

Conference Paper

Effectiveness of Al-Quran Auditory Therapy and Music Therapy on Pain Quality in Coronary Heart Disease Patients at Ulin General Hospital

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Heart disease is the number one cause of death globally; an estimation shows that 17.7 million people die because of cardiovascular disease. 7.4 million deaths are caused by coronary heart disease. The main symptoms of coronary heart disease are chest pain (angina), feeling depressed, squeezed or choked with the location of the pain at the back of the left breastbone spreading from the bottom of the upper arm, left shoulder, to the neck or lower jaw. Pain management can be done with non-pharmacological techniques of Al-Quran auditory therapy and music therapy. The purpose of this study is to determine the effectiveness of Al-Quran auditory therapy and music therapy on the quality of pain in patients with coronary heart disease. This research is a quantitative research with Quasy Experimental research design using two pre and post design approach involving 28 respondents. Measurement of pain level by using Numerical Rating Scale. The results showed that both therapy had an effect on the quality of pain of coronary heart disease patients. The mean decreasing of pain in the group of auditory therapy Al-Quran is bigger than the music therapy group the results of the mean 1.286. So it can be deduced that Al-Quran auditory therapy is more effective in reducing pain in patients with coronary heart disease. The suggestion of this study may provide additional information for response-related pain relief.

Keywords: CHD, Pain, Al-Quran, Music

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Published: 15 March 2021

Publishing services provided by
Knowledge E

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Selection and Peer-review under the responsibility of the IVCN Conference Committee.

1. Introduction

The number one cause of death in the world, an estimated 17.7 million people die from cardiovascular disease by 2015, representing 31% of all deaths globally. An estimated 7.4 million deaths are caused by coronary heart disease. By 2015, 17 million premature deaths (under 70 years) are caused by non-communicable diseases and 37% are caused by cardiovascular disease [1].

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Coronary heart disease is at the seventh highest position of Non-Communicable Diseases in Indonesia. South Kalimantan Province is on the order of 11 for patients with coronary heart disease with estimates obtained based on doctor's diagnosis of 0.5%, while based on symptoms of 2.2% [2]. At Ulin Hospital from January to June 2017 with a total of 147 people, based on male gender as many as 116 people (80.5%) and women as many as 28 people (19.5%), based on age 0-14 years as many as 1 person and more than 15 years as many as 143 people (99.3%).

The main symptoms of coronary heart disease are chest pain (angina), feeling depressed, choked with the location of the pain at the back of the left breastbone spreading from the bottom of the upper arm, left shoulder, to the neck or lower jaw [3]. Characteristics of coronary heart patient pain need to be considered include location, duration, radiation, and quality as well as accompanying important symptoms to trace [4].

Severe and sustained pain, if not promptly treated, can result in neurologic shock[5]. Morton's research, 2013 reveals that patients who experience critical states not only experience problems in their physiology, but also psychosocial, developmental and spiritual processes [6].

Pain management may be given nonpharmacologically by distraction technique. Excess distraction technique exercises are easier to do and there are no side effects whatsoever. One method of distraction that can be done to deal with pain using audiotori distraction method with Quran therapy and music [7].

Al-Quran Auditory can reduce the level of pain, cause blood vessels, and heart rate decreased⁸. Al-Quran therapy also has elements of meditation, autosuggestion and relaxation [8]. Auditory reading of the Qur'an has a relaxing effect and can decrease anxiety, improve sleep quality when listened to within 60-70 db constantly, no sudden change of rhythm, and in soft tones [9].

Surah Ar-Rahman has a therapeutic effect [10] Characteristics of sura Ar-Rahman are included in the criteria of audiotori therapy which have a relaxation effect. Vibration in classical music matches the vibrations of the brain's nerves, so it can stimulate the brain's nerves to oscillate (swinging, vibrating) [11]. Music can be applied into a therapy where music is useful for the healing process because it can reduce pain and make relaxation [6]

Music has a positive effect on cardiovascular disorders especially cardiac patients, strong evidence that proper music such as harp music can reduce stress. The type of music that can be used for therapy is that has a tempo of 60-80 beats / minute [12]. Based on the preliminary study it was found that overcoming the pain of coronary heart

patients still using pharmacological therapy, the use of non-pharmacological therapy using distraction techniques of Al-Quran auditory therapy and music therapy has never been given to coronary heart patients.

