

Managing Pain Problems in Elderly Patients With Hypertension Through Murottal Therapy

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Abstract.

The community service partner is the elderly and families in Tambak Baru Ilir Village. Hypertension in the elderly is often accompanied by pain, either due to complications of hypertension or due to physical decline due to aging. Uncontrolled pain can lead to increased blood pressure, sleep disturbances, depression, and a reduced quality of life. In addition to pharmacological treatment, non-pharmacological approaches are needed to help reduce pain, one of which is Quranic recitation therapy. Recitation therapy has been shown to have a calming effect and can help reduce anxiety and stress levels, as well as improve sleep quality in the elderly, contributing to pain reduction and blood pressure stabilization. The result of this interventions, There was a decrease in pain levels in elderly people with hypertension after being given Murottal therapy in Tambak Baru Ilir Village. Murottal therapy activities can be given to elderly people with hypertension to reduce the level of pain they feel.

Keywords: Elderly; Hypertension; Pain Management and Murottal Therapy.

I. INTRODUCTION

The elderly population continues to increase year by year and dominates other age groups [1]. According to data from the World Health Organization, the elderly population in Southeast Asia is 8%. It is estimated that by 2050 the elderly population will continue to increase threefold [2]. Indonesia, part of Southeast Asia, is also experiencing an increase in the number of elderly people, reaching around 80,000,000. Data on the number of elderly people based on a previous BPS survey showed that the number of elderly people was recorded at 63.71 million [1]. This increasing number of elderly people will cause the elderly to be unable to enjoy life in their old age due to health problems they suffer from. One of these health problems is hypertension. Hypertension is a health problem with a high incidence in Indonesia. According to the 2018 Basic Health Research (Riskesdas), the prevalence of hypertension, measured among the population aged 18 years and older, was 34.1%, with the highest prevalence in South Kalimantan (44.1%), and the lowest in Papua (22.2%). Hypertension occurs in the 31-44 age group (31.6%), 45-54 age group (45.3%), and 55-64 age group (55.2%) [3]. Data from the Banjar Regency Health Office in 2021 showed that Banjar Regency has a relatively high incidence of hypertension across its various regions. Hypertension management can be carried out pharmacologically and non-pharmacologically. Non-pharmacological therapy can be done through complementary therapy. Research by Natalia & Suryanadi (2024) states that complementary therapy focuses on providing relaxation as a procedure and technique aimed at reducing tension and anxiety, by training patients to be able to intentionally relax the body's muscles at any time, as desired [4]. According to the scientific perspective, relaxation is a technique to reduce stress and tension by stretching the entire body to achieve a healthy mental state [5].

The therapy that can be provided is relaxation therapy by listening to Murottal Al-Quran. Relaxation Therapy with Murattal Al-Quran has been widely applied as an alternative to accelerate healing. However, not many people know that Relaxation Therapy with Murattal Al-Quran actually helps healing. Music stimulation can activate specific pathways in several areas of the brain, the limbic system associated with emotional behavior is one of those activated. The limbic system that is activated by Murattal Al-Quran causes the body to relax, at this time blood pressure decreases thereby reducing pain [6]. The sound of the recitation of the Quran containing elements of the human voice is a healing instrument. The sound can

reduce stress hormones, activate endorphins, increase relaxation, divert fear, anxiety and tension [7]. These changes indicate relaxation or a decrease in tension in the reflexive nerves which results in the loosening of the arteries and an increase in blood levels in the skin, accompanied by a decrease in heart rate [8]. This Murattal Al-Quran Music Therapy works on the brain, where when driven by stimulation from (Murattal Al-Quran Therapy). Listening to Murattal Al-Quran can lower blood pressure so that pain is reduced [9]. This is in line with research by Febriana et al., (2024) which found that murrotal therapy was more effective in reducing pain in elderly people with hypertension compared to SEFT therapy [10]. The purpose of this community service is to teach the management of pain problems in elderly people with hypertension through Murottal therapy.

