

The Effect of Murottal Therapy on Blood Pressure in Elderly Patients With Hypertension at Jambidan Posyandu, Banguntapan 1 Community Health Center

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Abstrack: Hypertension is a non-communicable disease that poses a threat to people in developing countries. Hypertension is a cause of death, called the silent killer, and is mostly suffered by the elderly. This is caused by physiological factors, namely decreased body function due to the aging process, so that non-communicable diseases attack many elderly people. The global health standard does not only rely on curative measures because most diseases can be prevented by healthy lifestyles and avoiding risky lifestyles. This study aims to determine the effect of murottal therapy on blood pressure in the elderly with hypertension. This study used a quasi-experimental research design using a one-group pre-post test design and a sample size of 34 elderly with the sampling technique of purposive sampling and bivariate analysis using the Wilcoxon test. The result is that murottal therapy has an effect on reducing blood pressure in elderly people with hypertension, with a Wilcoxon signed rank test p-value of 0.000 ($P < 0.05$), so there is an effect of murottal therapy on blood pressure in the elderly with hypertension.

Keywords: Murottal therapy; elderly; hypertension.

1. Introductions

The increase in the number of elderly people gives special attention to those who are aging. The problems that need special attention for the elderly with regard to the process of growing old, which causes a change in the physical, cognitive, emotional, social, and sexual (Adam 2019). Increasing age increases blood pressure, both systolic and diastolic. One of the diseases that are closely related to the aging process is blood circulation disorders, including high blood pressure or hypertension, which is an increase in blood pressure that is excessive and almost constant in the arteries (Suhartini et al. 2017).

Hypertension is the most common disease suffered by the elderly. This is caused by normal human physiological factors that decrease with age (Lisnawati 2018). Patients with hypertension who are undiagnosed and untreated and therefore cannot control blood pressure in the long term are at increased risk for complications of hypertension and cardiovascular disease (Aidha and Tarigan 2018). The number one cause of death in Indonesia is cardiovascular disease, such as hypertension (World Health Organization 2017). Hypertension in Indonesia reached 34.1%, which is an increase from 2013's percentage of 25.8%. Prevalence in Indonesia was the highest in 2018, namely 13.2% in North Sulawesi and Papua; the lowest was 4.4% according to the doctor's diagnosis and taking antihypertensive medication. While the prevalence of hypertension alone in people aged >18 years in 2018 was the highest in South Kalimantan (44.1%)

average rate of hypertension in Indonesia is 34.1% (RISKESDAS 2018).

In the treatment of hypertension, there are two ways: pharmacological and non-pharmacological. Hypertension is pharmacologically treated by using anti-hypertensive drugs (Lindayani, Urifah, and Suwandi 2018). One of the non-pharmacological actions that can be used to stabilize blood pressure is music therapy. Music therapy is a nursing intervention effectively used to lower the blood pressure of patients with hypertension. Music therapy is popular in Indonesia, one of which is a therapeutic murottal because Indonesia is a country with a Muslim population. The world's biggest Qur'an murottal therapy is an effective music therapy used to lower blood pressure in hypertensive patients (Siswoyo, Setyowati and A'la, 2017; Yuliani *et al.*, 2018).

The murottal Qur'an is one method of treatment that has all kinds of programs and data needed for treating various disorders of the body's cells. Listening murottal can affect the emotional intelligence (EQ), intelligence quotient (IQ), and spiritual intelligence (SQ) of a person. Listening to murottal will bring some calm and relaxation to a person, so it will contribute to a decrease in blood pressure. The tempo of murottal is between 60 and 70 bpm and has a low tone, which may reduce stress and anxiety (Yuliani *et al.*, 2018; Amelia, Kartika and Apriliani, 2022).

In the interviews with 10 elderly patients with hypertension in the village Jambidan, 7 elderly said that not knowing therapy murottal is able to reduce the stress that affects blood pressure in the elderly, while 3 elderly said that people with hypertension who know therapy murottal are able to reduce stress and feel relaxed while listening to murottal do not even know that a reduction in stress and relaxation is able to affect blood pressure in elderly hypertensive patients. Murottal therapy has many benefits for patients with hypertension, so researchers are interested in studying the effect of murottal therapy on blood pressure in elderly hypertensive patients. So this study aims to see the effect of murottal on reducing blood pressure in elderly patients at Jambidan Posyandu Banguntapan 1 Community Health Center by recording the results of the pretest and posttest.

