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Research

The effectiveness of Reading Surah Ar-Rahman to Reduces Blood Pressure among Hypertension Patients

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A B S T R A K

Background: Increased blood pressure in the long term can cause coronary heart disease, kidney damage and stroke. Indonesia is one of the developing countries that has the highest prevalence of hypertension and the 5th most killer disease. One of the non-pharmacological nursing interventions that can be applied to hypertensive patients is reading the Qur'an. Surah Ar-Rahman can be used as an alternative non-pharmacological treatment for people with hypertension.
Purpose: this study was to determine the effect of reading Surah Ar-Rahman on blood pressure in patients with hypertension.
Method: This type of quantitative research used a quasi-experiment with a two- group pre-test-post-test with control group design. Results: the sample in this study was 46 respondents, the sampling technique was purposive sampling and the data collection used an observation form. The bivariate test using Wilcoxcon.
Result: the results of the study found that the average systolic blood pressure before therapy for reading Surah Ar-Rahman was 155.65 mmHg and the diastolic was 95.22 mmHg and the average systolic blood pressure after the intervention was reading Surah Ar-Rahman. Rahman is 145.22 mmHg and his diastolic is 89.57 mmHg. Thus the Wilcoxon Test results obtained statistical results obtained systolic p value = 0.000 and diastolic p value = 0.003 ($p < 0.05$) which means there is a significant change in blood pressure reduction in hypertensive patients who have been given therapy reading Surah Ar-Rahman.
Conclusion: the recommendation for nurses to be used as a basis for realizing evidence-based practice in the treatment of hypertension sufferers with complementary therapies.

INTRODUCTION

Blood pressure in people can change in various stages, such as high blood pressure (above the normal value) and low blood pressure (below the normal value). Elevated blood pressure over a long period of time can cause coronary heart disease, kidney damage, and stroke if not detected quickly[(1)]. Based on data from WHO (2019), hypertension is estimated to cause the mortality of around 7.5 million peoples (12.8%). In 2015, 1.13 trillion world population are estimated to suffer from hypertension, most or 2/3 live in low and middle-income countries, such as 1 in 4 men and 1 in 5 women suffer from hypertension. Therefore, WHO targets to reduce the prevalence of non-communicable diseases, one of which is hypertension, by 25% in 2025.

Indonesia is one of the developing country has the highest prevalence of hypertension. The prevalence of hypertension at the age above ≥18 years is 8.4 % of hypertension sufferers based on a doctor's diagnosis, based on the results of blood pressure measurements. The prevalence of hypertension in Indonesia is around 34.1 %, and it is the 5th largest cause of death in Indonesia.

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Hypertension is called the silent killer or something that can secretly cause sudden death for sufferers. Meanwhile, the prevalence of hypertension in the province of West Sumatra has reached 22.6 %. The data from the West Sumatra Health Office in 2014, hypertension was the most common disease suffered by the community with a total of 31,760 peoples[2] 24.5%[3].

Based on data found at the Gambok health center in Sijunjung district, data on hypertension sufferers from 2019 to 2021 has increased every year. The largest increase in hypertension cases will be in 2021 with a total of 3,620 cases consisting of 1,793 men and 1,821 women. Hypertension is the highest non-communicable disease in the Gambok Health Center, so hypertension is a major problem that must be addressed (Gambok Health Center, 2021). Treatment of hypertension at the health center can be carried out with a promotive approach (promotion) by providing health education/counseling about hypertension with the existence of this health education/counseling can increase public knowledge about hypertension, preventive by reducing salt intake, increasing fruit consumption and vegetables, as well as reducing saturated fat by consuming low-fat milk, losing excess weight, exercising regularly, avoiding alcohol and quitting smoking[4], and curative (treatment) can be carried out with pharmacological and non-pharmacological treatment. Pharmacological treatment using antihypertensive drugs such as catopril, candesartan, and amlodipine. Meanwhile non-pharmacological treatment is complementary therapy which can speed up the healing process. Complementary therapies that can be given to people with hypertension are herbal therapy, nutritional therapy, progressive relaxation, meditation, acupuncture, acupressure, aromatherapy, reflexology and murottal therapy al-Quran[5].

Reading Surah Ar-Rahman can have a positive impact on the psychology of people with hypertension, reading the Qur'an has benefits that affect health because it has elements of meditation, autosuggestion, and relaxation. Reading surah Ar-Rahman is a therapy given by reading surah Ar-Rahman with a slow and harmonious rhythm can reduce stress hormones, so that it can naturally activate endorphins and can increase feelings of relaxation and can divert attention from fear, anxiety and tense (Idham, 2016). Furthermore, the body will release endorphins in this condition which will make the body relax, when the body is in a relaxed state there will be a decrease in epinephrine/adrenaline which can cause a decrease in blood pressure[6] .