II. METHODS

The location of this Community Service activity is located in Tambak Baru Ilir Village, Banjar Regency, South Kalimantan. The media used is a speaker and audio of murrotal. There are three stages of activity, namely: Preparation The first step in this community service activity is measuring the pain scale in the elderly using a Visual Analogue Scale (VAS) pain instrument based on a predetermined score. The instrument scores/values presented are: 0 = no pain, 1-3 = mild pain, 4-7 = moderate pain, 8-10 = severe pain. Screening was conducted face to face with the target participants present at the location. Furthermore, the murrotal therapy demonstration was conducted, involving the recitation of the holy Quranic verse, Surah Ar-Rahman, for approximately 20 minutes. The elderly were able to sit back and relax. After the murrotal therapy session, the team evaluated the second activity by asking the clients how they felt after the therapy. After completion, the elderly rest first for 10 minutes before doing the next activity



Fig 1. Community service activities



Fig 2. the murrotal therapy demonstration to relief the pain

Monitoring and evaluation

Monitoring and evaluation (monev) is carried out directly to the target. Monitoring and evaluation is carried out by conducting discussions and questions and answers after the murrotal therapy in Tambak baru ilir Village. This evaluation aims to determine the Elderly Feelings After Performing the murrotal therapy. The results of the evaluation are both through questions and answers and the implementation of defancy, All elderly are enthusiastic when participating in the murrotal therapy and can follow the murrotal therapy and some elderly experienced a calm feeling. Overall, the murrotal therapy can be carried out by all elderly in Tambak Baru Ilir Village.

III. RESULT AND DISCUSSION

Results of the characteristic of elderly conducted in Tambak baru ilir Village which was attended by 27 participants. Participants were enthusiastic about the activities carried out. Data collection was carried out in Tambak baru ilir Village on March 1st, 2025.

Table 1. The elderly characteristic

CHARACTERISTIC	N	%
GENDER		
Male	5	18.5%
female	22	81.5%
TOTAL	27	100%
AGE		
40-50 years old	6	22.2%
51-60 years old	13	48.2%
61-70 years od	6	22.2%
>70 years old	2	7.4%
TOTAL	27	100%
ETHNIC GROUP		
Banjar	26	96.3%
Java	1	3.7%
TOTAL	27	100%

Source: primary data 2025

From table 1, it can be seen that the participants in community service providing murottal therapy are mostly female (81.5%), aged 51-60 years (48.2%) and of Banjar ethnicity (96.3%).

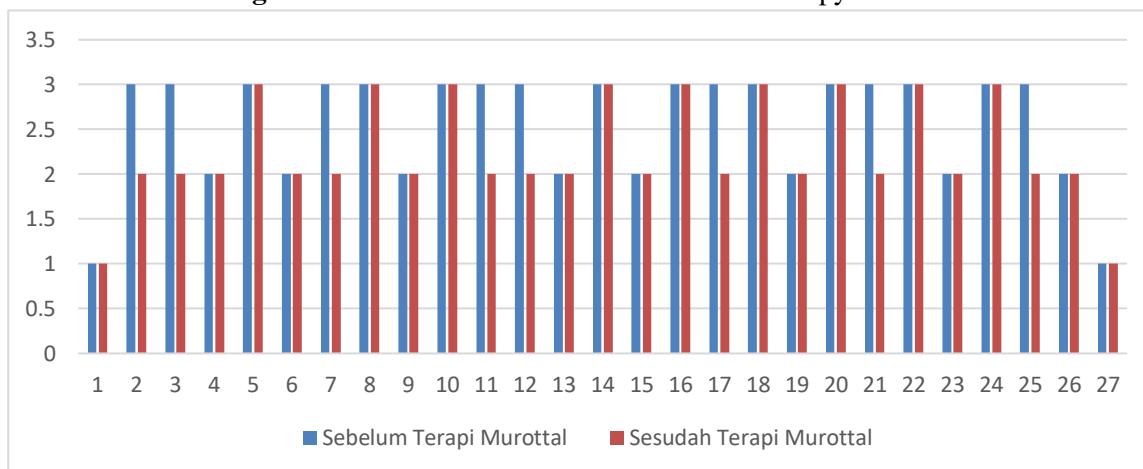
Table 2. Pain Scale Before and After Murottal Therapy in 2025

