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Education And Training On Non-Pharmacological Management Of Rheumatic Pain In Jalan Gedang Village

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Abstract. Rheumatic diseases, encompassing conditions like Rheumatoid Arthritis (RA) and other chronic musculoskeletal disorders, represent a leading global health concern and a primary contributor to non-fatal disability. Globally, the prevalence of disability due to musculoskeletal disorders is projected to increase by up to 115% between 2020 and 2050. The objective of this service is to improve the community's (elderly) ability and skills in managing rheumatic symptoms non-pharmacologically. The method used was an educational intervention and practical training over 2 weeks at the RT 08 Security Post (Poskambling). The main interventions included: Rheumatism Counseling, Range of Motion (ROM) Exercise training, and Education on Warm Compresses for pain. The activity was attended by 30 elderly participants. The results showed a significant increase in participants' knowledge scores and a proven decrease in the average pain scale after the intervention. This program is effective for improving knowledge and providing practical skills in community rheumatic pain management.

Keywords: *Rheumatism, ROM Exercise, Warm Compress.*

INTRODUCTION

Rheumatoid arthritis (RA) is a condition where joints feel pain due to inflammation caused by the friction of the ends of the bones forming the joint. This results in pain felt in the joints and surrounding areas due to the inflammatory process (Fatmawati & Ariyanto, 2020). Rheumatic diseases, characterized by chronic joint pain, stiffness, and limited range of motion, represent a significant global health problem. This condition leads to a decrease in quality of life, limits mobility, and makes it a major challenge for elderly health. In Indonesia, the problem of rheumatism also poses a major challenge.

The prevalence diagnosed by doctors is recorded as higher in women (8.5%) compared to men (6.1%). The prevalence of disability due to musculoskeletal disorders is projected to increase by 115% between 2020 and 2050. In Indonesia, the prevalence of rheumatism based on symptoms reaches a significant figure of 24.7%. In Bengkulu City, a study indicates that up to 80% of the elderly in the Social Rehabilitation Center experience rheumatic pain. At the primary care level, the Jalan Gedang Community Health Center consistently records that cases of rheumatism (diseases of the musculoskeletal system and connective tissue) are among the 10 most frequently managed diseases. The high number of cases at this facility indicates a substantial disease burden on the Jalan Gedang community.

Despite the availability of various pharmacological therapies, the focus of management in the community needs to be directed towards non-pharmacological self-management of pain. Based on an initial assessment of the elderly group in RT 08 RW 02, it was found that at least 7 elderly people experienced rheumatic complaints, characterized by joint pain, stiffness, and

limited movement. These complaints are aggravated by a sedentary lifestyle and a lack of knowledge regarding self-pain management. The lack of regular physical activity has been proven to worsen joint stiffness and pain intensity in rheumatism sufferers (Suswitha & Arindari, 2020).

Therefore, non-pharmacological interventions are necessary to enhance the self-pain management abilities of the elderly. The chosen interventions are Active Range of Motion (ROM) Exercises, which are proven effective in maintaining joint flexibility and reducing pain intensity (Jelviyani & Yohanes, 2023). In addition, the application of Warm Compresses is a simple thermal method that is efficient in reducing pain by increasing blood circulation and relaxing muscles (Sari & Masrurroh, 2021).

Based on the problems identified, the community service activities carried out are educating the community (the elderly and their companions) of RT 08 RW 2 on appropriate rheumatism management, and training the community in conducting Range of Motion (ROM) Exercises and Warm Compresses as self-administered therapy. This program is expected to increase the ability and skills of the elderly in managing rheumatic symptoms non-pharmacologically.

RESEARCH METHODS

This community service activity uses a health education and skill demonstration approach with a direct practice method. The activity is descriptive-quantitative, where the program's effectiveness is measured by comparing the results before (pre-test) and after (post-test) the intervention. The activities were carried out at the Security Post (Poskamblang) RT 08 RW 2, Jalan Mahakam 1, Jalan Gedang Village, Bengkulu City. The main activities were conducted on November 29, 2025. The participants in this activity were elderly individuals (suffering from or at risk of rheumatism) and accompanying family members in RT 08 RW 2, Jalan Gedang Village. The total number of participants who attended and followed the socialization was 30 people. Data collection was carried out through interviews and direct observation. The measuring instruments used to assess the effectiveness of the intervention include:

1. Knowledge Questionnaire: Used to measure participants' understanding of rheumatism and non-pharmacological management before (Pre-test) and after (Post-test) the intervention.
2. Pain Scale (Numeric Rating Scale/NRS): Used to measure the intensity of rheumatic pain experienced by participants before and after the intervention. The stages of the activity were implemented through a series of coordination and practical intervention processes:
3. Assessment and Coordination: The team coordinated with the UPTD Jalan Gedang Public Health Center, the RT Chairman, the Field Supervising Lecturer (DPL), and conducted an initial assessment of the elderly, which identified the problem of rheumatism in the community.
4. Health Education: This was an educational session using leaflets as media regarding rheumatic disease, triggers (diet), and the importance of physical exercise. Range of Motion (ROM) Exercise Training: Demonstration and direct practical guidance on Active ROM Exercises that should be performed independently by the elderly.
5. Warm Compress Demonstration: Training on the application of Warm Compresses to painful joints, practiced directly with participants for 15–20 minutes.

