THE EFFECTIVENESS OF BEETHOVEN'S "FUR ELISE' AS CLASSICAL MUSIC THERAPY ON LOWERING STROKE CLIENTS' BLOOD PRESSURE IN THE INPATIENT ROOMS OF DR. PIRNGADI REGIONAL GENERAL HOSPITAL, MEDAN, IN 2014

by Endang Susilawati

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ABSTRACT

Music therapy is a therapy that uses a systematic, controlled, and directed music to heal, rehabilitate, educate, and train children and adults who suffer from physical, mental or emotional ailments. A steady rhythmic music which gives a regular rhythm will give balance to a person's heart beat and pulse that can lower h[illegible]lood pressure.

This study is a quasi-exp[illegible]mental design of one group pre-post test, which aims to find out the effectiveness of Beethoven classical music therapy on lowering stroke patients' blood pressure at Dr. Pirngadi Regional General Hospital. The population was all stroke [illegible]atients caused by hypertension and treated in Dr. Pirngadi Regional General Hospital, and 23 of them were used as the samples, taken by using purposive sampling technique. The data were gathered by using observation sheets, before and after music therapy intervention and analyzed by using pair t-test at the significance level of 95%.

The results of the research showed that after classical music therapy intervention, systolic blood pressure had a significant reduction. The average content of systolic blood pressure before the intervention was 157,5 mmHg. 5 minutes after the intervention it was 154,7 mmHg , 10 minutes after the intervention it was 149,2 mmHg, and 15 minutes after the intervention it was 145, 8 mmHg at p-value < 0.001. The average diastolic blood pressure before the intervention was 98,4 mmHg, 5 minutes after the intervention it was 94.3 mmHg, 10 minutes after the inter[illegible]ntion it was 91.8 mmHg, and 90.5, and 15 minutes after the intervention it was 90.5 mm/Hg at p-value < 0.001. It is recommended that Beethoven Classical music should be needed for health care and a policy for the provision of complementary therapies should be set in the Inpatient Rooms, especially in the Stroke Unit.

Keywords : *Music Therapy, Blood Pressure*

1. Background

Stroke is an acute neurological dysfunction which is caused by blood circulation disorder and it occurs abruptly (in seconds) or at least swift (in hours) with the symptoms and token which are in line with disturbed brain focal area (World Health Organization, 2005).

The number of stroke patients tends to increase each year, not only attacks old people but also young and productive people. Nowadays, Indonesia is recognized as the country with the largest number of stroke patients in Asia (Yastroki, 2009).

Stroke ranks the third in causing death in the United States. Referring to the report of the American Heart Association, about 795,000 people in the United States are attacked by stroke each year. Of that number, 610,000 people undergo the first stroke while 185,000 of them undergo relapses.

Nowadays, there are four million people in the United States live in physical disability because of stroke and 15% to 30% of them suffer from permanent defect (*Centers for Disease Control and Prevention*, 2009).

In Asia (Thailand and China) there are more rates of incidence of bleeding. In the last few years, there was a tendency for life span of the people who were affected by stroke to be longer (Hamzah, 2006).

This rate becomes worse by the shift of ages in stroke patients since stroke now begins to attack younger and more productive people, and even more than that, it also attacks teenagers (Gemari, 2008).

Economically, the incidence of stroke has bad effect because of defect, for it will decrease the productivity and economic capacity of the people and the Nation (Yastroki, 2009).

According to the survey in 2004, stroke is the number one killer in public hospitals throughout Indonesia. It is estimated that 500,000 people are affected by stroke. Of that number, one third of them return to normal, and the other one third undergo mild until

moderate functional disorder, while the remaining one third undergo serious functional disorder which forces them to continuously stay on bed (HIMAPID FKM UNHAS, 2007). Stroke is a health problem which needs to be paid specific attention.

Based on Riskesdas (Basic Health Research), it was found that stroke is the cause of death, and the principal physical disability in almost all hospitals in Indonesia. The rate of the incidence of stroke is increasing from year to year. In every seven people who die in Indonesia, one of them is affected by stroke (DEPKES, 2011).

Hypertension is one of the causes of 17.5 million cases of stroke all over the world. It is the condition in which blood pressure increases.

There are many factors which can influence the incidence of blood pressure; they are, among others, age, stress, medication, obesity, smoking, and alcohol.

The relapse of human blood pressure can be warded off by using pharmacological therapy such as anti-hypertension medicines and non-pharmacological medicines which include healthy life behavior and music therapy.

