

Enhancement of Knowledge and Training for Independent Physiotherapy Management of Low Back Pain by Physical Activity Using Pamphlet Media at Posbindu, Candisari Village, Banyuurip, Purworejo

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ABSTRACT

The community in the village is often involved in agricultural or household work that requires heavy physical activity, but they often lack knowledge or access to healthcare, including physiotherapy, to address back pain. The training, in the form of simulations, provided practical skills on how to perform self-exercises at home. The purpose of this activity was to increase the knowledge of the community in Candisari Village, Banyuurip, Purworejo, about physiotherapy and techniques for independently managing back pain, using pamphlets at Posbindu as an effective way to convey information to the rural community. The results showed an average pretest score of 66.9 points, while the average posttest score was 80.7 points. The difference between the pretest and posttest scores indicated an increase of 13.8 points, demonstrating an improvement in the knowledge of the Candisari Village community, Banyuurip, Purworejo, about independent physiotherapy training for managing back pain due to intense physical activity using pamphlets.

ARTICLE INFO

Article History:

Submitted/Received 27 Aug 2024

First Revised 5 Sep 2024

Accepted 6 Sep 2024

First Available online 21 Oct 2024

Publication Date 21 Oct 2024

Keyword:

Physiotherapy

Self-exercise

Rural community

INTRODUCTION

Physically demanding activities, such as heavy lifting, repetitive movements in certain jobs, or prolonged sitting in non-ergonomic positions, can lead to stress and strain on muscles and spinal structures. The most common work-related complaints are musculoskeletal disorders (MSDs). Body parts frequently affected by MSDs include the neck, shoulders, back, and lower back (Pristianto et al., 2022). The impact is not only limited to discomfort but also affects daily life quality and productivity. Risk factors such as poor posture, muscle fatigue, lack of warm-up before physical activities, and insufficient rest can increase the likelihood of back pain (Hosseini et al., 2019).

According to Pratama et al. (2021), Low Back Pain (LBP) is the most common musculoskeletal disorder and is frequently reported by populations worldwide. In the modern era, humans need to increase their work productivity because many human tasks have been replaced by machines. The pain that arises typically subsides within a period of 2 to 12 weeks. Back pain is not generally a serious condition and can be managed by staying active and using pain relievers. However, in some cases, back pain can be so severe that it becomes unbearable, hindering daily activities. Back pain complaints can lead to changes in posture and also affect the muscle strength generated (Pristianto et al., 2021). Low back pain is associated with work activities such as lifting, pushing, and pulling heavy objects, or maintaining non-ergonomic work postures for extended periods. These activities can lead to conditions that cause pressure or pinching of the peripheral nerves in the spinal area, either due to acute trauma or prolonged strain (Aswina et al., 2023).

Low Back Pain (LBP) is a musculoskeletal disorder characterized by pain, muscle stiffness, and muscle tension. These complaints may be accompanied by or may not be accompanied by localized pain between the rib arches or between the costal margin and the lower buttock fold/inferior gluteal fold, spreading to the legs. Chronic back pain can lead to disability that affects functional ability (Afifah & Pristianto, 2022).

The reported prevalence of Low Back Pain (LBP) varies, with rates of 50% in the UK and Scandinavia and up to 70% in Australia. High prevalence has also been reported in the Americas, Europe, China, and Australia. Back pain during pregnancy is influenced by race and ethnicity. In 2015, according to the Indonesian Health Data Profile, there were 5,298,285 mothers, 20% of whom suffered from LBP. Of these, 50% of pregnant women experienced back pain/Low Back Pain, and 30% of them had limited activity (Dewi et al., 2019).

Physiotherapy plays a crucial role as a healthcare service aimed at enhancing movement ability and bodily function. According to the provisions in the Indonesian Minister of Health Regulation No. 65 of 2015 Article 1, Paragraph 2, physiotherapy is defined as a healthcare service aimed at developing, maintaining, and restoring the movement and function of the body for individuals or groups throughout their lifespan. This service involves various methods such as manual therapy, movement exercises, the use of devices (including physical, electrotherapy, or mechanical), functional training, and communication.

METHOD

The method used in this community service activity involves education through Health Education and training in the form of simulations. The educational session aims to provide knowledge and understanding of the importance of physiotherapy in treating and managing back pain caused by intense physical activity. The community will be informed about simple physiotherapy techniques that can be performed at home to reduce and prevent back pain, as well as the long-term benefits of regular physiotherapy treatment. Following the educational session, simulation-based training will be conducted to give the community an overview and practical skills on how to perform self-care exercises at home to alleviate back pain complaints. Participants' involvement in this community service activity included attending the series of events, which consisted of educational outreach, simulations, and pre- and post-tests. The activities were

attended by 45 people, starting with an opening session followed by the distribution of the questionnaire forms (pretest). Next, the material was presented, and the simulations were conducted. After the activities were completed, participants filled out the evaluation forms (posttest) again to measure changes in their knowledge and understanding. Questionnaires were used as instruments to collect data.

