111 people on the fourth quarter (CND Meulaboh Hospital, 2016). Prevention of hypertension is generally done by changing lifestyles such as weight reduction, dietary regulation, regular exercise and reduce stress. This series is non-pharmacological management. Regular dietary regulation of diet and exercise has generally been shown to lower blood pressure, but the use of nasyid music as a nonpharmacological treatment for lowering blood pressure is still in the development stage. Music consisting of a combination of rhythm, rhythm, harmonics and the names of Allah's names and shalawat to prophets, is believed to have an effect on the treatment of the sick. Along with the development of the age of interest in research on music and how its influence on health also experienced the development. Based on research conducted by Chapin (2012) listening to music can reduce anxiety and stress so that the body relaxes, resulting in decreased blood pressure and heart rate. The results of initial observation showed that music therapy, especially religious music has never been applied by nurses at the General Hospital Cut Nyak Dhien Meulaboh to lower blood pressure. From interviews with nurses in First Class inpatient rooms, in addition to pharmacological therapies such as drugs, non-pharmacological therapy is often used only relaxation therapy. Therefore it would be nice if religious music therapy is also applied at the General Hospital Cut Nyak Dhien Meulaboh to complement existing therapies.

B. Research Methods

This study was a pre experimental study with One Group pretest-posttest, a study designed to test changes that occurred after an experiment without any comparison group (Notoatmodjo, 2010). Using the wilcoxon test. In this study to be analyzed is the effectiveness of relegi music therapy on the decrease in blood pressure in hypertensive patients at the Regional General Hospital Cut Nyak Dhien Meulaboh. The

samples in this study were hypertensive patients who were treated at the Cawat Nine General Hospital General Hospital Dhien Meulaboh which amounted to 19 people. Method of measurement is done by way of; blood pressure measurement is performed 15 minutes before the distraction of religious music performed, then continue with the rest phase for 15 minutes, then continue the second distraction of religious music, then rest for 15 minutes and finally do back blood pressure measurement. The result of the measurement before the action is done is then compared with the measurement result after the action is taken. Then the results were analyzed using a wilcoxon test to prove whether there was an effect of religious distraction music on the decrease in blood pressure.

C. Research Results

1.Characteristics of Respondents

Age of respondents who were the respondents were grouped into three namely middle adult (31-45 years old), old adult (46-60 years), and early age (61-74 years) (Hurlock, 2002). Education is categorized into four namely elementary, junior high, high school, university (PT). The work is grouped into four namely civil servants, private, farmers and IRT. The complete characteristics of the respondents can be seen in table 4.1 below:

Table 1. Frequency Distribution of Respondents by Characteristics

No	Categorized	Total	(%)
Age			
1	Medium Adults	2	10,5
2	Old Adults	15	79
3	Early Elderly	2	10,5
Total		19	100
Education			
1	Universities/College	3	15,8
2	Senior High School	11	57,9
3	Junior High School	3	15,8
4	Primary School	2	10,5
Total		19	100
Worker			
1	Government employees	3	15,8
2	Private	7	36,8
3	Farmers	4	21,1
4	Housewife	5	26,3
Total		19	100

Sources : Primary Data (2017)

From the table above it can be seen that the majority of respondents aged elderly are 16 people (84.2%), educational background most high school, ie 11 people (57.9%), and most respondents have jobs in the private sector that is 7 people 36.8%).

2. Blood Pressure of Hypertension Patients Before Religious Music Therapy.

The patient's blood pressure is categorized into three categories: mild, moderate, and severe hypertension. Categorized mild hypertension when blood pressure between 140/90 mmHg to 159/99 mmHg, moderate hypertension when blood pressure between 160/100 mmHg to 179/109 mmHg, and severe hypertension when blood pressure $\geq 180 / \geq 100$ mmHg. The result of blood measurement before religious music therapy can be seen in the following Table 2.

