



The Effect of Progressive Muscle Relaxation and Hearing Holy Quran Sound on The Quality of Life Among Elderly with Hypertension

Dewi Kurniawati *

Nursing Department, Yarsi Health
Science College, Sumatera Barat, Indonesia

Pera Putra Bungsu

Nursing Department, Yarsi Health
Science College, Sumatera Barat, Indonesia

Abstract: Older population is significantly grown up in global society, and most of the elderly suffering with hypertension. Hypertension is one of the extremely disease which cause cardiovascular and decreasing the quality of life. Using complementary methods seems necessary to lessen the patients problem like using progressive muscle relaxation and hearing Holy Quran sound to elderly with hypertension. To assess the effectiveness of progressive muscles relaxation and hearing Holy Quran sound to the QOL in elderly with hypertension. On elderly with hypertension who is residing in Guguk Panjang area. We used quasy experimental study design which consisted of 38 participants and divided into two groups, 15 as intervention group and 23 participants as control group. In experiment group subject were practiced the progressive muscle relaxation and listened to the Holy Quran for 6 consecutive days. They have listened the last of three surah from the Holy Quran. The quality of life was measure using WHO-QOL BREF. Based on Mann Whitney test results the quality of life score shows significant difference in mean scores for total scores in qol before and after intervention between two groups ($p = 0.004$). Furthermore almost all domain also show significant difference. There is a significant difference between QoL experiments and control group after getting the progressive muscle relaxation and hearing the Quran sound among elderly with hypertension. These findings indicate that hearing the Quran sound will increase the quality of life of elderly with hypertension.

Keywords: *Elderly, quality of life, progressive muscle relaxation, hypertension*

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I. INTRODUCTION

Recently, the population of elderly significantly grow up in global society. Data in 2014, showed the number of older people more than 65 age years old was above 46 million, which representing 15% of the total U.S. population; and estimated will increase to 21% by 2030 [1, 2, 3, 4].

By aging-related the elderly will experience functional deteriorations and chronic illnesses such as hypertension [5]. Hypertension is more prevalent among older adults. The prevalence amongst those 45 to 54 years of age was 34.7%; 65 to 74 years of age 64.7%; and 77.3% in older adults ≥ 75 years of age [6].

Hypertension is identified to have significant effects

on kidney disease [7, 8]; cardiovascular disease such as heart failure, myocardial infarction, and stroke [9]; and a leading risk factor formortality [7]. About 7.1 million people are consequence to die because of hypertension in worldwide every year [5].

In Indonesia, hypertension becomes the five common degenerative diseases. Data in 2018 indicated an increasing number to 34.1% from 26.5% in 2013 [10].The chronic disease have impact in Wuality of Life (QOL) of elderly patients. Currently some show that hypertension contributes to decrease the QOL of patients [11, 12]. The QOL of patient with hypertension is caused by issues which concern to pharmacological treatment [13].

*Correspondence concerning this article should be addressed to Dewi Kurniawati, Nursing Department, Yarsi Health Science College, Sumatera Barat, Indonesia. E-mail: data.peraputrabungsu@gmail.com

The data indicated that the effectiveness of antihypertensive therapy only by about 15%–20%, and it is still considering low to control of blood pressure [14, 15]. Only 10% of patients who report to have advantageous in lowering blood pressure after taking the medication [16].

Therefore, using complementary methods to reduce patients' problems seems necessary. One of the basic and low-risk interventions, which can be used parallel to the treatment for these patients, is complementary or alternative medicine [17, 18].

The complementary medicine methods is using behavioral intervention such as progressive muscle relaxation [19] and hearing Holy Quran can increase the Quality of Life [20]. Progressive muscle relaxation is a physical stimulation and mental peace with emphasis on muscle systematic stretching and release (contraction-release) [19].

Study from Shahriari [19] revealed that mean scores of functional and overall domains of QoL had a significant difference practice progressive muscles relaxation compared to control. It shows the positive effect on improvement of QoL in the older adults. Besides that, current study found that hearing to the Quran voice will increase the QoL in elderly more over to the mental health domains followed by the life satisfaction domains [21].