The preliminary survey conducted by interview on March 21, 2022 in the work area of the Gambok Health Center, especially in Jorong Muaro, 5 people suffering from hypertension, 3 peoples took antihypertensive medications, while 2 of them were not took antihypertensive medications, pharmacologically and non-pharmacologically. When asked about reading surah Ar-Rahman as an alternative that can reduce or cause changes in blood pressure, they answered that they did not know. Therefore, based on the background above, the researcher is interested in conducting further research on the effect of reading surah Ar-Rahman in the working area of the Gambok Health Center in 2022.

METHOD

1. **Research Design**

   The research of quasi-experimental research with a two-group pre-test-post-test with control group design. In this design, the intervention group was given the treatment while the control group was not. In both groups, it was started with a pre-test.

2. **Time and Place**

   This research was conducted from June 2022 to July 2022 and conducted within the operational jurisdiction of the Gambok Public Health Center in Sijunjung, West Sumatra.

3. **Population and Sample**

   The population studied consisted of 3,620 individuals suffering from hypertension within the operational area of the Gambok Health Center. The research sample consisted of 46 people with hypertension in the intervention group 23 people and the control group 23 people who suffered from hypertension in the working area of the Gambok Public Health Center using a non-probability sampling technique (purposive sampling)[7] .

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4. Sample Criteria

The inclusion criteria in this study are: patients with a diagnosis of hypertension, aged 18-64 years with mild grade hypertension, moderate grade and severe grade, willing to follow from the beginning to the end of the study, muslim, can read the Qur'an, not experiencing hearing loss, consuming antihypertensive drugs. Exclusion criteria such as: respondents with severe complications (i,e. stroke, kidney disease), age ≥ 65 years and over and extremely severe blood pressure grade

5. Research Procedure

The data collection tool in this study is in the form of informed consent, observation sheets, pre and post-tests**,** procedures for reading surah Ar-Rahman, measuring blood pressure using a blood pressure meter, and documentation.

6. Data Analyze

Data normality test using Shapiro Wilk test. Univariate analysis was used to see the frequency distribution of respondents' characteristics from demographic data (age, gender, grade). Bivariate analysis used wilcoxon test.

RESULT DAN DISCUSSION

1. Characteristics of respondents

Table 1: Characteristics of Respondents

No	Characteristics of Respondents	F	Percent (%)
1	Age		
	20-44 Years	20	43.5
	45-54 Years	18	39.1
	55-59 Years	7	15.2
	60-64 Years	1	2.2
	Total	**46**	**100**
2	Gender		
	Man	16	34.8
	Woman	30	62.5
	Total	**46**	**100**
3	Education		
	No school	8	17.4
	Elementary school	27	58.7
	Junior High School	4	8.7
	Senior High School	5	10.9
	College	2	4.3
	Total	**46**	**100**

Abbreviations; F: Frequency

Based on table 1 shows that of the 46 respondents, there were the most respondents aged 22-44 years, 20 people (43.5%) of the respondents with the most gender, women 30 people (62.5%) and respondents with the most education SD 27 (58.7%).

2. Systolic and diastolic blood pressure before (pretest) given therapy to read Surah Ar-Rahman to intervention group

Table 2: Systolic and diastolic blood pressure before (*pretest*) intervention to read Surah Ar-Rahman the intervention group

Variable	Means	SD	Min-Max	95%CI
Pretest systolic BP	155.65	13,082	140-180	149.99-161.31
Pretest diastolic BP	95.22	7,305	80-110	92.06-98.38

Abbreviations; BP: blood pressure, SD: standard deviation, Min-Max: minimal-maximal, CI: confodent interval

Based on table 2 above, it can be explained that the mean systolic blood pressure of the pretest respondents was 155.65 mmHg and the mean diastolic blood pressure was 95.22. This research is in line with the research of Setiawan, Apriani, et al. (2022) murottal surah Ar-Rahman on Reducing Hypertension Patients' Blood Pressure at the Merdeka Health Center. The mean systolic and diastolic blood pressure before the Al-Qur'an Surah Ar-Rahman murottal therapy was 150 mmHg for systolic and 93 mmHg distolic while after treatment it was 145 mmHg for systolic and 90 mmHg diastolic.

Stress is often associated with the incidence of hypertension because when experiencing stressful conditions, the body will produce the hormone adrenaline which can cause the heart rate to increase, according making a person irritable and emotional which can cause blood pressure to increase[8] . The analysis, the above theory is in accordance with what happened in the field) pretest diastolic blood pressure 95.22 mmHg, this value is because most respondents experienced an increase in blood pressure caused by several factors such as gender, age, education, and stress levels which can increase blood pressure, therefore interventions were given to read Surah Ar-Rahman for reducing blood pressure, it can be seen in the table description that the blood pressure of respondents with Grade I (mild HT) were 12 people, Grade II (moderate HT) were 9 people, and Grade III (severe HT) were 2 people.

