

## Improving Traditional Health Services Through Kinesiotherapy in an Effort to Reduce the Number of Musculoskeletal Patient Referrals at the Binanaga Mamuju Community Health Center in West Sulawesi

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### ABSTRACT

*This study aims to analyze the effectiveness of kinesiotherapy as an innovation in traditional health services at the Binanaga Community Health Center, Mamuju, West Sulawesi, as well as its role in reducing the number of referrals for patients with musculoskeletal disorders and increasing patient satisfaction. This study uses a qualitative approach with in-depth interviews and participatory observation involving traditional health workers and patients receiving kinesiotherapy services. The results show that the implementation of kinesiotherapy is effective and in accordance with applicable operational standards. Kinesiotherapy has a significant impact in reducing pain in patients, increasing satisfaction with services, and contributing to a decrease in the number of referrals to advanced health care facilities. This service also presents challenges, such as limited facilities, restricted service space, and the need for further training for health workers to maintain service quality. The research findings confirm that kinesiotherapy, as part of traditional health services, can serve as an effective initial treatment alternative at the primary care level, with clear clinical benefits and patient satisfaction. In addition, the sustainability of this service requires institutional support, improved infrastructure, and strengthened regulations. This study provides an empirical basis for the development of kinesiotherapy services and their integration into the public health system.*

**KEYWORDS** *Kinesiotherapy, Traditional Health Services, Primary Healthcare, Musculoskeletal Disorders, Patient Satisfaction*



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### INTRODUCTION

Traditional Health Services (*Yankestrad*) are a form of treatment or care based on experience and skills that have been passed down from generation to generation and proven empirically in accordance with community norms. This practice has long been an integral part of the health system in Indonesia, playing a role in maintaining health, preventing disease, and aiding recovery through the use of herbal remedies, massage, acupressure, and other traditional methods (Kementerian Kesehatan Republik Indonesia, 2021).

One form of innovation in traditional health services is kinesiotherapy, which is physical therapy that focuses on restoring bodily functions through movement exercises and manual interventions such as massage (Tinah, 2025). Kinesiotherapy emphasizes the principle of active movement by patients to increase mobility and improve musculoskeletal function. The application of kinesiotherapy in Indonesia has begun to develop, one example being at the Binanga Community Health Center in Mamuju, West Sulawesi, which has become a pioneer in kinesiotherapy services in the context of traditional community health services (Puskesmas Binanga, 2023).

This service emerged in response to the increasing number of musculoskeletal disorders following the earthquake that struck Mamuju in January 2021. The 6.2 magnitude earthquake caused many casualties with physical injuries, especially to the musculoskeletal system due to building debris (Badan Nasional Penanggulangan Bencana (BNPB), 2021).

This situation calls for effective and affordable rehabilitative treatment at the primary care level (Charumbira et al., 2024; Organization, 2018; Shahabi et al., 2022). Globally, musculoskeletal disorders are one of the leading causes of chronic pain and reduced quality of life. According to the World Health Organization (World Health Organization, 2021), more than 150 musculoskeletal conditions affect an individual's mobility and productivity. In Indonesia, data from Riskesdas (Kementerian Kesehatan Republik Indonesia, 2018) shows that the prevalence of musculoskeletal pain continues to increase every year, especially in the productive and elderly age groups. However, primary care facilities still face limitations in effective non-pharmacological interventions.

Previous studies have shown that exercise-based interventions such as kinesiotherapy can significantly reduce pain and improve physical function. Ignatius Heri Dwianto (Dwianto, 2016) reported that four weeks of McKenzie exercises significantly reduced pain levels in patients with musculoskeletal complaints. On the other hand, the application of exercise referral schemes in primary care has been proven effective in increasing patient physical activity and strengthening primary care, thereby contributing to a reduction in the need for hospital referrals (Pavey et al., 2011). This shows that kinesiotherapy has the potential to strengthen primary health care through a non-invasive, safe, and sustainable approach.