No	Pain scale	Before therapy		After therapy	
		Mean + SD	Max-Min	Mean + SD	Max-Min
1.	Pain scale	2,56 ± 0,641	1 – 3	2,26 ± 0,594	1 – 3

Source: primary data 2025

From table 2, it is obtained that The average pain scale score before and after murottal therapy was <3. This scale indicates mild pain. However, there was a decrease in the average pain scale score of community service participants between before and after murottal therapy.

Fig 1. Pain Scale Before and After Murottal Therapy in 2025



Source: primary data 2025

Diagram 1 shows a decrease in pain scale scores before and after murottal therapy. This change occurred in eight community service participants, representing 29.6%. This change resulted in a decrease in pain scale scores in participants 2, 3, 7, 11, 12, 17, 21, and 25. The implementation of community service activities on murottal therapy as a non-pharmacological intervention to reduce pain levels in elderly people with hypertension provides an interesting picture when connected with physiological, psychological, and spiritual theories related to pain management. Based on the measurement results, it was found that the average pain level before therapy was 2.56 and after the intervention decreased to 2.26. Although the

decrease was not significant and still in the mild pain category, this change still indicates a positive effect of murottal therapy on the elderly's perception of pain. To understand these findings more deeply, it is necessary to analyze the various biological, psychological, and methodological factors that play a role in the elderly's response to this intervention. The participants in this activity were mostly aged 51–60, predominantly female, and almost all of them were from the Banjar ethnic group.

This is the period when the aging process begins to cause various changes in the body's systems, including the cardiovascular, musculoskeletal, and nervous systems. Elderly people in this age group generally begin to experience bone and joint degeneration, muscle stiffness, and decreased blood vessel elasticity, making them more susceptible to pain [11]. In women, this risk increases with postmenopausal hormonal changes, as decreased estrogen levels weaken blood vessel protection and the body's ability to respond to physical stress. This explains why women predominate among participants and explains their tendency to be more susceptible to pain complaints [12]. Furthermore, the predominance of the Banjar ethnic group, which is predominantly Muslim, positively contributes to the acceptance of murottal therapy because they have a strong emotional and spiritual connection to the recitation of the Quran, making this therapy easily accepted and comfortably undertaken by participants. Although the reduction in pain was not very large, the results of this activity are still in line with previous studies (Hartiningsih et al., (2022); (Muwarni & Anggoro, 2023) showing that murottal therapy can have a positive effect on reducing pain and blood pressure in elderly hypertensives. The reduction in pain values that occurred was not very large due to several important factors, namely [13, [14]:

Mechanism of Action: Influences the Affective Component, Not Purely Sensory

Murottal therapy works by utilizing this mechanism. Soothing sounds, especially those with deep spiritual meaning, such as Quranic recitation, act as a competitive stimulus to pain signals. This stimulus diverts the brain's attention and triggers a relaxation response. This mechanism involves the central nervous system, specifically the limbic system. When someone listens to Quranic recitation recited with a regular tone and calming rhythm, the auditory stimuli are transmitted to the areas of the brain that regulate emotions, mood, and stress responses. Activation of the limbic system leads to a decrease in the production of stress hormones like cortisol and an increase in endorphins, which function as the body's natural analgesics [15]. Endorphins work to suppress the transmission of pain impulses in the neural pathways, thus reducing the perception of pain [16].

