

The Effect of Reading the Holy Al-Quran on Stress Levels Among Patients with Hypertension

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ABSTRACT

The impact of psychological conditions faced by hypertension patients is stress. This can disrupt physical activity and make the condition more serious if nursing intervention is not provided. Reading the holy Al-Qur'an is one alternative that can reduce stress levels. It is can reduce stress hormones and increase feelings of relaxation and improve body chemistry so that it can reduce blood pressure and stress levels. The study aimed to determine the effect of reading the Al-Qur'an on stress levels in hypertension patients. This study uses quantitative research with a pre-experiment research a one group pre-posttest design. The sampling technique uses purposive sampling, namely respondents with hypertension as many as 63 respondents. The intervention of reading the Al-Qur'an by choosing a surah that the patient is able to do with a moderate tone of voice. The instrument uses the Perceived Stress Scale (PSS). The results of the study showed that, the average score of stress levels before the intervention for the low category was a mean of 21.56 (SD = 0.72), while the moderate category was the mean score of 38.17 (SD = 4.20). Then the mean score of stress levels after the intervention for the low category was the mean score of 19.10 (SD = 2.87), and the moderate category was the mean score of 25.71 (SD = 3.45). The Wilcoxon test found that the p-value was 0.001 ($p < 0.05$) which means that there is an effect of reading the Qur'an on stress levels in hypertensive patients. It is hoped that to the Muhammadiyah Hospital Palembang can implement the intervention of reading the Al-Qur'an for patients with hypertension which is useful for reducing the stress level of patients.

Key Messages:

- Reading the Al-Qur'an is one alternative therapy that provides positive impact for the patients and reading the Al-Qur'an is a part of religious that can provide a relaxation response.

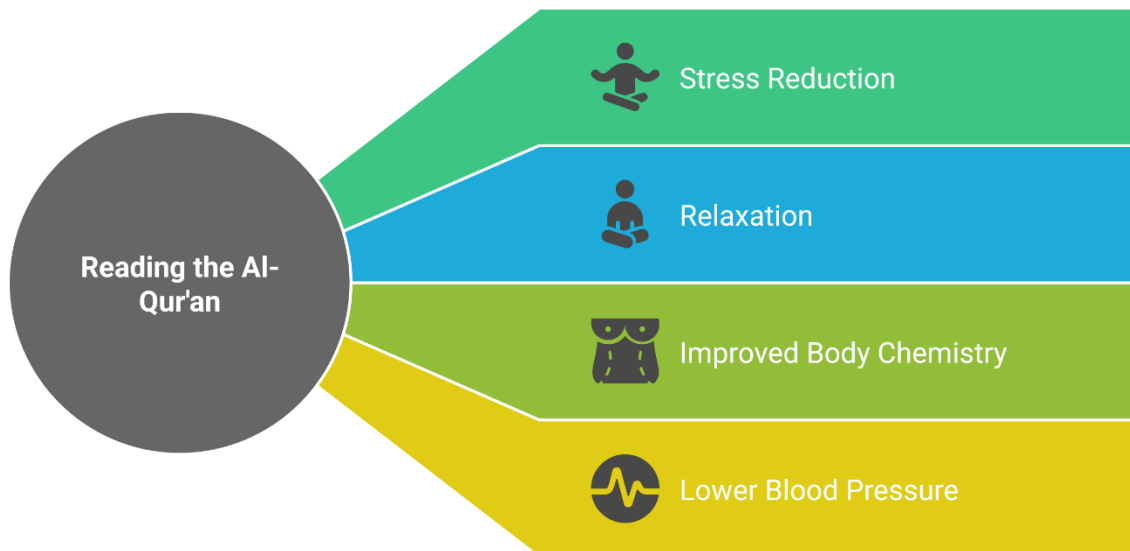
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GRAPHICAL ABSTRACT

Exploring Stress Reduction Through Al-Qur'an Reading



INTRODUCTION

Indonesia is currently trying to overcome various health problems that occur (1). Non-Communicable Diseases (NCDs) are one of the most serious public health challenges in the 21st century (2). NCDs are the cause of 71% of deaths worldwide (3). One of the contributors to the NCD death rate is heart disease from the death rate in low and middle income countries, including Indonesia (4). Based on WHO data, hypertension sufferers are estimated to reach 1 billion in the world, and two-thirds of them are in developing countries (5). This figure is increasingly worrying, namely 972 million (26%) adults in the world suffer from hypertension (6)(7)(8)(9). Hypertension can cause serious complications if not treated and cared for properly (5). Complications that can occur in hypertension patients are caused by several factors including the heart, brain, kidneys, eyes, stroke, excessive sympathetic nerve activity, obesity, unhealthy lifestyle, hereditary factors, and stress, someone who experiences hypertension generally experiences stress in the form of emotional or psychological (10). Psychological or emotional stress is stress caused by emotional situational disorders. One of the factors that triggers hypertension is a psychological condition that experiences pressure, namely stress (11).

