

# Differences Between Ar Rahman Murotal Therapy and Progressive Muscle Relaxation in Decreasing Blood Pressure in Patients with Hypertension at RW 3 Sumampir

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**Abstract—** Hypertension is a global health problem resulting in increased morbidity and mortality and the burden of health costs, including in Indonesia. The purpose of this study was to find out the difference between Ar Rahman Murotal Therapy and Progressive Muscle Relaxation in decreasing blood pressure in hypertension patients at RW 3, Sumampir village. This was a quantitative research with cross over design with The One Group Pretest-Posttest Design approach. The population in this study were all patients with hypertension in Sumampir, North Purwokerto of Banyumas according to data obtained from Puskesmas (Community Health Center). The sampling technique used was purposive sampling. The number of samples used were 13 people who were present at the time of data collection divided into control and treatment groups. The instrument used were speaker and digital sphygmomanometer. Data was analyzed using independent sample test. All respondents were female (100%). Significance value in systolic and diastolic blood pressure reduction in both treatments was not statistically significant ( $p > 0.05$ ), but the mean systolic blood pressure (4.15) and diastolic (4.53) in therapy using Ar Rahman murotal higher than the value of added systolic blood pressure (2.93) and diastolic (1.46) on the therapy of Progressive Muscle Relaxation techniques. This means that clinically Ar Rahman murottal therapy is more effective in helping to reduce blood pressure compared to Progressive Muscle Relaxation therapy. Significance value in systolic and diastolic blood pressure reduction in both treatments was not statistically significant that clinically Ar Rahman's murotal therapy is more effective in helping to reduce blood pressure than Progressive Muscle Relaxation therapy.

**Keywords:** hypertension, murotal Ar Rahman therapy, progressive muscle relaxation

## I. INTRODUCTION

Hypertension is a global health problem resulting in an increase in pain and mortality rates as well as health expenses including in Indonesia. Basic health Research (RISKESDAS) in 2018 showed an increase in the prevalence of hypertension in Indonesia with a population of about 260 million is 34.1% compared to 27.8% of Riskesdas in 2013 [1]. Diagnosis of hypertension is enforced when systolic blood pressure  $\geq 140$  mmHg and/or diastolic blood pressure  $\geq 90$  mmHg on measurements in the clinic or health care facilities (Association of Indonesian Hypertension Doctors, 2019). The most number of cases of hypertension (essential hypertension and other hypertension) with hospitalized patients in hospitals in Indonesia (SIRS 2015) were in Central Java Province [2]. One of the healthy living patterns recommended by many guidelines according to Perhimpunan Dokter Spesialis Kardiovaskular Indonesia (Indonesian Cardiovascular Specialist Association) in 2015 were doing regular exercise of 30 – 60 Minutes/day, at least 3 days/week. It can help decreasing blood pressure. For patients who have no time to do the exercise, should be encouraged to walk, ride a bicycle or climb a ladder in their routine activities at their workplace [3].

Based on the results of interviews through questionnaires conducted in July 2019 in 26 patients with hypertension at are RW 3 of Sumampir, the results showed that 14 people (53.8%) confessed that they did not do exercise  $\geq 30$  minutes a day. There are several complementary therapies are inexpensive and easy as the alternatives to help decreasing blood pressure such as laugh therapy, relaxation progressive muscles, aromatherapy and also therapy using music and murottal Ar

Rahman verses [4]. The results of the study of Ekarani, Heryati and Maryam (2019) showed that there were differences in diastolic blood pressure between group intervention and control group after the progressive muscle relaxation intervention. The results of the literature study conducted by Yunita Sari and Rekawati (2019) found that traditional music therapy gave a positive effect to lower elderly blood pressure with hypertension. The results of the research conducted by Wirakhmi, Utami, and Purnawan (2018) showed that listening murotal Al Quran is more effective in reducing the pain of people with hypertension compared to Mozart's music. Relaxation therapy of progressive muscles and Murotal Ar Rahman are both safe and easy to do. They are used to facilitate patients who have no spare time to perform physical activities. Based on the background, researchers would like to compare the differences between in Murotal Ar Rahman therapy and progressive muscle relaxation to decrease blood pressure in patients with hypertension at Rw 3 of Sumampir village.

