



EMPOWERING THE COMMUNITY AND CADRES FOR PROMOTIVE AND PREVENTIVE EFFORTS IN NON-SPECIFIC CHRONIC LOW BACK PAIN CONDITIONS

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Abstract :

Chronic nonspecific low back pain is a musculoskeletal problem that can interfere with physical activity and functional ability. Community empowerment is needed to improve knowledge and skills in implementing promotive and preventive efforts. This community service activity aims to improve the knowledge and skills of cadres and the community through education and core stability exercise training. The activity was carried out at the Elderly Posyandu (Integrated Health Post) in Tohudan Village, Colomadu District, Karanganyar Regency, Central Java. There were 30 participants, consisting of 8 cadres (26.7%) and 22 community members (73.3%). The activity was carried out through counseling using educational leaflets, demonstrations, core stability exercise practice with assistance, and strengthening the role of cadres. The results showed that all 30 participants participated in the activity and gained education and practical experience in preventing and reducing low back pain. Cadre involvement is essential to support the sustainability of training at the community level. Further evaluation using pre-post knowledge measurements and pain scores is needed to quantitatively measure the program's effectiveness.

Keywords: *cadres, community empowerment, core stability exercise, lower back pain, physiotherapy*

INTRODUCTION

Low back pain is a musculoskeletal problem that often leads to activity limitations and functional impairment. For chronic, nonspecific low back pain, management approaches focus more on nonsurgical interventions, physical activity, education, and exercises tailored to the individual's condition (World Health Organization, 2023; Li et al., 2023).

Low back pain can be associated with a variety of physical and behavioral factors, including low physical activity, postural habits, activity load, and psychosocial factors. Modern approaches emphasize that the management of chronic low back pain should consider biopsychosocial factors and encourage appropriate activity, rather than prolonged restriction of movement (Zhou et al., 2023; Niederer et al., 2026).

The underlying problem at the Tohudan Village Elderly Posyandu (Integrated Health Post for Elderly) is the limited knowledge of the community, particularly the elderly, regarding how to prevent and alleviate lower back pain. Structured education and advice can help improve patient understanding and support self-management of the condition, although education is more effective



when combined with other appropriate interventions (Southerst et al., 2023; Scholz et al., 2024).

The educational presentation was also supported by the provision of educational leaflets on low back pain to participants. The leaflets covered the definition of chronic nonspecific low back pain, common complaints, risk factors, daily safety habits, the role of cadres, simple exercises, and warning signs that require examination. This provided participants with information to refer back to after the activity.

One form of exercise used is core stability exercises. These exercises focus on trunk control and stability, as well as coordination of abdominal, pelvic, and spinal muscles. Recent evidence suggests that core or stabilization exercises can provide benefits for pain and function in patients with chronic nonspecific low back pain (Wahyuni & Kurnia, 2023; Sulaiman et al., 2023; Li et al., 2023).

Empowering cadres is a crucial strategy because the program's sustainability depends not solely on the implementation of activities by the community service team. The concept of self-management places individual capabilities and environmental support as crucial elements in the management of chronic low back pain (Zhou et al., 2023; Scholz et al., 2024). Based on these challenges, this activity aims to empower cadres and the community through education and core stability exercises as a promotional and preventive measure for nonspecific low back pain.

IMPLEMENTATION METHOD

This activity is a community service activity using an educational and skills training approach. The activity was carried out at the Elderly Posyandu (Integrated Health Post for Elderly) in Tohudan Village, Colomadu District, Karanganyar Regency, Central Java. The target group was cadres and the community participating in the Posyandu activities. The educational and training approach aligns with the principles of non-surgical management of chronic low back pain in primary and community care (World Health Organization, 2023; Verville et al., 2023).

The activity involved 30 participants, consisting of 8 cadres and 22 community members. Cadres were involved as drivers and facilitators, while the community served as the primary target for education and training. The community-based approach, which involved environmental support and participant empowerment, is relevant to the concept of self-management in chronic low back pain (Zhou et al., 2023; Scholz et al., 2024).

Table 1. Distribution of Participants

Participant Group	Amount	Percentage	Role in Activities
Cadre	8	26.7%	Motivator and training companion
Public	22	73.3%	Main participants of education and training
Total	30	100%	Participant

The implementation consisted of five stages: (1) coordination and preparation with the partners and cadres; (2) health education regarding non-specific low back pain, risk factors, prevention, and safe physical activity, accompanied by distribution of an educational leaflet; (3) demonstration and supervised practice of core stability exercise; (4) cadre mentoring to strengthen the continuation of the exercise program; and (5) evaluation of participant understanding and implementation of the exercise.