The problem of stress is one of the main studies in the field of mental health that continues to be studied by researchers and scientists (12). Stress is a health crisis associated with several diseases, such as cardiovascular disease, anxiety, and depression (13). A survey found that about half of Americans have experienced a major stressful event (14). Many of them experience behavioral responses related to stress such as increased blood pressure, lack of sleep, loss of appetite and lack of enthusiasm for activity (15). The level of stress in society in 23 countries including Indonesia, is generally 84% with the most common triggers being health problems (51%), workload (17%), and financial problems (16%) (16). Assesses stress as a condition that burdens or endangers the well-being of sufferers, including physical, psychologicals and social (4). Stress is a common symptom experienced by people all over the world, both poor countries, developing countries and even countries with advanced economies and civilizations (10)(17).

Some stress management techniques that can be done by hypertension patients are: Meditation, Yoga, Breathing exercises, Muscle relaxation, Laughter therapy (18). Therefore, a strategy is needed to quickly and appropriately handle stress disorders, both symptoms and impacts, namely the Islamic approach and the psychological approach. The selection of these two approaches is based on the

consideration that the two approaches have a functional relationship with each other (19). In the Islamic approach, reading the Al-Qur'an, praying and remembering are an inseparable unity so that doing one of the three approaches can include the other approaches (20). Reading the Al-Qur'an is one part of praying that is greatly recommended by moeslim people besides saying tahmid, tahlil, and takbir (11). Not all individuals who experience stress have the knowledge and skills to manage the stress they experience so that it can have an impact on decreasing their mental health and happiness which can cause psychosomatic disorders, namely physical illnesses caused by psychological disorders. Therefore, a strategy is needed to quickly and appropriately handle stress disorders, both symptoms and impacts, namely the Islamic approach and the psychological approach (21). Reading the Al-Quran has been previously researched and proven to be effective in helping patients express their emotions in a more adaptive way as well as providing a relaxing effect and can reduce stress (22). The research showed that changes in systolic and diastolic blood pressure in the intervention group (23). Another research found a significant difference in the average stress level of hypertension patients in the intervention group and the control group (24). In this condition, nurses are very important health workers in providing nursing care, especially in preventing psychological problems due to hypertension (8).

The role of nurses in overcoming stress suffered by hypertension patients is also very important. Stress that occurs when patients undergo medical procedures that are sometimes very complex and due to the disease felt or suffered by the patient (25). And to reduce the level of anxiety, fear and stress can be done with control, communicate and social support. Communication from nurses is very much needed by patients and families, both verbally and nonverbally (26). Through proper communication, it can help ease the burden on patients and help patients in their healing process (27). Regarding some of the descriptions above, it can be concluded that hypertension sufferers are increasing, one of the impacts that arise is stress. Stress can be handled with several interventions, one of which is reading the Al-Qur'an is a part of religious relaxation that can provide a good response. In addition, the research showed that religious factors can be involved in upgrading life expectancy, decreasing blood pressure, the use of alcohol, cigarettes, drugs, stress, irate, anxiety and improving the quality of life of patients with hypertension, heart disease and cancer. The purpose of this study is how the Effect of Reading the Al-Qur'an on Stress Levels in Hypertension Patients.

METHODS

The design used in this study was Pre- Experiment using the *One Group Pre-Post test design*. This design does not use a control group, where stress levels are measured before and after being given treatment in the form of reading the Al-Qur'an. The sample used in this study were hypertension patients at the Internal Medicine Polyclinic, Muhammadiyah Hospital, Palembang using the purposive sampling technique. This study was conducted on May 12 - July 21, 2024 with a total of 63 respondents who met the inclusion criteria, namely (1) Able to communicate using good language; (2) Patients are willing to be respondents; (3) Hypertension patients; and (4) Can read the Al-Qur'an.

The data collection process was carried out on hypertension patients. After the respondents agreed (Informed Consent), the researcher then provided an explanation to the respondents regarding the research procedures including the objectives, benefits, research procedures, time contracts, and requests for Informed Consent. Time contracts were carried out to avoid respondents dropping out during the study. Next, the researcher gave the respondents a questionnaire to fill out and then gave the respondents an intervention of reading the Al-Qur'an by choosing a surah that the patient is able to do with a moderate tone of voice for 5-15 minutes which was done once a day, each time it was given at 09:00-11:00 AM and 13:00-15:00 PM, a place provided in a special room away from the crowd that does not have many disturbing sounds, observations were made at the respondents' homes by filling out the questionnaire again after 7 days.

