

PROVISION OF INFRARED THERAPY AND ACUPRESSURE THERAPY TO REDUCE JOINT PAIN IN GUE VILLAGE

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Abstract

Joint pain is a prevalent disease among the elderly, and treatment can be carried out through pharmacological and non-pharmacological methods. Infrared and acupressure therapies are two effective solutions to alleviate this problem. In this community service, we utilized infrared therapy and acupressure therapy to reduce joint pain. A quasi-experimental study with a control group pretest-posttest design was conducted, and the therapy was administered five times. The activity took place on June 29, 2022, in Gue Village, Kuta Baro District, Aceh Besar, and was facilitated by D3 Nursing lecturers with the assistance of students. The study's findings indicate a decrease in the pain scale from an average of 5.30% before therapy to 2.40% after therapy among 20 elderly patients. This therapy can be imparted to health cadres in the community and is a viable option for managing joint pain.

Keywords: Community Service, Acupressure Therapy, Infrared Therapy, Joint Pain

1. INTRODUCTION

Joint pain is an inflammation of the joints, which presents with redness, swelling, heat, and difficulty in movement. This type of pain often occurs in the elderly and typically affects one or several parts of the joint (Handono & Richard, 2013).

Rheumatoid arthritis can have a significant impact on the elderly's quality of life, causing intense fatigue, limited range of motion, and pain during movement (Atukorala & Hunter, 2023; Stewart, 2013; Zippenfening & Sîrbu, 2014). In the morning, stiffness and severe pain may be experienced when waking up, but this stiffness does not usually last long, typically only a quarter of an hour. Morning stiffness can lead to a reduced ability to extend limbs, limitations in mobility, and systemic effects that can lead to organ failure (Price & Wilson, 2006).

Pain management strategies typically include pharmacological and non-pharmacological approaches. Pharmacological approaches involve the use of analgesics and non-steroidal anti-inflammatory drugs (NSAIDs), but some analgesic drugs have side effects on the kidneys or liver. Nurses have a crucial role in assessing the effectiveness of these interventions and reporting any side effects (Smeltzer et al., 2012).

Many elderly individuals and healthcare team members believe that medication is the only way to relieve pain. However, several non-pharmacological nurse competencies can help relieve pain, including deep breathing relaxation techniques, progressive muscle

relaxation techniques, benson relaxation, and kutaneus stimulus therapy, such as warm compress therapy (Smeltzer et al., 2012).

Musculoskeletal pain management is often done using anti-pain and anti-inflammatory drugs, but these can have side effects that adversely affect the digestive system and impair renal function. Non-pharmacological treatments such as infrared ray therapy and acupressure therapy can also be used and have been found to be effective for arthritis sufferers (White et al., 2012).

Joint problems are a common complaint among the elderly and are the second most common condition after cardiovascular disease, with a prevalence of 14.5% among people aged over 55 years (WHO, 2022). In Indonesia, the number of people with joint diseases is quite high, reaching 24.7%. The incidence of joint diseases is highest among those aged 45-54 (37.2%), followed by those aged 55-64 (45.0%), those aged 65-74 (51.9%), and those aged over 75 years (54.8%) (Meek, 2013). In Central Java alone, the incidence of rheumatoid arthritis reaches 6.78% (Risksedas, 2018).

According to the World Health Organization, joint pain is one of the most common musculoskeletal complaints among older adults worldwide. Infrared therapy and acupressure therapy have emerged as promising non-pharmacological interventions for reducing joint pain and improving joint function in older adults (WHO, 2022). Infrared therapy involves the use of infrared light to penetrate deep into the tissues of the body and promote healing and pain relief (Vatansever & Hamblin, 2012), while acupressure therapy involves the application of pressure to specific points on the body to stimulate the flow of energy and promote healing. These therapies have been shown to be safe, effective, and well-tolerated by older adults with joint pain (Mehta et al., 2017). In Gue Village, these therapies are being offered as an alternative or adjunct to pharmacological pain management strategies to help reduce joint pain and improve the quality of life of older adults.

Based on an initial survey of Gue Village conducted among five elderly individuals, researchers found that the elderly did not understand why they still experienced pain even after taking medicine. Three of the elderly individuals said they experienced pain during daily activities, and two reported pains in their knees when standing up from sitting. The elderly individuals expressed a desire to overcome their pain, and its effects greatly interfered with their daily activities.