The exercise components follow the program outlined in the proposed community service activities, including prone plank, side plank, pressure feedback core exercise in supine position, bridging, kneeling leg lift, and supine back rotation. The activity plan also includes pain measurement using the Quadruple Visual Analogue Scale (QVAS).

The data reported in this article is limited to the implementation of the activity and the distribution of participants as provided in the activity documentation. Numerical scores for the pre-test and post-test evaluations have not been included because these evaluation data were not yet available in the materials used to prepare the manuscript.

RESULTS AND DISCUSSION

The community service activity was attended by 30 participants, consisting of 8 cadres and 22 community members. Community members comprised the largest participant group (73.3%), while cadres accounted for 26.7%. The involvement of both groups reflects the empowerment approach implemented in this activity, in which cadres were prepared to support the sustainability of the program, while community members received direct education and exercise training. The combination of health education and structured exercise is consistent with recommendations for the management of chronic primary low back pain in primary and community care (Verville et al., 2023; World Health Organization [WHO], 2023).

The first activity involved counseling on nonspecific low back pain. Participants received information about the condition, factors associated with low back pain, prevention strategies, and the importance of maintaining physical activity. Structured education or advice may improve some outcomes in people with chronic low back pain, while a structured and tailored self-management approach is also important (Scholz et al., 2024; Southerst et al., 2023).



Figure 1. Distribution of leaflets and explanation of educational materials to participants

In addition to the direct delivery of material, each participant was given an educational leaflet titled "Prevent & Manage Chronic Non-Specific Low Back Pain." The leaflet contained practical information that participants could use as reminders after the activity, including daily safety habits, sitting and lifting positions, strategies for doing housework, the role of cadres, simple exercises, and danger signs that require examination. Providing written educational materials supported the reinforcement of educational and self-management messages. However, education should not stand alone and should be tailored to the needs of participants (Southerst et al., 2023)



Figure 2. Educational leaflet on chronic nonspecific low back pain distributed to participants

The second component is a demonstration and practice of core stability exercises with assistance. Participants are guided through the exercises and receive direct correction from the activity team. The practical component is important because the expected outcome is not only increased knowledge but also the participants' ability to perform exercises to prevent and reduce low back pain. The use of core stabilization exercises is supported by previous studies (Masroor et al., 2023; Sulaiman et al., 2023; Wahyuni & Kurnia, 2023).



Figure 3. Practice exercises with assistance to participants

The involvement of cadres is a crucial element in the sustainability of activities. Cadres can help remind and assist the community in performing exercises during Posyandu (Integrated Health Post) activities. Self-management of chronic low back pain encompasses an individual's ability to manage their condition and the support that enables them to maintain healthy behaviors (Zhou et al., 2023). Therefore, cadre involvement can be a supporting component in maintaining educational messages and exercise activities at the community level.

From a physiotherapy perspective, core stability exercises are aimed at improving trunk control and stability and supporting abdominal, pelvic, and spinal muscle function. Core or stabilization exercises can improve physical function in individuals with chronic low back pain (Li et al., 2023). Recent evidence also indicates that exercise interventions, including stabilization exercises, may provide benefits for pain outcomes in people with chronic low back pain (Liu et al., 2026; Wang et al., 2026).

These findings are also supported by recent research. Structured exercise programs were among the interventions considered in the development of the World Health Organization guidelines for chronic primary low back pain (Verville et al., 2023). Various forms of exercise can improve pain and function in individuals with chronic low back pain (Li et al., 2023), while tailoring exercise programs to patient characteristics may further improve the appropriateness of intervention selection (Niederer et al., 2026).

A limitation of this article is the unavailability of numerical data from the

pre-test and post-test evaluation results for the materials used in the manuscript. Therefore, the results presented primarily describe the number of participants and the implementation of the activities. Clinical relevance needs to be clearly considered in low back pain physiotherapy research (**Innocenti et al., 2024**). Therefore, further evaluations need to use standardized measurements of knowledge, exercise skills, pain intensity, and function before and after the activities.

The educational leaflet used in the activity is presented in Figure 2. The leaflet material includes the definition of nonspecific chronic low back pain, risk factors, daily safety habits, the role of cadres, simple exercises, and danger signs that need to be paid attention to.

CONCLUSION

The community empowerment program at the Tohudan Village Elderly Posyandu (Integrated Health Post for Elderly) involved 30 participants, consisting of 8 cadres and 22 community members. The program combined education using leaflets, demonstrations, core stability exercises with mentoring, and strengthening the role of cadres as a promotive and preventive approach to nonspecific low back pain.

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