The objective of the study was to assess the effectiveness of progressive muscles relaxation and hearing Holy Quran sound to the QOL in elderly with hypertension.

II. METHODOLOGY

This study conducted on elderly with hypertension who is residing in GugukPanjang area. We used quasy experimental study design which consisted of 38 participants and divided into two groups, 15 as intervention group and 23 participants as control group.

The inclusion criteria were: the participants sign the consent form and the aged more than 60 years old. For exclusion criteria included: the elderly with muscle and cardiovascular disease.

Data were collected in two section questionnaire. First was demographic characteristics, and second was quality of life. Quality of Life was measure using WHO-QOL BREF which consists of 26 questions. The va-

lidity and reliability of these questionnaires was established in some studies in Indonesia for Indonesian version [22, 23, 24]. The score of questionnaire using 5 point Likert scale that rates from 5 (strongly agree) to 1 (strongly disagree) and consists of 4 domains which are physical psychological, social and environmental dimension.

All respondent filled the consent form about their agreement to this study. Then quality of life was measure to experiment and control group before applying the intervention. In experiment group subject were practiced the progressive muscle relaxation and listened to the Holy Quran for 6 consecutive days. They have listened the last of three Surah from the Holy Quran.

In the current study progressive muscle relaxation defined to contraction and relaxation some muscle in some organ of the body which covered upper and lower hand, upper and lower leg, chest, abdomen and shoulder. The movement was shown by the trainer and also using screen sharing and participant were asked to follow the movement. Step one subject were asked to take the comfort position an then take in deep breathing for three times. After that they try to focus and concentration to follow the movement which start from the lower hand and last to upper leg. Muscle relaxation were practiced three times a week and repeated for two weeks. When the subjects finish to practice progressive muscle relaxation then they listened to the Holy Quran. After 2 weeks QoL questionnaire was filled in experimental group. In the control group QoL were completed in the first day and last day of the study.

Demographic data and QoL domain was describe by using frequency counts, means and standard deviation. The different between two groups was analysing by Mann Whitney test.

III. RESULTS

Table 1 shows demographic characteristic for experiment and control groups, which in the experimental group mean age $M = 70.33$; $SD = 7.128$, BMI ($M = 24.78$; $SD = 3.545$). For the control group the mean of age was $M = 69.13$; $SD = 7.097$, BMI $M = 24.64$; $SD = 2.954$. Most of respondent in both group have high consumption of natrium and less for physical activity.

TABLE 1
DEMOGRAPHIC CHARACTERISTIC

Characteristics	Int Group (n = 15)	%	Cont Group(n = 23)	%
Age	70.33 ± 7.128		69.13 ± 7.097	
BMI	24.78 ± 3.545		24.64 ± 2.954	
Gender				
Man	2	13.3	8	34.8
Woman	13	86.7	15	65.2
Education				
Basic school	5	33.3	6	26.1
Middle school	3	20	4	17.4
High school	3	20	10	43.5
University	4	26.7	3	13
Status				
Widow	9	60	7	30.4
Smoking				
Yes	0	0	2	8.7
No	15	100	21	91.3
Natrium consumption				
Yes	12	80	20	87
No	3	20	3	13
Family with Hypertension				
Yes	5	33.3	9	39.1
No	10	66.7	14	60.9
Physical activity				
Yes	11	73	13	56.5
No	4	27	10	43.5