3. Systolic and diastolic blood pressure before (pretest) given therapy to read Surah Ar-Rahman to intervention group

Table 3: Systolic and diastolic blood pressure after (post-test) intervention to read Surah Ar-Rahman intervention group

Variable	Means	SD	Min-Max	95%CI
Posttest systolic BP	145.22	13,774	130-190	139.26-151.17
Posttest diastolic BP	89.57	6,381	80-110	86.81-92.32

Abbreviations; BP: blood pressure, SD: standard deviation, Min-Max: minimal-maximal, CI: confodent interval

Based on Table 3 above, it can be explained that the mean systolic blood pressure of the posttest respondents was 145.22 mmHg and the average diastolic blood pressure was 89.57 mmHg. This research is in line with the research of Harmawati, et al. (2020) in the effect of giving murottal therapy surat ar-rahman on blood pressure in the elderly with hypertension at the tanah kampung community health center the number of respondents was 16 people with an average systolic and diastolic blood pressure before being given Al-Rahman murottal therapy was 148.44 mmHg and 91.88 mmHg diastolic, and after Ar-Rahman murottal therapy was 125.63 mmHg and 82.50 mmHg diastolic.

Based on the results of the study, there was a decrease in blood pressure after being given Surah Ar-Rahman reading therapy to respondents in the intervention group in the work area of the Gambok Public Health Center, Sijunjung Regency, where before being given Surah Ar-Rahman reading therapy, how many hypertension sufferers were in the category of moderate, mild hypertension, while after being given Therapy for reading Surah Ar-Rahman with hypertension is in the category of mild and normal hypertension.

The results of this study are in accordance with the theory, reading Surah Ar-Rahman can have a positive impact on the psychology of people with hypertension, Reading Surah Ar-Rahman is a therapy given by reading Surah Ar-Rahman with a slow and harmonious rhythm can reduce stress hormones, so that the endorphine hormone can naturally be active and can increase feelings of relaxation and can divert attention from fear, anxiety and tension (Idham, 2016). Furthermore, the body will release endorphins in this condition which will make the body relax, when the body is in a relaxed state there will be a decrease in epinephrine/adrenaline which can cause a decrease in blood pressure (Fitria, 2018).

According to the researcher's analysis, after being given therapy to read Surah Ar-Rahman the respondents said they were calmer and more relaxed because reading Surah Ar-Rahman with a slow and harmonious rhythm can reduce stress hormones, so that endorphins can naturally be active and can increase feelings. relax and can distract from fear, anxiety and tension. Furthermore, the body will release endorphins in this condition which will make the body relax, when the body is in a relaxed state there will be a decrease in epinephrine/adrenaline which can cause a decrease in blood pressure.

After being given an intervention to read surah Ar-Rahman 1 time a day for 1 week, it was found that there was a change in the respondent's blood pressure, namely 15 respondents with HT Grade I (Mild), 4 respondents namely with Normal TD, 3 respondents with moderate HT Grade, after reading surah Ar -Rahman.

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4. Systolic and diastolic blood pressure before (pretest) in the control group

Table 4 : Systolic and diastolic blood pressure before (pretest) in the control group

Variable	Means	SD	Min-Max	95%CI
Pretest systolic BP	154.78	12,746	140-180	149.27-160.29
Pretest diastolic BP	96.52	7,751	90-110	93.17-99.87

Abbreviations; BP: blood pressure, SD: standard deviation, Min-Max: minimal-maximal, CI: confodent interval

Based on table 4 above, it can be explained that the average (Mean) systolic blood pressure of pretest respondents is 154.78 mmHg and the average diastolic blood pressure is 96.52. The maximum value for systolic blood pressure is 180 and the minimum value is 140 mmHg. While for diastolic pressure 110 and minimum value 90 mmHg. Standard deviation of systolic blood pressure was 12.746 mmHg and diastolic blood pressure was 7.751 mmHg.

5. Systolic and diastolic blood pressure after (posttest) in the control group

Table 5: Systolic and diastolic blood pressure after (posttest) in the control group

Variable	Means	SD	Min-Max	95%CI
Posttest systolic blood pressure	156.09	16.164	140-200	149.10-163.08
Posttest diastolic blood pressure	96.52	8,317	80-110	92.93-100.12

Abbreviations; BP: blood pressure, SD: standard deviation, Min-Max: minimal-maximal, CI: confodent interval

Based on table 5 above, it can be explained that the average (Mean) systolic blood pressure of posttest respondents is 156.09 mmHg and the average diastolic blood pressure is 96.52 mmHg. The maximum value for systolic blood pressure is 200 mmHg and the minimum value is 140 mmHg, while for the maximum value for diastolic blood pressure is 110 mmHg and the minimum value is 80 mmHg. Standard deviation of systolic blood pressure 16.164 mmHg, and standard deviation of diastolic blood pressure 8.317 mmHg.