Music therapy is a type of therapy by using systematic, controllable, and guid music in curing, rehabilitating, educating, and training children and adults who suffer from physical, mental, and emotional disorder. Music which consists of the combination of rhythm, harmony, and melody has been believed to have the influence on healing ailments.

Stable rhythmical music which gives harmonious rhythm will provide harmony for human heartbeat and pulse (Natalina, 2013).

The use of music as a therapy has been known since the ancient Greece era and it began to be applied during World War I and World War II. The use of music as the medium of therapy in hospitals also has been developed in the last few years.

A research conducted by Chavin in 2004 revealed that listening to classical music could decrease the level of apprehensiveness and stress so that one's body undergoes relaxation which would bring about the lowering in blood pressure and pulse.

The result of the research conducted by Asrin et.al showed that music therapy which has dominant moderate frequency is significant for co olling blood pressure response of primary hypertension patients.

The result of the research conducted by Sarayar et al indicated that there was the influence of classical music on the lowering in blood pressure of pre-hemodialysis patients in Dahlia BLU Room of RSUP Prof. Dr. R.D. Kandou, Manado at p-value = 0.00 (α = 0.0).

The result the preliminary research in the Inpatient Rooms of Dr. Pirngadi Regional General Hospital, Medan, showed that there were 144 patients affected by stroke from October until December, 2013. In general, stro e is caused by hypertension.

Based on the background above, the researcher was interested in studying the effectiveness of music therapy on the lowering in stroke patients' blood pressure in the Inpatient Rooms of Dr. Pirngadi Regional General Hospital, Medan, in 2014.

1.1. Objective of the Research

1.1.1. General Objective

To find out the influence of the therapy of Beethoven classical music on blood pressure of stroke pa ents which were given music therapy in the Inpatient Rooms of Dr. Pirngadi Regional General Hospital, Medan.

1.1.2. Specific Objectives

a. To find out the average of blood pressure of stroke patie s before they were given music therapy in the Inpatient Rooms of Dr. Pirngadi Regional General Hospital, Medan.
b. To find out the average of blood pressure of stroke patie s after they were given music therapy in the Inpatient Rooms of RSUD Dr. Pirngadi, Medan.
c. To analyze the disparity in the average of blood pressure of stroke patients befo and after they were given music therapy in the Inpatient Rooms of Dr. Pirngadi Regional General Hospital, Medan.

1.2. Formulation of the Problems

How far was the effectiveness the therapy of Beethoven classical music on t lowering in blood pressure of stroke patients in the Inpatient Rooms of Dr. Pirngadi Regional General Hospital, Medan?

1.3 Hypothesis of the Research

Beethoven classical music therapy was effective in lowering blood pressure of stroke patients.

1.4 Significance

1.4.1 Patients/Families and People

Increasing the outlook and the science on music therapy in lowering blood pressure so that patients/families and people could apply it in their homes to control blood pressure.

1.4.2 Hospitals

The management of the hospital attempted to determine the policy in applying complementary therapy for stroke patients besides the therapy of anti-hypertension medicines.

2. Research Methodology

2.1. Types of Research

The type of the research was quasi experiment, using one group. Pre and post tests would be conducted in order to measure the success in the intervention by the design model as follows:

O1 ——————X ——————→ O2

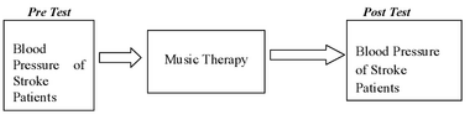
Explanation:

O1 = Blood pressure of stroke patients before intervention

X = Intervension of Beethoven classical music therapy

O2 = Patients' blood pressure after intervention

2.2. Conceptual Framework



Picture 3.1. Conceptual Framework of the Research

Independent variable in the research was music therapy and dependent variable was blood pressure of stroke patients.

2.3. Location and Time of the Research

The research was conducted in the Inpatient Rooms of Dr. Pirngadi Regional General Hospital, Medan. The data were gathered from September until October, 2014

2.4. Population and Samples

The population was all stroke patients caused by hypertension who were treated in the Inpatient Rooms of Dr. Pirngadi Regional General Hospital, Medan.

The samples were taken by using Lameshow formula as follows:

$$n = \frac{\sigma^2 (Z_{1-\alpha/2} + Z_{1-\beta})^2}{(\mu_1 - \mu_2)^2}$$

Explanation:

n = minimum number of samples

$Z_{1-\alpha/2}$ = value of table Z at α 5 % = 1,96

$Z_{1-\beta}$ = value of table Z at β 10% = 1,28

σ = standard deviation (can be taken from the research conducted by Sarayar et.al = 14,24)

$\mu_1-\mu_2$ = variance of mean value pre and post-test (=12)

Based on the calculation of the samples in this research, the minimum number of samples was 15 respondents. At the time the data were gathered, the samples were 23 respondents.