2. Methods

Methods

The research method is a quasi-experimental design with a one-group pre-post-test design. The population in this study was elderly with hypertension in IHC Jambidan. 40 elderly with an age >60 years old and a sample of 34 elderly, the sampling method is purposive sampling (Hwang and Sim 2020).

Data Collection Technique

Based on the techniques of data collection, it can be done in two ways: with primary data and secondary data. Primary data was obtained through the examination of blood pressure directly by the respondent. Secondary data is data obtained from the record books, IHC and preliminary studies, books, journals, and the internet.

Technical Data Analysis

Murottal intervention is given by adjusting the position of the respondent, who is sleeping lying down and relaxing with their eyes closed. Respondents give murottal surah Ar-Rahman using headphones. Blood pressure was measured before and after the intervention using a digital sphygmomanometer. Univariate analysis aims to explain or describe the characteristics of each of the variables, including age, gender, occupation, and education. A bivariate analysis was conducted to determine whether there is a relationship between the two variables or influences (Notoadmojo 2018). Hypothesis testing is done by Wilcoxon to find the relationship between two variables or more on the condition that the distribution data is not normal.

3. Results

Tabel 1. Distribution characteristics of elderly hypertensives in Posyandu Jambidan Banguntapan 1 Community Health Center

| Characteristics | Group | F | % |
|-----------------|--------------------|-------------------|----------------------|
| Gender | Woman | 26 | 76.5 |
| | Man | 8 | 23.5 |
| | Total | 34 | 100.0 |
| Age | 60-70 | 25 | 73.5 |
| | 71-80 | 9 | 26.5 |
| | Total | 34 ± 11.31 | 100.0 ± 33.23 |
| Education | No School | 18 | 52.9 |
| | Elementary School | 12 | 35.3 |
| | Junior High School | 2 | 5.9 |
| | Senior High School | 2 | 5.9 |
| | Total | 34 | 100.0 |
| Profession | Housewife | 10 | 29.4 |
| | Labor | 9 | 26.5 |
| | Farmer | 6 | 17.6 |
| | Trader | 8 | 23.5 |
| | Freelance | 1 | 2.9 |
| | Total | 34 | 100.0 |

Source: Primary Data, 2020

According to table 1, there were 26 female respondents (76.5%) and 8 male respondents (23.5%) out of 34 total respondents. This shows the majority of respondents were female. By age there were 25 respondents aged 60–70 years (73.5%) and 9 respondents aged 71–80 years (26.5%). This shows the majority of respondents are aged 60–70 years. Based on such educational backgrounds, 18 people have no school (52.9%), elementary school were 12 people (35.3), and 2 in junior high school (5.9%), while the senior high school was 2 respondents (5.3%). This shows the majority of respondents have no school background. Based on their work, 10 of them are housewives (29.4%), 9 are traders (26.5%), 6 are laborers (17.6%), and 8 are farmers (23, 5%), with 1 being a freelancer (2.9%). This shows the majority of respondents worked as housewives.

Table 2. Blood pressure data before murottal therapy in Posyandu Jambidan Banguntapan 1 Community Health Center

| Variable Blood Pressure | Pretest | | | | | | | | |
|---------------------------------|---------|-------|-------|----|-------|-------|----|-------|-------|
| | H1 | | | H2 | | | H3 | | |
| | F | % | M | F | % | M | F | % | M |
| Systolic Blood Pressure | | | | | | | | | |
| 130-140 | 2 | 5.9 | | 2 | 5.9 | | 4 | 11.8 | |
| 141-150 | 10 | 29.4 | | 19 | 55.9 | | 15 | 44.1 | |
| 151-160 | 10 | 29.4 | | 7 | 20.6 | | 12 | 35.3 | |
| 161-170 | 8 | 23.5 | 158.4 | 5 | 14.7 | 152.7 | 3 | 8.8 | 153.5 |
| 171-180 | 3 | 8.8 | | 1 | 2.9 | | 0 | 0 | |
| 181-190 | 1 | 2.9 | | 0 | 0 | | 0 | 0 | |
| Total | 34 | 100.0 | | 34 | 100.0 | | 34 | 100.0 | |
| Diastolic Blood Pressure | | | | | | | | | |
| 60-70 | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| 71-80 | 11 | 32.4 | | 13 | 38.2 | | 13 | 38.2 | |
| 81-90 | 18 | 52.9 | 86.44 | 20 | 58.8 | 84.8 | 19 | 55.9 | 86.1 |
| 91-100 | 5 | 14.7 | | 1 | 2.9 | | 2 | 5.9 | |
| Total | 34 | 100.0 | | 34 | 100.0 | | 34 | 100.0 | |