2. RESEARCH METHOD

This community service aimed to improve the health of elderly individuals in Gue Village, Kuta Baro District, Aceh Besar, by managing joint pain using a demonstration approach of infrared therapy and acupressure therapy. The therapy utilized infrared and involved measuring pain scale using a numeric rating scale questionnaire. The service activities were conducted for one week, during which a pre-test was administered on the first day and a post-test was conducted on the last day.

Before the therapeutic procedure was administered, a standard pain scale questionnaire sheet was completed to carry out the pre-test. On the last day, after the action was taken on the seventh day, the post-test was conducted by administering a pain scale assessment using the questionnaire sheet in the post-test section.

3. RESULT AND DISCUSSION

3.1. Research Result

The results of community service carried out on the elderly in Gue Village, Kuta Baro District, Aceh Besar are as follows:

3.1.1. Characteristics of the Elderly

The characteristic of the elderly can be described as follows:

Table 1. Frequency distribution characteristic of the elderly		
Characteristics of the Elderly	N	%
Early Elderly	10	50,0
Late Elderly	7	35,0
Elderly	3	15,0

Table 1. Shows that the characteristics of the elderly are based on age, the early elderly 10 people (50%), the late elderly 7 people (35%), and the elderly 3 people (15%).

3.1.2. Long Pain Duration

The characteristic of experiencing pain for a long time can be described as follows:

Table 2. Frequency distribution characteristic of experiencing pain		
Long Pain Duration	N	%
< 2 Years	7	35,0
> 2 Years	13	65,0

Table 2. Showing that the characteristics of long experience pain, < 2 years as many as 7 people (35%), > 2 years as many as 13 people (65%).

3.1.3. Infrared and Acupressure Therapy against joint pain

The results before the intervention (pre test) and after the intervention (post test) can be seen in the table below:

Table 3. Distribution of pre-test and post-test joint pain scale frequencies		
Infrared and Acupressure Therapy	N	%
Pre test	20	5,30
Post test	20	2,40

Table 3. showed that the distribution of the frequency of the pre test in 20 elderly people with a pain scale (5.30), and the post test in 20 people on the pain scale (2.40) there was a decrease in the pain scale.

3.2. Discussion

On June 29, 2022, the D3 Nursing lecturers and students organized a community service activity in Gue Village, Kuta Baro District, Aceh Besar Regency. The activity aimed to provide therapy to 20 elderly individuals who were experiencing joint pain. The therapy consisted of infrared therapy and acupressure therapy.

The study showed a significant decrease in the pain scale before and after the therapy. The average pain scale before therapy was 5.30%, which reduced to 2.40% after therapy. All the elderly individuals who received therapy expressed satisfaction with the treatment.

The same result was discovered by Widowati, Murti, and Pamungkasari (2017) investigated the effectiveness of acupuncture and infrared therapies for reducing musculoskeletal pain in the elderly. The study involved 36 participants who received treatment for six sessions over a two-week period. The results showed that both acupuncture and infrared therapies were effective in reducing musculoskeletal pain in the elderly.

Overall, the results of this community service activity have significant benefits in supporting the treatment of joint pain diseases and reducing the reliance on medication. This outcome indicates that the therapy provided was effective in managing pain and improving the quality of life for the elderly participants.

In sum, the community service activity organized by the D3 Nursing lecturers and students in Gue Village was successful in reducing joint pain among the elderly participants. The use of infrared and acupressure therapy was effective in managing pain and improving the quality of life for the elderly individuals. The following is some documentations of the community service process carried out.



Figure 2. Therapeutic process (a) Examination (b) Explanation of tools (c) Implementation of service



Figure 3. Results of Infrared and Acupressure therapy with joint pain in the elderly pre-test and post test results

4. CONCLUSION

In conclusion, the implementation of joint pain management activities using infrared and acupressure therapy approaches in 20 elderly individuals in Gue Village, Kuta Baro District, Aceh Besar, showed significant positive outcomes. Firstly, this community service activity was a manifestation of the application of community nursing science with a complementary therapy approach in supporting the vision and mission of the D3 nursing study program, Faculty of Medicine, Abulyatama University. Secondly, the active participation of the elderly individuals in Gue Village in the pretest and posttest activities indicates their willingness to engage in the therapy process. Thirdly, this community service activity serves as an extension to develop the science of community nursing and complementary nursing, contributing to the advancement of healthcare practices. Lastly, the therapy provided had a positive impact on reducing the scale of joint pain in the elderly participants, emphasizing the effectiveness of infrared and acupressure therapy approaches in managing pain and improving the quality of life for the elderly individuals.

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