The samples were taken by using purposive sampling technique which was determined by the following criteria:

1. Adults
2. Diagnosed medically as affected by non-hemorrhagic stroke which was caused by hypertension.
3. Treated in the Stroke Unit of Dr. Pirngadi Regional General Hospital, Medan.
4. Fond of music

2.5 Definition of Operational

What it meant by Operational was:

3.5.1. Music therapy: A type of medication which was done by having the respondents listen to classical music, Beethoven, with moderate frequency (750-3,000 Herzt).

3.5.2. Blood pressure of stroke patients was the result of measurement on the pressure undergone by blood in systolic and diastolic blood vessel systemically in human body at mmHg; tensimeter of Nova brand was used as measuring device.

2.6. Data Gathering Process

The activities in data gathering in this research began by measuring respondents'

blood pressure, followed by their listening to Beethoven relaxing classical music in 15 minutes, using phonograph record, 'Websong.' They wore headsets in listening to the music. After that, their blood pressure was measured again by using tensimeter, 'Nova'. The measurement was conducted three times: 5 minutes, 10 minutes, and 15 minutes after the intervention.

2.7. Processing Plan and Data Analysis

The data were processed by using computer in order to find out the average blood pressure of the stro patients, using univatriate analysis and to find out the influence of Beethoven classical music therapy on respondents' blood pressure, using bivatriate analysis and paired t-test at the significance level of 95%.

3. Result of the Research

3.1. Description of the Research Location

Dr. Pirngadi Hospital was established on August 11, 1928 by the Dutch Colonial Government. It was named "GEMENTA ZIEKEN HUIS." The laying down of its cornerstone was conducted by a ten year-old girl, Maria Constantia Macky, the daughter of Medan Mayor, Dr. W. Bays, who was appointed as the Director of the hospital.

During the Japanese occupation, the hospital was expropriated and changed its name to "SYURITSU BYUSONO INCE." An Indonesian by birth, Dr. RADEN PIRNGADI GONGGO PUTRO, was appointed as the director of the hospital, and his name has been inaugurated as the name of the hospital until now.

After Indonesia proclaimed its independence on August 17, 1945, Dr. Pirngadi Hospital was expropriated and taken care by the RIS (Interim Republic of Indonesia) of East Sumatera Partition State. By the rapid political upheaval at that time, on August 17, 1945 all RIS partition states were abolished and changed to NKRI (Unitary State of the Republic of Indonesia). Dr. Pirngadi Hospital was also expropriated an aken care by the central government/the Ministry of Health in Jakarta.

In the period o 950 to 1952 Dr. Pirngadi General Hospital played an important role in the historical proces f the establishment of the Medical School (the Faculty of Medicine), University of Sumatera Utara because e of the requirements for establishing the Faculty of Medicine, University of Sumatera Utara, was that the faculty had to own a hospital as the supporting facility. Besides that, the faculty had to have instructors (usually doctors), either Dutch or native Indonesian, who worked at Dr. Pirngadi eral Hospital.

Since the establishment of the Faculty of Medicine, University of Sumatera Utara, on August 20, 1952, Dr. Pirngadi Hospital has been automatically become the Teaching Hospital which was used as the Clinical cretariat for the medical students of the University of Sumatera Utara.

RSU (General Hospital) H. Adan Malik became the Teaching Hospital of the Faculty of Medicine, University of Sumatera Utara, in January 1993, Dr. Pirngadi General Hospital changed its status from the Teaching Hospital to the Hospital for Teaching so that by this status Dr. Pirngadi General Hospital with its facilities and capacity was not only used as education place for aspirant doctors from the Faculty of Medicine, University of Sumatera Utara, but also the aspirant doctors from other faculties in North Sumatera, West Sumatera, and Lampung.

There are no correct data which indicate when Dr. Pirngadi General Hospital was handed its ownership from the central government to the North Sumatera Provincial Administration. In line with the implementation of Regional autonomy, Dr. Pirngadi General Hospital was handed its ownership from the North Sumatera Provincial Administration to Medan City Administration on December 27, 2001.