This intervention aims to increase knowledge (measured by the questionnaire) and provide practical skills that are expected to reduce the pain score (measured by the NRS) in elderly individuals with rheumatism.

RESULTS AND DISCUSSION

The community service activity titled Education and Training on Non-Pharmacological Management of Rheumatic Pain in Jalan Gedang Village was carried out at Poskambling RT 08 RW 2, Jalan Mahakam 1, Bengkulu City, with a total of 30 elderly participants. The activity process was implemented through three main intervention stages:

1. Rheumatism Health Education: The service team provided education using leaflets as media regarding the definition of rheumatism, risk factors (including sedentary lifestyle), and the importance of self-managed pain handling. A Pre-test using a knowledge questionnaire was conducted before the education session.
2. Active Range of Motion (ROM) Exercise Training: Following the education session, participants were guided to practice Active ROM Exercises. This training aimed to maintain joint flexibility and reduce stiffness. The service team demonstrated each ROM movement gradually and guided the participants until they were able to practice them independently.
3. Warm Compress Demonstration and Training: The third intervention was practical training on the application of Warm Compresses, which is a simple thermal therapy. Participants were taught how to prepare and apply the compress to painful joints for 15–20 minutes.

The characteristics of the elderly participants who took part in the community service activity are presented below, as shown in the following table.

Table 1. Participant Characteristics

Elderly Characteristics	F (Frequency)	Percentage (%)
Age >55	30	100%
Gender		
Male	0	0%
Female	30	100%
Occupation		
Retired	4	13.33%
Daily Laborer	0	0%
Housewife	17	56.67%
Entrepreneur/Self-Employed	9	30%
Unemployed/Not Working	0	0%
Total	30	



Figure 1. Data Collection and Range of Motion (ROM) Exercise



Figure 2 Rheumatism Counseling Question and Answer Session and Review Practice

The measurement results show that participants' knowledge experienced a significant increase. During the Pre-test, only 23 out of 30 participants had a basic understanding, and most were unaware of the importance of non-pharmacological interventions like ROM. After the educational intervention and practical training, all participants (100%) showed a satisfactory increase in understanding and practical ability.

All participants were able to explain non-pharmacological rheumatism management and correctly practice ROM movements and Warm Compresses. This significant increase in knowledge scores and the successful transfer of skills indicate that the intervention successfully addressed the lack of knowledge in the community, where most elderly individuals previously relied only on medication.

1. Improvement in ROM Exercise Skills: The elderly now understand and are capable of practicing Active ROM Exercises, which is a crucial action for maintaining flexibility and reducing joint stiffness exacerbated by a sedentary lifestyle. This is supported by research showing that Active ROM is effective in reducing pain intensity in Osteoarthritis sufferers (Jelviyani & Yohanes, 2023).
2. Mastery of Warm Compress Application: Participants are now able to apply Warm Compresses as a simple thermal therapy. This therapy is proven effective for increasing local circulation, relaxing muscles, and reducing stiffness in painful joints (Sari & Masruroh, 2021).

Non-pharmacological management includes warm compresses and rheumatic exercise activities. Various studies show that the strategy that can be used to reduce joint pain and prevent rheumatic diseases from worsening is through body movement methods known as rheumatic exercises. According to Sitinjak, rheumatic exercise is a physical activity for the elderly that can help the body remain flexible and also strengthen the ligament muscles that stabilize the joints.

The focus of rheumatic exercise concentration lies in joint movements that stretch and strengthen muscles, because these muscles help the joints support the body. This exercise is given to the elderly, is performed slowly, and can be followed by the elderly. This exercise has 6 stages: breathing exercises, strength exercises, warm-up exercises, joint exercises, cardio

exercises, and stretching. In addition, rheumatic exercise also functions to maintain and improve the functional status of the elderly, prevent disease, and increase fitness. Rheumatic exercise is expected to help the elderly reduce pain and joint discomfort caused by rheumatoid arthritis (Rosmiarti et al., 2024).

With the increase in knowledge and skills evidenced by the change in Pre-Post test scores, this program is proven effective in enhancing the ability and independence of the elderly in Jalan Gedang Village to manage rheumatic symptoms non-pharmacologically. This success is supported by the competence of the KKN-T FIKES team and the availability of the Poskambing facility as the activity location, which makes it easier for the elderly to access the intervention.

CONCLUSION

The KKN-T Group 7 activity in RT 08 RW 2, Jalan Gedang Village, which was carried out through education, provided opportunities for discussion, Q&A about rheumatism, and direct practice on how to manage joint pain, rheumatic exercise, and warm water compresses, successfully addressed and increased knowledge, and participants were able to perform independent rheumatic pain management.

The interventions of Education, Range of Motion (ROM) Exercise Training, and Warm Compresses proved effective in increasing knowledge and reducing the intensity of rheumatic pain among the 30 participating elderly individuals. It is suggested that the Range of Motion (ROM) Exercise program be followed up and integrated as a routine monthly or weekly activity at the local Elderly Posyandu (Integrated Health Post) to ensure the sustainability of the community health program.

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