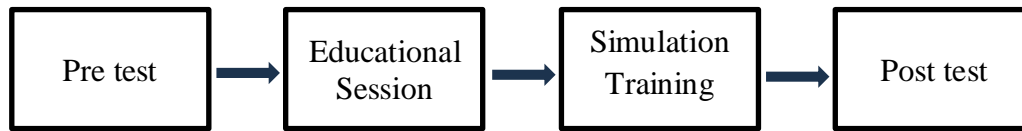


FIGURE 1. Stages of Community Service Activities

RESULT AND DISCUSSION

The majority of the residents in Candisari Village are farmers and factory workers. They are engaged in various economic activities, such as farming on agricultural land or working in factories around the village. The farmers cultivate land to produce various agricultural products such as rice, corn, and vegetables. Meanwhile, the factory workers are involved in the production processes across different industrial sectors, such as textiles, crafts, or food. These activities, though carried out to achieve specific goals, often result in back pain. Back pain can stem from various factors, including improper posture, muscle fatigue, injury, or even specific medical conditions like spinal herniation. Moreover, an unhealthy lifestyle, such as a lack of exercise or smoking habits, can also increase the risk of back pain.

The common issues related to back pain experienced by the community include a lack of understanding of proper posture during intense physical activities. Specific issues include a lack of knowledge about maintaining good posture during prolonged activities and the lack of awareness about self-care exercises that can be done at home to reduce back pain caused by intense physical activity. Intense physical activity can place stress on muscles and joints, especially if performed without adequate warm-up or in non-ergonomic body positions. Additionally, using tools or equipment that do not match proper body posture can increase the risk of injury and back pain. Improper treatment or insufficient rest can also worsen back pain. Therefore, it is essential to understand the correct techniques for performing physical activities, ensure that the tools and equipment used are appropriate for the needs, and provide adequate rest for muscle and joint recovery. This knowledge can help reduce the risk of back pain and ensure optimal health and well-being for those engaged in intense physical activities.

Through a simple survey involving interviews with the village midwife, it was found that there have been no adequate efforts to provide understanding about the negative impact of back pain caused by intense physical activity and how to address it in the context of public health. This community service activity was attended by 45 participants from Candisari Village, Banyuurip, Purworejo, organized through the village midwife during a Posbindu event. The goal of this community service activity is to enhance the knowledge of Candisari Village residents in Banyuurip, Purworejo, about physiotherapy and to provide training on independent techniques for managing back pain.



FIGURE 2. Educational Outreach Activities

Evaluation was conducted using pretest and posttest questionnaires, as well as checklists, to assess participants' knowledge, understanding, and skill improvement regarding the material presented and the simulations conducted. The recap of the pretest and posttest results for the 45 community service participants showed an average pretest score of 66.9 points, while the average posttest score was 80.7 points. The difference between the pretest and posttest scores indicated an increase of 13.8 points, suggesting that there was an improvement in the knowledge of the Candisari Village, Banyuurip, Purworejo community regarding independent physiotherapy training for managing back pain caused by intense physical activity using pamphlet media.



FIGURE 3. Questionnaire Evaluation

The outreach method was used as one of the approaches in this community service activity. The outreach method has been proven to increase knowledge. For example, in a community service activity on clean and healthy living behavior (PHBS) conducted by Suprpto and Arda (2021), it was shown that the use of the outreach method could increase public knowledge about PHBS by 37.2%, particularly in households. This result is also supported by a study conducted by Fatchiya et al. (2021) on the role of family planning outreach in increasing knowledge about family planning among couples of reproductive age in low-income communities.

The simulation method was chosen for the training activity because previous research has shown that training with this method is effective in improving knowledge and skills. This is consistent with the evaluation results of this community service activity, which showed an increase in students' knowledge by 13.8 points (46.1%). Previous community service activities conducted by Nurbaya et al. (2022) demonstrated that the simulation method combined with education effectively improved knowledge and skills in monitoring the growth and development of toddlers and conducting health outreach among Posyandu cadres. Similarly, the research conducted by Sulaeman et al. (2022) found that the simulation method effectively improved the skills of washing hands, maintaining distance, and wearing masks among middle school students.

CONCLUSION

The community service activities conducted in Candisari Village, Banyuurip, Purworejo, were successful in enhancing the knowledge and skills of the participants regarding independent physiotherapy techniques for managing back pain caused by intense physical activity. The use of the outreach method,

complemented by simulation training, proved effective in significantly increasing participants' knowledge, as evidenced by the average pretest and posttest scores, which showed a 13.8-point improvement. These findings align with previous studies that have demonstrated the efficacy of educational outreach and simulation methods in improving public health knowledge and skills. The results highlight the importance of providing proper education and training to reduce the risk of back pain and improve the overall health and well-being of individuals engaged in physically demanding activities.

ACKNOWLEDGMENTS

The Community Service Team would like to express their gratitude to the village midwife, who served as the Posbindu coordinator, and to the residents of Candisari Village, Banyuurip, Purworejo, for their participation and support. We also extend our thanks to the Research and Community Service Center of Respati University Yogyakarta for their support.

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