After Dr. Pirngadi General Hospital belonged to Medan City Administration, the latter paid serious attention to develop the hospital by rehabilitating and improving it in all fields. The effort was realized by the Regional Regulation of Medan No. 30/2002 on September 6, 2002 on Institutional Change from Dr. Pirngadi General Hospital to the Health Care Service of Dr. Pirngadi General Hospital, Medan. In consequence, there was the organization, personnel, and management restructuring, and Dr. H. Sjahrial R. Anas, MHA was appointed as its Director. This was followed by the improvement of facility, infrastructure and the procurement of sophisticated devices as the support for the service. In this era, history recorded a big and bold move of Medan Mayor when he built the extension of 8 (eight) stories, furnished by

sophisticated facilities. Its cornerstone laying was performed on March 4, 2004, and the building was operated on April 16, 2005.

Based on the human resources, facilities, and infrastructure of Dr. Pirngadi General Hospital in implementing education, its status was then changed from the Hospital as the Place for Education to the Education Hospital.

Based on the recommendation from IRSPI (Indonesian Education Hospital Association), feasibility study on the Dr. Pirngadi General Hospital, Medan, to become the Education Hospital was conducted. The assessment (visitation) team consisted of Director of Specialist Medical Care, Director General in charge of Medical Care, the Head of Legal and Organizational Bureau, the Secretary General of the Department of Health, the Chairperson of the Education General Hospital Association and the Head of Legal and Organization Department, and the Secretary of Directorate General of Medical Care. Finally, on April 10, 2007, Health Care Service of Dr. Pirngadi General Hospital, Medan, officially declared that the hospital became the Education Hospital, based on the Decree of the Minister of Health of the Republic of Indonesia No. 433/Menkes/SK.IV/2007.

3.2. Univatrate Analysis

3.2.1. Respondents' Characteristics

There were 23 respondents in this research. Their characteristics could be seen in the following table:

Table 3.1. Respondents' Characteristics Related to the Effectiveness of Music Therapy in Lowering Blood Pressure at Dr. Pirngadi Regional General Hospital, Medan.

Karakteristik	n	%
Age		
Younger Adult 26-35 years old	-	-
Older Adults 36-45 years old	3	13,0
The Young Elderly 46-55 years old	8	34,8
Middle Aged 56-65 years old	8	34,8
Old People > 65 years old	4	17,3
Sex		
Male	14	60,9
Female	9	39,1
Ethnic Group		
Acehnese	2	8,7
Bataknese	8	34,8
Javanese	5	21,7
Karonese	4	17,4
Malayunese	3	13,0
Padangnese	1	4,3
Occupation		
Government Employee	5	21,7
Indonesian National Army/Police Force	1	4,3
Teacher	2	8,6
Entrepreneur	4	17,3
Private Company Employee	2	8,7
Farmer	4	17,3
Rickshaw Driver	1	4,3
Housewife	4	17,3
Total	**23**	**100**

Based on Table 3.1 above, it was seen that the majority of the respondents' characteristics were as follows: 39.1% of the respondents were 50 to 59 years old, 60.9% of them were males, 34.8% of them were Bataknese, 73.9% of them were Moslems, and 21.7% of them were government employees.

3.2.2. Respondents' Lifestyle

Respondents' lifestyle and habit could be seen from their smoking habit, their consumption of meat, and their physical exercises. The frequency of respondents, based on their lifestyle could be seen in the following table.

Tabel 3.2. Respondents' Lifestyle Related to the Effectiveness of Music Therapy on Lowering Blood Pressure in Dr. Pirngadi Regional General Hospital, Medan, in 2014

Lifestyle	n	%
Smoking		
Yes	15	65,2
No	8	34,8
Meat Consumption		
Each Week	8	34,8
Each Month	4	17,4
Sometimes	9	39,1
Hari Raya/New Year	2	8,7
Physical Exercises		
Every Day	1	4,3
Twice a Week	2	8,7
Each Week	10	43,5
Sometimes	3	13,1
Never	7	30,4
Total	**23**	**100**

From the table above, it could be seen that, in general, respondents had the habit of smoking (65.2%), the habit of sometimes consuming meat (39.1%), and the habit of doing physical exercises each week (43.5%).

3.2.3. Description of the Respondents' Average Blood Pressure before and after the Intervention

Tabel 3.3. The Average of Respondents' Systolic Blood Pressure before and after the Intervention of Beethoven Classical Music Therapy

Before Intervention	5 Minutes After Intervention	10 Minutes After Intervention	15 Minutes After Intervention
157,5 mmHg	154,7 mmHg	149,2 mmHg	145,8 mmHg

Based on the table above, it could be seen that the average value of respondents' blood pressure became lower after 15 minutes of the intervention (145.8 mmHg).