A questionnaire on the characteristics of respondents containing demographic data from respondents, including name, age, gender, education, occupation, religion. The stress instrument uses the Perceived Stress Scale (PSS). Validity test on the stress level measurement questionnaire using the Pearson product moment correlation test, the results of the validity test obtained a validity value range of 0.406 -

0.475 (r table: 0.361) and the reliability test of the reliability value obtained by Cronbach Alpha is 0.61. The analysis test used to test reading the Al-Qur'an on stress levels in hypertension patients, the data was processed by computerization and the results of the data were not normally distributed, then the data was transformed 3 times and it was still not normal so the Wilcoxon alternative test was used ($p \leq 0.05$).

CODE OF HEALTH ETHICS

This study has also passed an ethical test at Health Polytechnic of Ministry of Health of Palembang with No: 0309/KEPK/Adm2/III/2024.

RESULTS

Table 1 shows that the mean or average age of respondents is 53.81 years, and the median is 53.00 (SD: 6.77), the youngest is 43 years, and the oldest is 71 years. The results of the frequency distribution of respondents showed that most respondents were female (60.3%), with a marital status of married (95.2%), the last education was high school (31.7%), not working (50.8%). and had suffered from hypertension > 3 years (53.0%).

Table 1. Frequency Distribution of Respondents According to Age, Gender, Marital Status, Education, and Occupation (n=63)

Characteristic	n	%
Age		
Mean = 53.81, SD = 6.77, Min-Max = 43 - 71, 95% CI 52.10 - 55.51		
Gender		
Man	25	39.7
Woman	38	60.3
Marital status		
Marry	60	95.2
Not married yet	3	4.8
Education		
No school	7	11.1
Elementary School	11	17.5
Junior High School	11	17.5
Senior High School	20	31.7
College	14	22.2
Work		
Civil servant	5	7.9
Self-employed	4	6.3
Businessman	20	31.7
Indonesian National Armed Forces	2	3.2
Does not work	32	50.8
Long-term hypertension		
<1 years	10	15.8
1-3 years	19	31.2
>3 years	34	53.0
Total	63	100

Table 2 showed that. before the intervention, there was low stress (14.3%) and moderate stress (85.7%). After the intervention, the stress of hypertension patients was low stress (77.8%) and moderate stress (22.2%).

Table 2. The Frequency Distribution Before and After Al-Quran Reading Intervention in Hypertension Patients (n=63)

Variables	Before		After	
	Frequency	(%)	Frequency	(%)
Low Stress	9	14.3%	49	77.8%
Moderate Stress	54	85.7%	14	22.2%
Total	63	100%	63	100%

Table 3. The Differences Between Average Before and After Given Al-Quran Reading Intervention on Stress Levels in Hypertension Patients (n=63)

Variables	Stress Levels'	Mean	Median	SD	Min	Max	95% CI		p Value
							Low	Up	
Before reading the Al-Qur'an	Low	21.56	22.00	0.72	20	22	21.00	22.11	0.001
	Moderate	38.17	39.00	4.20	28	45	37.02	39.31	
After reading the Al-Qur'an	Low	19.10	20.00	2,87	14	22	18.28	19.93	
	Moderate	25.71	25.50	3.45	18	32	23.72	27.71	

Table 3 explained that, the average score of stress levels before the intervention for the low category was a mean of 21.56 (SD = 0.72) with a minimum score of 20 and a maximum of 22. While the moderate category was an average score of 38.17 (SD = 4.20), with a minimum score of 28 and a maximum of 45. Then the average score of stress levels after the intervention for the low category was an average score of 19.10 (SD = 2.87), a minimum score of 14 and a maximum of 22. While the moderate category was an average of 25.71 (SD = 3.45), a minimum score of 18 and a maximum of 32. The Wilcoxon test found that the p-value was 0.001 ($p < 0.05$) which means that there is an effect of reading the Qur'an on stress levels in hypertensive patients.

DISCUSSION

The average value before and after the treatment was obtained, the stress level value before the intervention was mild category 22.00 with a standard deviation of 0.72 while the moderate category was 39.00 with a standard deviation of 4.20 and the value after the intervention was mild category 20.00 and a standard deviation of 2.87 and moderate stress value 25.50 with a standard deviation of 3.45 with a mean rank of 32.48. Before the intervention, the majority of respondents experienced moderate stress as many as 54 respondents (85.7%) while after the intervention, the majority of respondents experienced mild stress as many as 49 respondents (77.8%).