2. Method

This research uses quantitative research method with Quasi Experiment design, using two group pre and post design approach. This study partially intervenes from existing samples with Al-Quran auditory therapy and partly with music therapy. The population in this study were all patients with coronary heart disease who experienced typical pain (moderate-severe) in the Heart Hospital Room, sampling in this study with accidental sampling. Researchers made informed consent given to patient or families prior to the study. Ethical research that must be considered include, respect for respon, beneficence-non maleficence and justice. To determine the effect of Al-Quran auditory therapy and music therapy on the quality of pain in coronary heart disease using T-test with Paired Samples Test, while to know the difference of effectiveness of Al-Quran auditory therapy and music therapy by using Independent test t-test. Distribution of normal data is determined by Shapiro-wilk test. After the test of homogeneity test. If the data distribution is not normal to analyze the experimental results using the Mann Whitney test.

3. Result

The study was conducted from 13 November to 14 December 2017 at Ulin Hospital. This study uses the number of samples of 28 respondents, the sample is then divided into two intervention groups of 14 respondent's using auditory therapy Al-Quran and 14 respondents by using music therapy.

There is a significant influence of Al-Quran auditory therapy and music therapy on the quality of pain in patients with coronary heart disease. it was found that the difference between therapy of Al-Quran Auditori and Music therapy was 3.851 with probability (sig 2-tailed) 0.001. Then H_0 is rejected which means there is a significant difference between the difference of pain (pre and post) on the auditory therapy of Al-Quran and music therapy. In this study the auditory therapy of Al-Quran distribution of its influence is better than music therapy on the decrease of pain scale in patients with coronary heart disease.

TABLE 1: Pain Scale Before and After given Al-Quran Auditory Therapy and Music Therapy

Therapy		Mean	SD	Min-Max
Al-Quran	Before	6.29	1.267	4 – 8
	After	3.71	0.354	1 – 6
Music	Before	5.79	1.251	4 – 8
	After	4.5	1.225	3 – 7

TABLE 2: Effect of Auditory Therapy Quran and music therapy on the Quality of Pain

	Mean	SD	t	Sig
Al-Quran	1.286	0.914	5.264	0.000
Music	0.857	0.363	8.832	0.000

TABLE 3: Effectiveness of Al-Quran Auditory Therapy and Music Therapy on Pain Quality in Coronary Heart Disease Patients

	Mean Different	t	df	Sig
Al-Quran & musik	1.286	3.851	26	0.001

4. Discussion

Measurement of pain intensity is subjective and pain in the same intensity is felt differently by everyone. Similarly, research conducted by Rusfita, 2017 which shows that the scale of pain in maternal mothers in puskesmas district Banjarnegara district based on the average pretest results before being given auditory therapy Al-Quran is 3,848 with moderate pain category with maximal value [8].

Measurement of pain intensity is subjective and pain in the same intensity is felt differently by everyone. The results of pain intensity prior to auditory therapy Al-Quran has intervals with a scale of 4-10, meaning that the pain felt by the respondent is moderate to very severe pain [13]. The height of different pain properties is different for each individual because the pain is subjective and individual, in accordance with the theory that pain is a multifactorial, subjective, personal and complex phenomenon that is influenced by psychological, biological, social, cultural and economic factors.

Pain intensity after being given auditory therapy Al-Quran has interval with pain scale 1-6. Means the pain felt by the respondent is mild to moderate pain. This is also evidenced by Handayani which states that auditory therapy of the Quran can reduce pain intensity. Al-Quran chants can lower stress hormones, activate natural hormone endorphins, increase feelings of relaxation, and divert attention from fear, tension, improve the body’s chemical system so as to lower blood pressure and slow the rate of breathing, heart rate, pulse and brainwave activity. Deeper or slower respiratory rate is very good cause calm, emotional control, deeper thinking and better metabolism [13].

The decrease of pain after being given auditory therapy Al-Quran because Al-Quran serves as a system of repair (service system) both physical and psychic, known as syifa which means medicine, healers and bidders [14]. Chanting the holy verses of the Qur'an can provide a relaxing effect because it can activate the hormone endorphin that makes a person feel relaxed, divert attention from fear, anxiety, and tension, improve the body's chemical system so as to lower blood pressure and slow breathing [15].

Al-Quran as a healer has been done and proven people who read Al-Quran or listening will give changes in electric current in the muscles, changes in blood circulation, changes in heart rate and changes in blood levels of the skin [16]. The influence of Al-Quran therapy on the heart is expressed in patients suffering from heart disease after being heard sounds show a high immune system, improved heart function becomes faster while reducing the recurrence of heart attack, thus reading the Quran is played far will give a good effect for body [17].

Based on the results of the analysis can be seen that the intensity of pain before being given music therapy has interval with pain scale 4-8. Means the pain felt by the respondent is moderate to severe pain. Priyanto's research stated that prior to mozart music therapy in patients with acute coronary syndromes in RSUD KRT Setjonegoro Wonosobo obtained maximum pain scale 5 with median value 413.