Source: Primary Data, 2020

Based on table 2, the results of measuring the patient's systolic blood pressure before carrying out murottal therapy were, an average of 158.4 mmHg on the first day, 152.7 mmHg on the second day, and 153.5 mmHg on the third day. For diastolic blood pressure an average of 86.44 mmHg on the first day, 84.8 mmHg on the second day, and 86.1 mmHg on the third day.

Table 3. Blood pressure data after murottal therapy in Posyandu Jambidan murottal Puskesmas Bangutapan 1

| Variable Blood Pressure | Posttest | | | | | | | | |
|---------------------------------|----------|-------|-------|----|-------|-------|----|-------|-------|
| | H1 | | | H2 | | | H3 | | |
| | F | % | M | F | % | M | F | % | M |
| Systolic Blood Pressure | | | | | | | | | |
| 130-140 | 3 | 8.8 | | 7 | 20.6 | | 5 | 14.7 | |
| 141-150 | 14 | 41.2 | | 17 | 50.0 | | 19 | 55.9 | |
| 151-160 | 5 | 14.7 | | 5 | 14.7 | | 8 | 23.5 | |
| 161-170 | 8 | 23.5 | 156.8 | 5 | 14.7 | 148.2 | 2 | 5.9 | 150.6 |
| 171-180 | 4 | 11.8 | | 0 | 0 | | 0 | 0 | |
| 181-190 | 0 | 100.0 | | 0 | 0 | | 0 | 0 | |
| Total | 34 | 100.0 | | 34 | 100.0 | | 34 | 100.0 | |
| Diastolic Blood Pressure | | | | | | | | | |
| 60-70 | | | | | | | 1 | 2.9 | |
| 71-80 | 18 | 52.9 | 83.2 | 17 | 50.0 | 82.7 | 19 | 55.9 | 82.9 |
| 81-90 | 16 | 47.1 | | 16 | 47.1 | | 14 | 41.2 | |
| 91-100 | 0 | 0 | | 1 | 2.9 | | 0 | 0 | |
| Total | 34 | 100.0 | | 34 | 100.0 | | 34 | 100.0 | |

Source: Primary Data, 2020

Based on table 3, the results of measuring the patient's systolic blood pressure after carrying out murottal therapy were, an average of 156.8 mmHg on the first day, 148.2 mmHg on the second day, and 150.5 mmHg on the third day. For diastolic blood

pressure an average of 83.2 mmHg on the first day, 82.7 mmHg on the second day, and 82.9 mmHg on the third day.

Table 4. Wilcoxon Test Results Test Blood Pressure In elderly hypertensives in Jambidan Puskesmas Posyandu Banguntapan 1

| | X1Q2S | X1Q2D | X2Q2S | X2Q2D | X3Q2S | X3Q2D |
|------------------------|---------|---------|---------|---------|---------|---------|
| | - | - | - | - | - | - |
| | X1Q1S | X1Q1D | X2Q1S | X2Q1D | X3Q1S | X3Q1D |
| Z | -1,919a | -3,017a | -4,441a | -3,116a | -4,103a | -3,496a |
| Asymp. Sig. (2-tailed) | ,055 | ,003 | ,000 | .002 | ,000 | ,000 |

Source: Primary Data, 2020

Based on table 4, in view of the results of significant data H_a accepted means H_o is rejected, and there is no change after doing therapy on blood pressure murottal respondents in elderly hypertensive patients. Jambidan Puskesmas Posyandu Banguntapan 1 Bantul, Yogyakarta.

4. Discussion

In this research, the majority of respondents were female, based on table 1 which indicates that out of 34 respondents, as many as 26 were female (76.5%) and the male sex of as many as 8 respondents (23.5%). This study is in line with research by Amanda and Martini (2018), the Chi Square test results showed the relationship between age and the incidence of hypertension ($p = 0.01$), sex with hypertension ($p = 0-04$), and the status of central obesity with hypertension ($p = 0.01$). So there is a relationship between age, sex, and the status of central obesity and hypertension.