Tabel 3.4. The average of Respondents' Diastolic Blood Pressure before and after the Intervention of Beethoven Classical Music Therapy

Before Intervention	5 Minutes After Intervention	10 Minutes After Intervention	15 Minutes After Intervention
98,4 mmHg	94,3 mmHg	91,8 mmHg	90,5 mmHg

Table 3.4 above showed that the average value of respondents' diastolic blood pressure became lower after 15 minutes of giving music therapy than that after giving 5 and 10 minutes of music therapy.

3.3. Bivatriate Analysis

3.3.1. The Effectiveness of Beethoven Classical Music Therapy on the Lowering in Stroke Patients' Blood Pressure in Dr. Pirngadi Regional General Hospital, Medan

The effectiveness of Beethoven classical music therapy on the lowering in respondents' systolic blood pressure was viewed from the average disparity of respondents' systolic blood pressure before the intervention and after the intervention in the 5th, 10th, and 15th minutes by using paired t-test because all variables had normal distribution of data (the result of Kolmogorov Smirnov test).

Tabel 3.5. The Average Disparity of Respondents' Systolic Blood Pressure before and after the Intervention of Beethoven Classical Music Therapy

Systolic	Mean	SD	P Value
Before Intervention	157,5	10,4	
After 5 Minute Intervention	154,7	9,6	0,000
After 10 Minute Intervention	149,2	9,6	0,000
After 15 Minute Intervention	145,8	9,7	0,000

From Table 3.5 above, it could be seen that there was significant average disparity of systolic blood pressure between before the intervention and after the intervention, either in the 5th minute (p-value < 0.001), the 10th minute (p-value < 0.001), and the 15th minute (p-value < 0.001).

In the 5th minute after the intervention, there was the lowering in blood pressure of 2.8 mmHg, in the 10th minute there was the lowering in blood pressure of 8.3 mmHg, and in the 15th minute there was the lowering in blood pressure of 11.7 mmHg.

3.3.2. The Effectiveness of Beethoven Classical Music Therapy on the Lowering in Respondents' Diastolic Blood Pressure in Dr. Pirngadi General Hospital, Medan

The effectiveness of Beethoven classical music therapy on respondents' diastolic blood pressure was viewed from the average disparity of respondents' diastolic blood pressure before and after the intervention in the 5th, 10th, and 15th minutes by using paired t-test.

Tabel 3.6 The Average Disparity of Respondents' Diastolic Blood Pressure before and after the Intervention of Beethoven Classical Music Therapy

Diastolic	Mean	SD	P Value
Before Intervention	98,4	2,6	
After 5 Minute Intervention	94,3	2,7	0,000
After 10 Minute Intervention	91,8	2,8	0,000
After 15 Minute Intervention	90,5	3,1	0,000

It could be seen that there was the average disparity of diastolic blood pressure before and after the intervention in the 5th minute (p-value < 0.001), in the 10th minute (p-value < 0.001), and in the 15th minute (p-value < 0.001).

In the 5th minute after the intervention, there was the lowering in diastolic blood pressure of 4.1 mmHg, in the 10th minute there was the lowering in diastolic blood pressure of 6.6 mmHg, and in the 15th minute there was the lowering in diastolic blood pressure of 7.9 mmHg.

4. DISCUSSION

4.1. Discussion

This research was conducted on stroke patients, caused by hypertension; they were given Beethoven classical music therapy, entitled "Fur Elise." Before the intervention of classical music therapy, the result of the patients' blood pressure was high: their systolic blood pressure was in the average range of 157.5 mmHg and their diastolic blood pressure was in the average range of 98.4 mmHg. Blood pressure of 190/110 was undergone by a respondent who was 53 years old. This indicated that the age factor did not always influence on the increase in an individual blood pressure; there were other factors such as lifestyle which was undergone by a respondent who was 53 years old. He used to smoke and was overweight.

After the patients were given music therapy, there was the lowering in their blood pressure; it could be seen from the result of the measurement. In the first five minutes, after the music therapy had been given, there was no significant lowering in the blood pressure. There was only a lowering in the respondents' systolic blood pressure in three respondents from 150 mmHg to 140 mmHg (two respondents) and from 170 mmHg to 160 mmHg (one respondent) so that the average value was 154.7 mmHg.