The level of pain felt by the respondent is influenced by several factors, among others, age, gender, culture, meaning of pain, attention, anxiety, fatigue, previous experience, coping style and social support. It also influenced the process of receiving voice on each individual [18].

Music can be applied into a therapy where music is useful for the healing process because it can reduce pain and make relaxation [6]. Music has the power to treat diseases and disabilities experienced by a person, music proven to show the effect of lowering the frequency of heart rate, reduce anxiety, depression, relieve pain and lower blood pressure [8]. Mozart music therapy while overcoming chest pain based on Gate control theory that chest pain impulse can be regulated or inhibited by defense mechanisms along the central nervous system.

Music therapy can be a safe intervention and may have a positive effect on improving symptoms associated with management of patients with coronary artery, this strategy can be a routine nurse intervention to do.

Based on the results of this study, Al-Quran auditory therapy and music therapy are both proven to have an effect on decreasing the pain scale in coronary heart disease patients, and for the comparison of effectiveness of the two therapies it is found that the auditory therapy of Al-Quran is more effective in reducing the scale pain in coronary

heart patients. Pain management with auditory techniques is a nonpharmacological treatment therapy that can be used as complementary medicine.

Al-Quran auditory therapy is an effective method to do in the reduction of pain. This is because the therapy can provide a relaxation effect, comfortable and quiet so that the blood vessels of the pulse and heart rate decreased or can be controlled [19]. Patients suffering from heart disease after sound exposure show a high immune system, improved heart function becomes faster while reducing the recurrence of heart attacks, thus reading the Quran that is played will far give a good effect on the body [17].

Auditory distraction in the form of Al-Quran and music has many benefits for humans, Al-Quran has benefits for humans both healing, comfort, tranquility and so on [20]. Chanting the holy verses of the Qur'an can provide a relaxing effect because it can activate the hormone endorphin that makes a person feel relaxed, divert attention from fear, anxiety, and tension, improve the body's chemical system so as to lower blood pressure and slow breathing [15].

Sound effects can affect the overall physiology of the body on the basis of activation of the sensory cortex with deeper secondary activation of the neocortex and successive limbic, hypothalamic and autonomic nervous systems. The eighth and tenth cranial nerves carry a voice impulse through the ear, the vagus nerve helps regulation of heart rate, respiration, and speech, carrying motor sensory impulses to the throat, larynx, heart, and diaphragm. The sound therapist expresses the vagus and limbic the brain responsible for emotion) is the link between the ears, the brain, and the autonomic nervous system that explains how sound works in the healing of physical and emotional disturbances [21].

Al-Quran reading therapy can synergize with pharmacological therapy in reducing pain [22]. Al-Quran auditory therapy when read or heard can provide a relaxing effect, and can cause blood vessels and pulse heart rate decreased [13]. In addition to reducing the pain of auditory therapy of the Quran can also improve the quality of life of a person this is evidenced by Mulyadi, 2012 which shows that there is a significant difference between the quality of life of respondents before and after being given intervention by reading the Koran to the control group and intervention group. In the intervention group for quality of life respondents increased after being given auditory therapy Al-Quran.

The basis of election of sura Ar Rahman in this research is because surah Ar-Rahman has meaning about the mercy and the nature of Allah's love to His servant and teach us gratitude that must be done every time to Allah SWT, Surah Ar Rahman also has a therapeutic effect on people who listen to it⁶. Ar-Rahman surah auditory therapy has

rhythm provisions, slow tempo, gentle full of appreciation and correct reading is music that can bring calm, minimize anxiety, and can cause relaxation response.

The provision of the Al-Quran Surah Ar Rahman's heading will lead to self-confidence, optimism (hope of healing), bring peace, peace and feel the presence of Allah SWT so that it can lead to stimulation to the hypothalamus to decrease the production of CRF (Corticotropin Releasing Factor). CRF will stimulate the anterior pituitary gland to reduce ACTH production (Adreno Cortico Tropin Hormone). This hormone will stimulate the adrenal cortex to decrease the secretion of cortisol and suppress the immune system thereby reducing the level of anxiety and pain [23].

Based on study, it can be concluded that there was an effect of giving Quran auditory therapy given to the quality of pain in patients with coronary heart disease at Ulin Hospital. There is a difference in the effectiveness of auditory therapy of Al-Quran and music therapy on the quality of pain in patients with coronary heart disease in Ulin Hospital, with the results of Al-Quran auditory therapy more effective in reducing pain in patients with coronary heart disease.

Funding

All Author declare no funding for this study

Acknowledgement

The authors would like to thank their colleague for their contribution and support to the research. They are also thankful to all the reviewers who gave their valuable inputs to the manuscript and helped in completing the paper.

Conflict of Interest

The authors have no conflict of interest to declare.

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