Stress can have a total impact on individuals, namely on physical, psychological, intellectual, social, and spiritual, stress can threaten physiological balance. One of the effective distraction techniques used to overcome stress in patients is using Al-Quran reading therapy, because Al-Quran reading therapy is an action to divert attention (12). There are various methods of stress reduction such as pharmacological, behavioral, cognitive, reading the Al-Qur'an and hypnosis. One way to reduce stress is through a religious approach (11). Al-Quran reading therapy is an effective therapy to overcome stress in hypertension patients because Al-Quran reading therapy is an action to divert attention (9). Reading the Al-Qur'an is a non-pharmacological treatment that can provide sensations that influence psychological responses by reducing cortisol levels, anxiety, stress, and tension. On the other hand, reading the Qur'an will also bring up a healthy effect of placebo, this does not focus only on the process of muscle relaxation or other physical, but on sentences that are repeated with a regular rhythm accompanied by surrender to God. When the sentence is repeated, the body will cause a relaxation process which is basically activating the parasympathetic nerves which function to reduce the body's response which has been increased by the sympathetic nerves (20).

Reading the Al-Qur'an is a process that can be done to calm the mind from everyday life and successfully provides psychological effects such as in the client's body including blood pressure, decreased

oxygen consumption, decreased muscle tension, decreased metabolic rate (20). The hormones epinephrine and cortisol released during stress cause increased blood pressure by constricting blood vessels and increasing heart rate (20). The amount of increase in blood pressure depends on the severity of stress and the extent to which we can overcome it. The results of this study also found that hypertension sufferers who participated in this study had an average age of 53.81 years with the lowest age range of 43 years and the highest age of 71 years. In general, humans experience physiological changes that drastically decrease rapidly after the age of 40 years and over, this decrease will be at risk of decreased function and affect the sensitivity of receptors, this shows that the older a person is, the function of their organs begins to decrease which is susceptible to various health problems (28). Another factors influence, the results of the study showed that hypertension sufferers were predominantly female (60.3%). This is in line with research stating that women tend to suffer from hypertension compared to men, this is due to decreased estrogen levels during menopause which is the main trigger in the process of hypertension in women (27) Stress is a non-specific response of the body to any disturbed body needs, a universal phenomenon that occurs in everyday life and cannot be avoided, everyone experiences it (29).

The reading of the Al-Qur'an is a number of sound vibrations that reach the ears flowing into the brain and then bring effects through electronic fields that are born in cells that will then respond to these fields and balance their vibrations. Therapy reading the Al-Qur'an at a slow tempo can reduce stress hormones, activate endorphin hormones that can increase feelings of relaxation and improve body chemistry so that it can lower blood pressure, slow breathing, heart rate and brain wave activity (30). The research showed that reading the Al-Qur'an is an activity that has a relaxing effect so that it can reduce stress levels (13). Another research explains that the therapy of reading the Al-Qur'an will generate waves through the sense of hearing that will be transmitted into the nervous system. The chanting of the verses of the Al-Qur'an improves the physiology of the nerves so that there is an improvement in the mechanism in the body, improves mood, and reduces stress levels (31). The harmonization of the waves of the therapy of reading the Al-Qur'an can reduce cortisol and increase endorphins that make someone feel relaxed and will cause the activation of the calm parasympathetic nervous system, so that it can reduce breathing, become where the body's circulation, heart rate, circulation of a person's emotional level. Research result (32) It was found that reading the Al-Qur'an has been proven to provide a calming and relaxing effect because it will provide a positive perception response which can then stimulate the hypothalamus to release endorphins, hormones that make someone feel happy so that they can reduce stress.

Based on the results of the research and theory above, the researcher assumes that reading the Al-Qur'an is effective in reducing stress levels in hypertension patients because reading the Al-Qur'an will provide a relaxing effect, so that the blood vessels and heart rate decrease. In addition, the relaxing effect when reading the Al-Qur'an can also reduce stress levels in hypertension patients (11). In addition to age, gender affects the level of stress and hypertension, women are more susceptible to hypertension because based on the theory obtained, this is caused by decreased estrogen levels during menopause which is the main trigger in the process of hypertension in women and also the female brain has a negative level of alertness response to stress.

CONCLUSION

The stress level after the intervention of reading the Al-Qur'an on the stress level of hypertension patients was in the mild category with an average of 19.10 with a standard deviation of 2.87. There was an effect of reading the Al-Qur'an on the stress level of hypertension patients. It is hoped that to the Muhammadiyah Hospital Palembang can implement the intervention of reading the Al-Qur'an for patients with hypertension which is useful for reducing the stress level of patients, and it is hoped that respondents can implement the intervention according to the Standardize Operational Procedure (SOP). As a suggestion or input for the operation of health services at the Muhammadiyah Hospital Palembang. In order, to improve the quality of nursing services in helping to reduce stress levels by reading the Al-Qur'an. Respondents are expected to be able to independently apply the intervention of reading the Al-Qur'an to reduce stress levels in hypertension patients. For further research, the results of this study are expected to be useful as knowledge and input in the development of medical surgical nursing science in the future And

this study is also expected to explore optimal duration and frequency of Al-Quran reading for stress reduction to compare its effects with other non-pharmacological interventions.

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CONFLICTS OF INTEREST

There is no conflict of interest to declare

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