Table 2. Frequency Distribution of Respondents Based on Blood Pressure Before Religious Music Therapy

No	Categorized	Frequency(n)	Percentages (%)
1	Weight	0	0
2	Medium	10	52,6
3	Light	9	47,4
Jumlah		19	100

Sources : Primary Data (2017)

Based on the above table it can be seen that the majority of respondents who experience hypertension is in the medium category, ie as many as 10 people (52.6%).

3. Blood Pressure of Hypertension Patients After Religious Music Therapy

The patient's blood pressure is categorized into three categories: mild, moderate, and severe hypertension. Categorized mild hypertension when blood pressure between 140/90 mmHg to 159/99 mmHg, moderate hypertension when blood pressure between 160/100 mmHg to 179/109 mmHg, and severe hypertension when blood pressure $\geq 180 / \geq 100$ mmHg. The result of blood measurement before religious music therapy can be seen in the following Table 3 below:

Table 3. Frequency Distribution of Respondents Based on Blood Pressure After Religious Music Therapy

No	Categorized	Frequency(n)	Percentages (%)
1	Weight	0	0
2	Medium	3	15,8
3	Light	16	84,2
Jumlah		19	100

Sources : Primary Data (2017)

Based on the table it can be seen that after receiving religious music therapy the majority of respondents experienced hypertension in the light category, ie as many as 16 people (84.2%).

4. Changes in Blood Pressure of Hypertension Patients Before and After Music Therapy

Based on the comparison of blood pressure before and after religious music therapy on 19 respondents at Cut Nyak Dhien Meulaboh General Hospital obtained the following results:

Table 4 Frequency Distribution of Respondents Based on Changes in Blood Pressure of Hypertension Patients Before and After Religious Music Therapy.

No	Sistole			
	Categorized	n	%	z p
1	Reduced	17	89,5	3,683 0,001
2	Permanent	2	10,5	
Total		19	100	
No	Diastole			
	Categorized	n	%	z p
1.		16	84,2	3,624

2.	3	15,8	0.001
Total	19	100	

Sources; Primary Data (2017)

Based on the above table it can be seen that the systolic blood pressure of respondents mostly decreased, ie as many as 17 people (89.5%), and that did not decrease 2 people (10.5%). From the statistical test results obtained value $Z = 3.683$ ($Z > 1.96$) and p value = 0.001 ($p < 0.05$). So it can be concluded that there is influence of religious music therapy to decrease systolic blood pressure in hypertensive patients. Furthermore, the diastolic blood pressure of respondents mostly decreased, that is as many as 16 people (84.2%), and that did not decrease 3 people (15.8%). From the statistical test results obtained value $Z = 3.624$ ($Z > 1.96$) and p value = 0.001 ($p < 0.05$). So it can be concluded that there is influence of religious music therapy to decrease diastolic blood pressure in hypertensive patients. The results of this study are in line with Suhartini' (2007) research where the results showed that after classical music therapy, 90% of respondents experienced a decrease in systolic blood pressure, 95% of respondents experienced a decrease in diastolic blood pressure, 60% of respondents experienced a decrease in respiration, 100% % of respondents experienced a change in pulse rate, with a significance value of 0.000-0,002 ($p < 0.05$), meaning that giving classical music gives effect on vital signs. This is allegedly closely related to the mood changes of patients who become more calm when listening to religious music in accordance with the wishes of the patient, because the music is heard to contain religious values with a gentle rhythm. With the calm of the mood it will relax the entire limb including the brain. According to Taruna (2013), this calm brain condition will stimulate the body to produce Nitric oxide (NO) molecules that work on the blood vessel tone so that blood vessels can be slightly dilated and lower blood pressure. Music can affect physiological functions, such as respiration, heart rate and blood pressure. Music can also lower levels of the hormone cortisol that increases during stress. Music also stimulates the release of the hormone endorphins, a hormone that gives the body a sense of pleasure that plays a role in decreasing tension (Young and Koopsen, 2007). Seeing the results of this study, the application of religious music therapy for patients with hypertension is very appropriate recommended as a companion of pharmacological therapy, so that the patient's hypertension will quickly decrease.

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