In the second ten minutes, respondents' systolic blood pressure was measured again. The result indicated that there was the lowering in blood pressure of 1 respondents. The lowering occurred in the systolic blood pressure of 10 mmHg from the previous blood pressure so that the average value was 149.2 mmHg.

The lowering in systolic blood pressure was clearly seen in 15 minutes after the intervention so that the average value was 145.8 mmHg.

Diastolic blood pressure also lowered, like what happened to systole blood pressure. In the beginning, respondents' diastolic blood pressure was 80 - 100 mmHg. Diastolic blood pressure only occurred in one respondent.

Five minutes after the intervention, diastolic blood pressure lowered to 10 mmHg. It was continuously stable until 15 minutes after the intervention, starting from the first day to the third day. The same was true to the average value. The average value of diastolic blood pressure in five minutes after the intervention was 94.3 mmHg. The next ten minutes the average value of diastolic blood pressure is 91.8 mmHg, and the next 15 minutes diastolic blood pressure was 90.5 mmHg. The result of statistic paired t-test at the significance level of 95% showed that there was the significant result in the first 5 minutes, 10 minutes, and 15 minutes after the intervention at p-value = 0.000 from the first day until the third day when this research was conducted. It was found that music therapy could decrease a person's level of stress so that there was a relaxation to the physiological response when music was listened to by a person who had hypertension. Besides that, music therapy could heal man physically and psychologically.

Some researchers from *The Neuro*, through *MRI scan* proved that brain released dopamine substance (hormone which is related to brain system, gives comfort and strength to motivate a person proactively to do a certain activity).

The music therapy could also decrease andrenocorticotropic hormone (ACTH), a stress hormone (Djohan, 2005). Through music, a person can also release his hidden emotion and bad memory. It is also very effective to make human body relaxed because body, emotion, and soul release sigh of relieve.

This condition is in line with the result of the research by Chavin (2004) which stated that listening to music could decrease the level of apprehensiveness and stress so that human body would relax and would bring about the lowering in blood pressure and pulse.

Music is able to trigger strong feeling and release it from the body like poison which is discharged from a wound (Merrit, 2003).

The spread of music is very potential to give resonance of its listener's feeling from negative to positive feeling and to increase the feeling of delight and peacefulness (Salapessy, 2001).

Besides that, through music a person can make an effort to find internal harmony (inner metabolism of human body so that the process can run properly. With better metabolism, human body will be able to build better anti-body system so that it will be guarded against any disease (Satiadarma, 2001)

Therefore, music is a beneficial device for a person to find a harmony in his soul. This is

important because by harmony in one's self, he will easily cope with his stress, tense, pain, and various types of disturbance or negative emotion (Ortiz, 1997). Besides that, music, through its sound, can change unharmonious frequency to come back to normal and healthy vibration so that it can recede to the normal condition (Salampessy, 2001).

Music therapy is therapeutic which means that it can cure ailments. One of the reasons is that music produces rhythmical response caught through ears and processed in the body nervous system and gland in the brain which reorganizes the interpretation of the sound to the internal rhythm of his sense of hearing. This internal rhythm influences.

The result of the research conducted by Asrin et.al showed that music therapy which dominantly in moderate frequency was very significant to handle the response of blood pressure in primary patients.

The result of the research conducted by Sarayar et.al showed that there was the influence of classical music therapy on the decrease in blood pressure of pre-hemodialysis patients in Dahlia BLU Room of RSUP Dr. R. D. Kandou, Manado at p-value < 0.05 (p < 0.01).

4.2. Limitation of the Research

In this research, there was no control group; the control was blood pressure before the intervention. Besides that, this research was conducted by ignoring participating disease and medical therapy of anti-hypertension which was given to respondents. The researcher was afraid if it would be bias in this research.

5. CONCLUSION AND SUGGESTION

5.1. Conclusion

The conclusion of the research was that music therapy was effective in decreasing blood pressure of stroke patients caused by hypertension. It was indicated by the result of statistic paired t-test which indicated that there was significant result at p-value < 0.05 (p < 0.001) for 5 minutes, 10 minutes, and 15 minutes after the intervention of Beethoven's "Fur Elise" classical music therapy.

5.2. Suggestion

5.2.1. Patients/Families/People

It is recommended that stroke patients, caused by hypertension, should be facilitated by classical music therapy as a complementary therapy in lowering their blood pressure.

5.2.2. Health Service

It is recommended that a policy should be made in providing the facility for music therapy in the Inpatient Rooms where stroke patients are being treated, especially the facility for music therapy in the Stroke Unit.

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