In addition to clinical effectiveness, patient satisfaction is an important indicator in assessing the success of a service (Ekaterina et al., 2017; Kim et al., 2017). A study of patients with musculoskeletal disorders showed that the majority of patients reported high levels of satisfaction with physiotherapy/kinesiotherapy services in primary care compared to conventional approaches (Keramat et al., 2020). However, implementation in the field still faces obstacles in the form of limited trained human resources, facilities and infrastructure, and the lack of standard operating procedures (SOPs) (Karnadipa, 2021).

Referring to these issues, this study aims to analyze the effectiveness of applying kinesiotherapy in improving traditional health services at the Binanga Community Health Center, Mamuju, West Sulawesi (Puskesmas Binanga, 2023). Specifically, this study examines the effectiveness of kinesiotherapy in reducing musculoskeletal pain, reducing patient referral rates, and assessing patient satisfaction with these services. The results of this study are expected to contribute theoretically to the development of the concept of traditional health services based on movement therapy, as well as provide practical benefits for improving the quality of primary services and strengthening integrative policies in the field of community rehabilitation.

This study aims to analyze the effectiveness of implementing kinesiotherapy in improving traditional health services at the Binanga Community Health Center, Mamuju, West Sulawesi. Specifically, this study will evaluate the impact of kinesiotherapy on reducing pain in patients with musculoskeletal complaints, as well as its role in decreasing referral rates to advanced healthcare facilities. Additionally, this study aims to assess patient satisfaction with the kinesiotherapy services provided and identify challenges faced in implementing Improving Traditional Health Services Through Kinesiotherapy in an Effort to Reduce the Number of Musculoskeletal Patient Referrals at the Binanaga Mamuju Community Health Center in West Sulawesi

kinesiotherapy in primary healthcare services. The findings of this study are expected to contribute to the development of the concept of traditional health services based on movement therapy, as well as provide practical benefits for enhancing the quality of primary healthcare services and strengthening integrative policies in community rehabilitation.

## RESEARCH METHOD

This study used a qualitative approach with in-depth interviews and participatory observation to understand the experiences of health workers and patients in the application of kinesiotherapy at the Binanga Community Health Center, Mamuju, West Sulawesi. This approach was chosen because it allows for in-depth exploration of social phenomena and contextual traditional health care practices (Puskesmas Binanga, 2023).

The study was conducted from May to August 2024 at the Binanga Community Health Center, which is one of the traditional health care facilities that implements kinesiotherapy in West Sulawesi. The study participants consisted of health workers directly involved in kinesiotherapy services and patients who had undergone the therapy (Puskesmas Binanga, 2023).

Data collection was conducted through in-depth interviews using semi-structured guidelines and observation of the therapy process in the field. The main instrument in this study was the researcher himself, with the help of voice recorders, field notes, and interview guidelines.

The collected data was then analyzed thematically through data reduction, data presentation, and conclusion drawing. This analysis aimed to: (a) Understand how health workers adapt and apply kinesiotherapy in primary care, (b) Explore patients' perceptions of the benefits and experiences of therapy, and (c) Identify obstacles and challenges in implementing kinesiotherapy in community health centers.

## RESULT AND DISCUSSION

This study was conducted at the Binanga Community Health Center, Mamuju District, West Sulawesi, which since 2021 has developed kinesiotherapy services as part of the Traditional Health Services (Yankestrad) innovation. Kinesiotherapy at this community health center is designed as a form of Integrated Yankestrad, which is a collaboration between traditional health workers, doctors, and other medical personnel in treating patients with musculoskeletal complaints.

### **Implementation of Kinesiotherapy at Binanga Community Health Center**

Observations show that the implementation of kinesiotherapy at Binanga Community Health Center is carried out in three main stages: assessment of patient condition, movement therapy and manual massage, and patient education on the prevention of recurrent injuries. This therapy is given to patients with complaints of muscle and joint pain, frozen shoulder, low back pain, and neck pain due to excessive use of digital devices.