Furthermore, the psychological relaxation created while listening to murottal can reduce muscle tension and improve blood flow, especially in elderly people with hypertension who frequently experience pain due to muscle spasms and impaired tissue perfusion. This calm and relaxed state directly contributes to reducing pain sensations. However, it is important to note that this intervention more strongly influences the affective-motivational component of pain (i.e., suffering, discomfort, and anxiety caused by pain) than its sensory-discriminative component (i.e., the intensity, location, and type of pain sensation itself) [17]. In elderly people with hypertension, the pain experienced is often chronic and multifactorial (e.g., due to vascular complications or joint degeneration). Murottal therapy as a non-pharmacological therapy can be very effective in reducing the "suffering" and anxiety that accompany pain, thus making it feel more tolerable, but it does not necessarily eliminate the pathophysiological source of the pain. This is why the reduction in the VAS scale may not be drastic [18].

Characterizing Mild Pain as a "Ceiling Effect"

Preliminary data indicate that most participants already experienced pain in the mild category (mean score of 2.56). In this context, the room for improvement is statistically very limited. This phenomenon is often referred to as the "ceiling effect." When the baseline or initial condition is already at the lower end of the scale, any intervention—even if effective—will only show small improvements [19]; [20]. As an analogy, someone with an exam score of 85 (on a scale of 100) will be more difficult to significantly improve than someone with a score of 50. Reducing from mild to even mild pain is still a clinically meaningful achievement for older adults, as it can improve their comfort and quality of life, even if the magnitude is modest.

Limited Duration and Intensity of Intervention

Sustained neuroplasticity and pain modulation require consistent and repeated exposure [21]. In this report, the murottal therapy intervention appears to have been conducted in only a single 20-minute demonstration session. A single exposure, while powerful, may not be sufficient to induce significant long-term neurochemical changes in the central nervous system. To produce a more potent analgesic effect, a sustained and structured intervention over a period of weeks or months is necessary. This allows the autonomic nervous system (which regulates the relaxation response) to "learn" and adapt, resulting in a more permanent reduction in basal stress levels and pain sensitivity [22].

Heterogeneity of Pain Causes in Elderly with Hypertension

The elderly with hypertension are not a homogeneous group. The pain they experience can originate from various sources: musculoskeletal pain (osteoarthritis), neuropathic pain, pain due to vascular complications, or a combination of these [21]. Murottal therapy, as a psycho-spiritual-relaxation intervention, is likely most effective for pain with a high psychogenic or stress component. For pain caused by significant tissue or nerve damage (nociceptive or neuropathic pain), the effects of murottal therapy will be more limited and serve as a supportive, rather than primary, therapy.

Research Factors as a Single Intervention

In ideal clinical practice, non-pharmacological therapies such as murottal are most effective when combined with other approaches, such as physical therapy, appropriate medication management, and nutritional support [15]. In this community service context, murottal therapy was provided as a single intervention. Therefore, it is understandable that the effects were not as strong as expected from a multimodal and comprehensive approach [22].

IV. CONCLUSION

The small reduction in pain scale in this report is not an indication of failure, but rather a reflection of the realistic mechanism of action of relaxation-based non-pharmacological therapy. Its primary effect lies in modulating the perception and emotions accompanying pain, rather than in directly eliminating the pain source. These results are consistent with modern pain theory, which views pain as a multidimensional experience (biopsychosocial-spiritual). Murottal therapy successfully addresses the psychological and spiritual dimensions, resulting in a small but significant reduction in pain, particularly in increasing feelings of comfort and calm in elderly participants. For more optimal results in the future, similar interventions need to be designed with longer duration, regular frequency, and integrated with other therapies and health approaches.

V. ACKNOWLEDGMENTS

Community service activities carried out in Tambak Baru Ilir Village can went well thanks to cooperation and support from all parties. Writer would like to thank all parties, especially Tambak Baru Ilir Village who have Actively contribute to this community service activity and thank you also to STIKes Intan Martapura who has accommodated and facilitated. Hope The results of these community service activities can be useful for the community in general and the elderly in Tambak Baru Ilir Village in order to maintain more optimal health and can prevent the risk of hypertension.

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