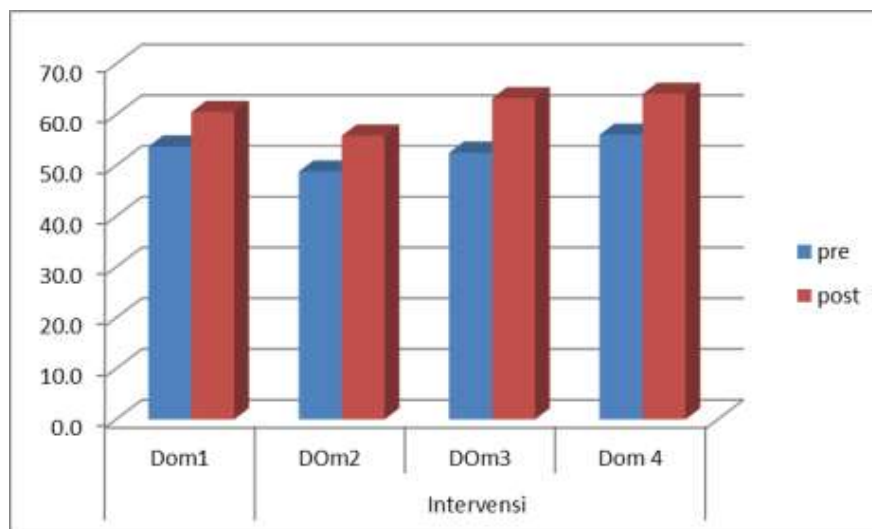


Fig. 1. QoL before and after in the experiment group

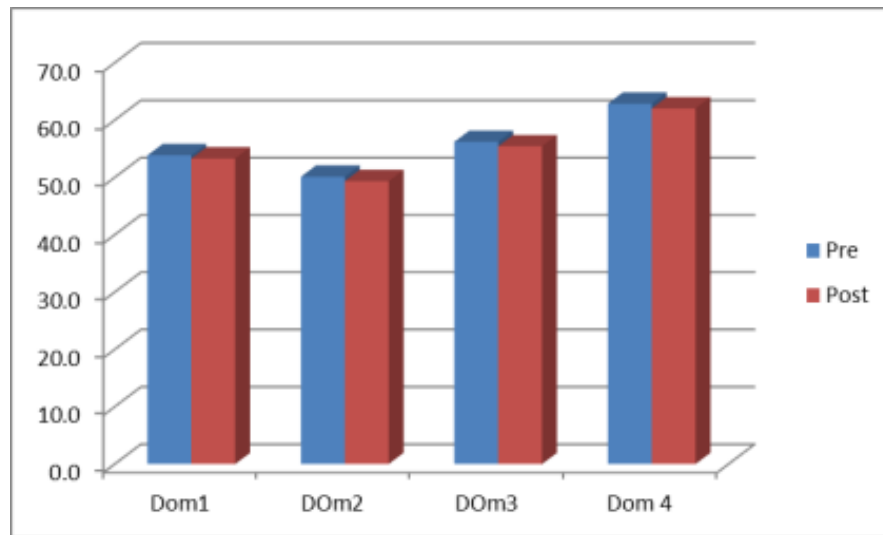


Fig. 2. QoL before and after in the control group

Fig. 1 shows the increasing of quality of life for all domains and for total QoL in the experiment group. And in Fig. 2 is for control group which display only slight difference between two groups.

Based on Mann Whitney test results the quality of

life score shows significant difference in mean scores for total scores in qol before and after intervention between two groups ($p = 0.004$). Furthermore almost all domain also show significant difference except for environmental (Table 2).

TABLE 2
DIFFERENCE WITHIN AND BETWEEN TWO GROUP

			Mean	SD	p Wilcoxon	p Mann Whitney
Domain 1	Intervention	Pre	53.73	± 6.912	.014	.013
		Post	60.53	± 7.11		
	Control	Pre	53.87	± 9.221	.257	
		Post	53.3	± 8.849		
Domain 2	Intervention	Pre	48.8	± 5.647	.002	.02
		Post	55.87	± 6.567		
	Control	Pre	50.13	± 8.019	.083	
		Post	49.35	± 7.643		
Domain 3	Intervention	Pre	52.53	± 11.759	.032	.048
		Post	62.87	± 10.501		
	Control	Pre	56.22	± 12.284	.083	
		Post	55.43	± 12.471		
Domain 4	Intervention	Pre	56.07	± 9.051	.005	.906
		Post	64.13	± 3.523		
	Control	Pre	62.87	± 9.392	.102	
		Post	62.04	± 9.108		