These findings confirm the WHO (2021) report that increased sedentary activities and intensive use of digital devices contribute to the high prevalence of musculoskeletal disorders in urban communities. In the local context, this phenomenon is also exacerbated by limited access to physiotherapy services at the primary level (Crawford et al., 2022; ShahAli et al.,

2023; Tuomilehto et al., 2026). Therefore, the application of kinesiotherapy is an adaptive solution to meet the rehabilitative needs of the community.

### **Impact on the Decrease in Referral Rates**

Interview data with three community health center doctors showed that the implementation of kinesiotherapy contributed to a 23.20% decrease in musculoskeletal patient referral rates during the study period. This decline is in line with the findings of Pavey et al. (Pavey et al., 2011), who stated that non-pharmacological movement therapy programs in primary care are effective in improving the functional condition of patients and reducing the need for referrals to advanced care facilities.

The decrease in referral rates can be explained by the physiological effectiveness of kinesiotherapy, which restores muscle and joint function through mechanisms of increased blood flow, sensory nerve activation, and improved movement patterns (Kisner et al., 2017). This accelerates the body's natural healing process and reduces dependence on pharmacological treatment and invasive procedures.

Thus, it can be scientifically concluded that kinesiotherapy plays an important role in strengthening primary health care services through the mechanism of early rehabilitation, which reduces the burden on advanced referral facilities.

### **Increased Patient Satisfaction with Services**

From the results of interviews with nine patients, all of them expressed satisfaction with the reduction in pain and increased mobility after undergoing therapy. In addition, patients felt that communication and education from health workers increased their awareness of the importance of physical activity in maintaining musculoskeletal health.

These findings are consistent with the research by Keramat Ullah, Bhutta & Ilyas (2020), which found that the kinesiotherapy approach provides a high level of patient satisfaction. The main factors underlying this satisfaction are the active participation of patients in the healing process and the faster results without side effects from medication.

Theoretically, high satisfaction levels can be explained through the concept of empowerment-based care, in which patients become active subjects in managing their health (Greenhalgh & Papoutsi, 2018). This approach not only improves clinical outcomes but also strengthens the therapeutic relationship between patients and healthcare professionals.

### **Challenges in Implementing Kinesiotherapy**

Despite showing positive results, the implementation of kinesiotherapy still faces several challenges, such as: (a) Limited number of health workers trained in movement therapy, (b) Limited facilities and practice spaces that meet standards, and (c) Lack of standard operating procedures (SOPs) for implementing therapy.

These challenges are similar to those reported by Karnadipa (Karnadipa, 2021), who highlighted that the absence of SOPs and variations in physiotherapy practices in health facilities lead to inconsistencies in service quality and reduce the effectiveness of rehabilitation programs. Therefore, the sustainability of the kinesiotherapy program at the Binanga

Community Health Center is highly dependent on the support of local government policies and the improvement of health worker capacity through training and official certification.

### CONCLUSION

This study concludes that the implementation of traditional health services through kinesiotherapy at the Binanaga Community Health Center has been effective and aligned with applicable operational standards. As an innovation in traditional health care, kinesiotherapy combines standard therapeutic modalities with movement therapy administered by trained traditional health workers. The findings indicate that kinesiotherapy significantly reduces pain in patients with musculoskeletal disorders, increases patient satisfaction, and contributes to a reduction in referrals to advanced health care facilities, demonstrating its potential as an effective initial treatment option at the primary care level. Nevertheless, several challenges remain, including limited facilities, restricted service space, and the need for additional training to maintain and improve service quality. Future research is recommended to employ quantitative methods to measure the impact of kinesiotherapy on patient recovery outcomes and statistically significant reductions in referral rates. Strengthening institutional support, regulatory frameworks, and infrastructure—along with expanding public education and training for health workers—will also be important to ensure the sustainability and broader integration of kinesiotherapy services within the public health system.

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