This shows the majority of respondents aged 60–70 years in this study are consistent with research by Tumanduk, Nelwan and Asrifuddin,(2019), titled Hypertension Risk Factors that Play a Role in Robert Wolter Monginsidi Hospital Test Results. Fisher's Exact Test on the relationship between age and hypertension gives $p = 0.041$, which indicates the presence of a significant relationship between age and the incidence of hypertension in patients at the Hospital Robert Wolter Monginsidi Manado. Age increases blood pressure, both systolic and diastolic. One of the diseases that are closely related to the aging process is blood circulation disorders, including high blood pressure, or hypertension, which is an increase in blood pressure that is excessive and almost constant in the arteries (Suhartini et al. 2017).

This study indicates that there are changes in blood pressure after doing murottal therapy in elderly patients with hypertension, which lies within the region Jambidan Banguntapan 1 Bantul, Yogyakarta. This study is in line with research conducted by Despitarsari (2019), entitled "The Effect of Listening to Qur'an on Changes in Blood Pressure in Elderly Hypertensive Patients." The test results showed a paired sample t-test with a p value of 0.000, meaning that the therapeutic listening to Qur'an influences the change in blood pressure in elderly hypertensive patients. According to a study done by Suwardi and Desi (2019), murottal therapy is a therapy of reading the Qur'an, which is the treatment of religion, in which a person recites the verses of the Qur'an for a few minutes or hours so as to provide a positive impact on a person's body. Therapy with a

rebound murottal Qur'aan has been developed in the religion of Islam, their goal is not sound therapy but to get closer to God (Allah) (Herniyanti et al. 2019). Qur'an murottal therapy can be performed on adults and children to determine the response of the brain when listening to murottal Qur'an (Hairuddin, Herlina, and Masnina 2015).

In the descriptions in table 4, it can be concluded that there is a change in blood pressure in elderly hypertensive patients after murottal therapy. In this study, the researchers conducted murottal Qur'an therapy using Surah Ar-Rahman 78 paragraph. This research is in line with research by Susilawati (2019), with the title "Murottal Therapeutic Effect of Qur'an Surah Ar-Rahman to the Reduction of Blood Pressure in Elderly Hypertensive Patients in PSTW Nobility Jambi City," with statistical test results obtaining a p-value of 0.000 (0,05). The mean diastolic blood pressure after intervention was 88.19 mmHg, with statistical test results p-value 0.000 (0,05). Research conducted by Widyastuti, (2015), with the title "Effect of Therapy Murottal Surah Ar-Rahman on Changes in Blood Pressure in Elderly Patients with Hypertension" in the IHC Elderly Kenanga Work Area of the CGU Health Center Siantan Hulu District of North Pontianak showed that the p-value of systolic blood pressure before and after therapy Murottal Surah Ar-Rahman is 0000, and the Wilcoxon test results showed that the p-value of diastolic blood pressure before and after the therapy Murottal Surah Ar-Rahman is 0.000. These results showed that p values for systolic and diastolic blood pressure were less than 0.05. So there is a therapeutic effect of murottal surah Ar-Rahman on the blood pressure before and after a given intervention in elderly patients with hypertension.

By doing murottal therapeutic effects, it gives comfort when sung in the room where there is no noise from the outside, so the impact will automatically reduce stress and blood pressure in a person. Listening to spiritual music, especially verses of the Quran (murottal), is very good for your health. Several limitations of this study warrant consideration. First, the results of this study may differ from the general situation because only older adults wanted to participate in the program. Second, individual characteristics such as disease severity or degree of family support were not considered. Therefore caution should be used with the generalization and interpretation of our results (Fernalia et al. 2020).

5. Conclusion

The average blood pressure value of hypertensive patients before being given murottal therapy, which was measured for 3 days, was 154.87/85.78 mmHg, while after being given murottal therapy, it decreased to 151.87/82.93 mmHg. There is a significant influence on blood pressure before and after being given therapy murottal in the elderly hypertension sufferers at Posyandu Jambi Banguntapan 1 Community Health Center, with a $p = 0.000$.

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