6. The effect of reading Surah Ar-Rahman on pressure blood of hypertensive patients

Bivariate analysis in this study was carried out to prove the hypothesis that was made before, so that the effect of reading Surah Ar-Rahman on blood pressure in hypertension sufferers in the Working Area of the Gambok Health Center in 2022 can be known.

Table 6 **:** The effect of reading Surah Ar-Rahman on pressure blood of hypertensive patients

	Postest-Pretest Systolic BP	Posttest-Pretest Diastolic BP
Z	-3,650 [a]	-2,968 [a]
Asymp. Sig. (2-tailed)	0.000	0.003

Abbreviations; BP: blood pressure

Based on table 6 test results were obtained using the Wilcoxon test. To find out the effect of reading Surah Ar-Rahman on blood pressure in hypertensive patients, we obtained a p-value of pretest-posttest systolic blood pressure of 0.000 and pretest-posttest diastolic blood pressure of 0.003, which means that p value <α (0.05) which means that Ha is accepted or There is an effect of reading Surah Ar-Rahman on blood pressure in people with hypertension in the working area of the Gambok Health Center, Sijunjung Regency in 2022. Statistical tests were carried out using the Wilcoxon signed rank test *which* obtained a p value = 0.000 for systolic α = 0.05 (p <α) and p value = 0.003 for diastolic which means significantly that Ha is accepted and there is a significant change in reducing blood pressure in hypertensive patients who have been given therapy to read surah Ar-Rahman.

According to the theory that reading Surah Ar-Rahman can have a positive impact on the psychology of people with hypertension, reading the Qur'an has health benefits because it has elements of meditation, autosuggestion, and relaxation. Reading surah Ar-Rahman is a therapy given by reading surah Ar-Rahman with a slow and harmonious rhythm can reduce stress

hormones, so that endorphins can naturally be active and can increase feelings of relaxation and can divert attention from fear, anxiety and tense (Idham, 2016). Furthermore, the body will release endorphins in this condition which will make the body relax, when the body is in a relaxed state there will be a decrease in epinephrine/adrenaline which can cause a decrease in blood pressure (Fitria, 2018).

Based on the researcher's analysis, there was a decrease in blood pressure between pretest and posttest due to the theory that there was treatment given once a day for 7 consecutive days to 23 respondents. There were 21 respondents who experienced a decrease in systolic blood pressure, 1 respondent experienced an increase in systolic blood pressure and 1 respondent did not decrease systolic blood pressure. According to this theory reading Surah Ar-Rahman can have a positive impact on the psychology of people with hypertension, reading the Qur'an has benefits that affect health because it has elements of meditation, autosuggestion, and relaxation. Reading surah Ar-Rahman is a therapy given by reading surah Ar-Rahman with a slow and harmonious rhythm can reduce stress hormones, so that endorphins can naturally be active and can increase feelings of relaxation and can divert attention from fear, anxiety and tense. Furthermore, the body will release endorphins in this condition which will make the body relax, when the body is in a relaxed state, there will be a decrease in epinephrine/adrenaline which can cause a decrease in blood pressure.

CONCLUSION

Response characteristics in the working area of the Gambok Health Center from 46 respondents, there were most respondents aged 22-44 years, namely 20 people (43.5%) of the respondents with the most gender, such as female 30 people (62.5%) and respondents with the most education with SD 27 (58.7%). The mean systolic blood pressure before (pretest) in the intervention group was given therapy reading Surah Ar-Rahman for blood pressure in hypertension sufferers was 155.65 mmHg and the diastolic was 95.22 mmHg. The mean systolic blood pressure after (posttest) in the intervention group was given reading therapy of Surah Ar-Rahman for blood pressure in hypertension sufferers was 145.22 mmHg and the diastolic was 89.57 mmHg. The mean systolic blood pressure before (pretest) in the control group was given therapy reading Surah Ar-Rahman for blood pressure in patients with hypertension was 154.78 mmHg and the diastolic was 96.52 mmHg. The mean systolic blood pressure after (posttest) in the control group was given therapy reading Surah Ar-Rahman for blood pressure in hypertension sufferers was 156.09 mmHg and the diastolic was 96.52 mmHg. The statistical test results obtained systolic value $p = 0.000$ and diastolic $p < 0.05$, it can be concluded that there is a significant change in blood pressure reduction in hypertensive patients who have been given therapy to read Surah Ar-Rahman.

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