IV. DISCUSSION

The results showed that mean scores of physical health, psychological and social relationship had a significant difference after 2 weeks intervention in study group, compare to control group. It indicated positive conse-

quences when doing progressive muscle relaxation and hearing Holy Quran sound on increasing the QoL among elderly with hypertension. [25] found that the quality of life was increase in different domain after practicing progressive muscles relaxation. Another studies have

consistent result with this study, QoL improvement was occurred after practicing progressive muscles relaxation in patients with prostate and breast cancer, multiple sclerosis and post traumatic syndrome [19, 26, 27, 28]. Study from [29] indicated significant relationship between progressive muscle relaxation and dance therapy on quality of life in elderly.

[30] stated that progressive muscle relaxation relieves tension in the muscles so that the muscles relax. Progressive muscle relaxation will cause the body to concentrate on muscle tension in several organs of the body. By releasing and decreasing muscle tension, this will increase a sense of comfort and peace for the body [17].

In this study we found most of respondent report decreasing the pain in the body after practicing progressive muscles relaxation in experiment group. Other studies are consistent with the current study and confirm pain relief through this approach. A systematic review examined the effect of muscle relaxation on breast cancer. Seven articles found this approach to provide pain and pain relief in breast cancer patients [31]. In a study comparing two non-pharmacological approaches, PMR and music therapy, for pain in cancer patients, the effect of muscle relaxation was significantly higher than that of music therapy. It could be argued that this non-pharmacological approach caused pain relief and ultimately improvement in quality of life in cancer patients [23]. Similar findings also indicated from [32] patients with hypertension claim that regular relaxation training can reduce physical disorders related to hypertension. Some of the physical complaints that subside due to relaxation are neck pain, headaches, difficulty sleeping, body stiffness and aches. Psychologically, relaxation training makes people with hypertension feel relaxed, which in turn reduces the feeling of discomfort and makes them calm, feeling anxious and worried less.

In a relaxed condition, the body through the brain will produce endorphin which functions as the body's natural analgesic and can relieve pain (physical complaints). Likewise with psychological conditions, by doing guide imagery and hypnosis there will be a release of negative emotions such as feelings of anger, anxiety, etc. which are implications of improving the quality of life from a psychological side [32].

Besides that, hearing Holy Quran sound also promote quality of life. [21] stated that after hearing Holy Quran sound in intervention group the QoL was higher than before intervention. This result also similar to [33] that QoL will enhance individual mental health.

The Qur'an is well-known as the mind and soul therapist and sometimes it is acknowledged as the resource of

curing treatment [34]. Since human nature has a tendency to listen the rhythm and enjoyment of order, the Holy Quran has a powerful expression and an enchanting style that affects individuals. The Quran is full of passages dealing with relaxation and how to achieve it, and provides a number of strategies for dealing with stressful situations. In general, the Quran calls for peaceful and serenity [21]

Therefore, it is important to manage the level of psychological aspects between individuals, as listening to the Quran is linked to the quality of life, it stimulates the alpha brain wave, changes negative emotions and creates a sense of relaxation, causing the release of endorphins are promoted [35]. The Quran also provided many solutions, principles, and guidelines for mental health [33, 36].

V. CONCLUSION

The findings of the present study showed that combination of progressive muscle relaxation and hearing the Quran sound will positively affected the quality of life in elderly such as physical pain relief and relaxation in elderly. In addition after the intervention almost elderly reported feel healthier and decrease sleep disturbances at night. Regarding the findings of the present study we can conclude that the quality of life will promoted after the intervention. Therefore, implementing such interventions is recommended to promote health in elderly, especially with hypertension.

A. Limitation and Future Research

The study has limitation since we did this research during pandemic, it is hard to find our respondent. In the future research we suggest to increase the number of respondent.

B. Ethical Consideration & Compliance with Ethical Guideline

After getting letter permission from department of national and political unity, the researcher finished the study questionnaires. Before filling the questionnaires, all participants signed the consent form and also get some explanation about this study.

C. Funding

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