## II. MATERIALS AND METHOD

This was a study a quantitative research with a cross over approach with the one group pre post-test design. The pre post-test is conducted by assessing before and after treatment on control group [5]. The population in this study were all patients with hypertension at sumampir village, Purwokerto utara, Banyumas, based on data from Puskesmas (Community Health Centre). The number of samples used were 13 people were present when the data retrieval. They were divided into control and treatment groups, they were murottal and progressive muscle relaxation group. [5]. the treatment between the two groups was paused for 10 days, started with the treatment of murattal therapy. The murottal group listened to the recitation of the Qur'an for 15 minutes. Meanwhile, the progressive muscle relaxation group performs the progressive muscle relaxation movement within the same time range. This 15 minute range has been used in various research related to music therapy or murottal (Mulyani, Purnawan, & Upoyo, 2019; Wirakhmi, Utami, & Purnawan, 2018). The instrument used were speaker and digital sphygmomanometer. Data was analysed using independent sample test. This study received ethical approval from the Faculty of Medicine, Jenderal Soedirman University with Ref: 6401 / KEPK / X / 2019

## III. RESULT

Patients with Hypertension at Sumampir of Purwokerto, Banyumas, Central Java province ranged from adults to seniors. In details, it can be seen in table 1. The intervention given in patients with hypertension were listening to murottal and performing progressive muscle relaxation. An overview of the difference in blood pressure average before and after treatment can be seen in table 2.

**Table 1. Age Description of Hypertension Sufferers**

Category	Amount	%
Late Adult (36 – 45 th)	1	7.6
Early elderly (46 – 55 th)	2	15.4

Late Elderly (56 – 65 th)	5	38.5
Elderly (> 65 th)	5	38.5
Total	13	100

**Table 2. Differences in Blood Pressure**

Variable	N	Pre	Post	<i>P</i>
		Average ± SD	Average ± SD	
<b>Murottal Group</b>				
Sistole	13	171,2±15,7	167,4±16,6	0,3
Diastole	13	97,0±9,8	111,1±36	0,27
<b>PMR Group</b>				
Sistole	13	168±15,7	165±15,7	0,01
Diastole	13	90,7±9,8	89,3±9,8	0,17

## IV. DISCUSSION

Table 1 shows the most patients with hypertension are in the late and elderly patients – both are 38.5%. The statistical test results in table 2 indicate that the patients experiencing significant statistic differences in systolic blood pressure is the group who received progressive muscle relaxation therapy. It is proved by the *p* value = 0.01 (< 0.05). Blood pressure increases as ages do. It is associated with increased stiffness and thickening of the walls of the blood vessels as the impact of atherosclerosis. Vascular wall stiffness and narrowing of the lumen of blood vessels lead to the rise of systemic resistance that leads to increased blood pressure [8]. The average age of patients with hypertension according to Wirakhmi (2018) was around 60 years. While it is systolic and diastolic blood pressure in the murottal group, diastolic blood pressure on the progressive muscle relaxation group does not have a significant difference statistic. However, according to the clinical importance perspective, a slight change in clinical research is still considered to give effect or impact. The therapeutic effect of listening to murottal Al Quran stems from the resulting tone and spiritual content therein. As well as relaxation music therapy, the murottal has a slow tempo with a soothing harmonious tone [9]. The murottal used in this study had a tempo of 95.99 per minute. The same recording of murottal has also been used in research by [7] to identify the therapeutic approaches effect on pain sufferers of hypertension. Murottal physically contains a human sound element that has a remarkable therapeutic effect. Sound can decrease stress hormone levels, activate natural endorphin, improve calmness, distract, and lower anxiety [10].

Decreased hormone stress and endorphin production stimulates the parasympathetic nervous system, which contributes to body metabolism characterized by a decrease in blood pressure, pulse and respiratory frequency. The effect of relaxation while listening to the murottal can be seen the dominance of  $\alpha$  (alpha) waves in the Electro Encephalogram (EEG) footage. It shows relaxation when the body is still

awake [11]. In addition to the effects of sound, Murottal also has a spiritual content. Listening to the murottal for Muslims is one of the most recommended forms of worship. Listen to murottal done by Muslims in a variety of conditions, healthy, sick, sad, joyful and others [12]. There is a significant relationship between high religiosity and the height of the meaning of life. It shows the role of religion in the search process of life meaning and peaceful feelings. People with higher levels of religiosity have a greater sense of peace than people with lower religiosity [13]. There is a decrease in both systolic and diastolic blood pressure in the group of progressive muscle relaxation. Even at systolic blood pressure, the decrease in blood pressure in this group was significant both clinically and statistically. The effect of progressive muscle relaxation that gives a relaxed feeling can lower stress hormone levels and improve endorphin hormones [14].

In addition, progressive muscle relaxation is beneficial in lowering pain. research conducted by Fitriani & Achmad, (2017) progressive muscle relaxation is able to lower the pain of dysmenorrhea in adolescents. In addition to directly guided implementation of progressive muscle relaxation can also be done through video media. The video usage of progressive muscle relaxation was proven to reduce blood pressure [14]. The benefits of progressive muscle relaxation in lowering blood pressure was also shown in research conducted by Ekarini, Heryati, & Maryam (2019).

## V. RECOMMENDATION

The results of this study can be used as complementary therapy (support) to help decreasing blood pressure in hypertension patients.

## VI. LIMITATION

The limitation of this research was the small number of population so that further research needs to conduct the research with a wider population

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