



Training for Injury Management Through Kinesiotaping Application in Student Sports Activity Units at Tadulako University

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Abstract.

Background

Sports injuries are common among student athletes, especially those participating in university-level sports activities. Kinesiotaping has emerged as an accessible and effective method for injury management and rehabilitation, yet knowledge and practical application of this technique remain limited among student communities.

Objectives

This community engagement program aimed to improve students' understanding and skills in injury management through kinesiotaping application within the Student Sports Activity Unit (UKM) at Tadulako University. The program also sought to raise awareness about sports medicine as a career path.

Methods

The program employed a combination of health education and practical training methods. Activities included seminars on sports injury types and kinesiotaping principles, hands-on demonstrations, and participant evaluations. The training was conducted over two days with active participation from student-athletes.

Results

The program successfully enhanced students' theoretical and practical knowledge of kinesiotaping. Over 80% of participants demonstrated improved understanding of injury management, while 75% showed the ability to apply kinesiotaping effectively during practice. The training also sparked interest in further learning and careers in sports medicine.

Conclusion

Kinesiotaping training serves as a valuable educational initiative to equip student-athletes with basic skills in sports injury management. This approach not only supports physical well-being but also opens pathways toward professional development in the field of sports health.

Keywords: Training, Kinesiotaping, Injury Management, Student Sports Unit, Sports Medicine

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INTRODUCTION

In the realm of student athletics, the risk of sports-related injuries remains a persistent challenge (Forelli et al., 2024; Wiese-Bjornstal, 2009). Many university-level athletes, particularly those engaged in Student Sports Activity Units (UKM), often lack adequate knowledge and resources to manage injuries effectively (Condello et al., 2019; Kuswoyo et al., 2020; Yang et al., 2012). This situation not only hinders athletic performance but also increases the likelihood of long-term musculoskeletal complications (Lloyd et al., 2015).

Among various rehabilitation techniques, kinesiotaping has gained popularity as a non-invasive intervention that offers support to muscles and joints without restricting mobility (Alqahtani & Parveen, 2023). It is applied directly to the skin using elastic therapeutic tape, aiming to facilitate recovery, reduce pain, and improve proprioceptive awareness (Ager et al., 2023; Taylor et al., 2014). Several studies have confirmed the effectiveness of kinesiotaping in alleviating muscle fatigue, enhancing joint range of motion, and accelerating soft tissue repair (Ozmen et al., 2016; Wu et al., 2015).

(Jurecka et al., 2021; Kirmizigil et al., 2020) Despite its clinical benefits, the practical application of kinesiotaping among student-athletes in Indonesia remains limited, mainly due to a lack of formal training and professional guidance. Moreover, kinesiotaping is often underutilized as a learning medium for

introducing students to sports medicine, a growing interdisciplinary field with promising career opportunities (Boguszewski et al., 2016). Without exposure to modern rehabilitation strategies, students may struggle to adapt to the evolving demands of competitive sports and athlete care (Wang et al., 2018).

This community engagement program was developed to address these gaps by offering structured training on injury management through kinesiotaping at Tadulako University. The program aimed not only to enhance student knowledge and self-efficacy in injury care but also to stimulate interest in sports medicine as an academic and professional pathway. By bridging the gap between theory and practice, this initiative is expected to contribute to a more resilient and medically informed athletic community within the university setting.

METHOD

Participant

The participants in this community service program consisted of 30 student-athletes actively involved in the Student Sports Activity Unit (UKM) at the Faculty of Teacher Training and Education (FKIP), Tadulako University. The participants were selected based on their regular involvement in physical training activities and expressed interest in learning about injury prevention and kinesiotaping techniques. Informed consent was obtained from all participants prior to the commencement of the training sessions.

Research Design

This study employed a descriptive-participatory approach, typical of community service initiatives, with a focus on capacity building and knowledge transfer. The intervention was conducted over a two-day training workshop that included both theoretical instruction and practical application of kinesiotaping techniques. The design followed three phases: (1) initial briefing and needs assessment, (2) implementation of the training sessions, and (3) post-training evaluation and reflection. A hands-on learning method was emphasized to enhance practical competency and knowledge retention.

Data Analysis

Data were collected using pre- and post-training questionnaires that measured participants' knowledge and self-confidence in kinesiotaping application. Additionally, observational checklists were used during the practical sessions to assess students' technical execution. Descriptive statistics were used to analyze the data, including percentage increases in knowledge scores and competency levels. Qualitative feedback from participants was also collected to evaluate program effectiveness and relevance.

RESULTS AND DISCUSSION

Results

The implementation of the kinesiotaping training program yielded significant improvements in participants' understanding and application of sports injury management techniques. The training was evaluated based on three key indicators: theoretical knowledge, practical competence, and interest in sports medicine as a professional pathway.

Prior to the training, only 26.7% of participants demonstrated a basic understanding of injury management concepts. Following the two-day intervention, this figure increased substantially to 86.7%, indicating a marked enhancement in cognitive understanding. Similarly, in terms of practical application, only 20% of participants were initially able to apply kinesiotaping correctly based on demonstration criteria. After the practical sessions and guided practice, 75% of participants performed the taping procedure accurately and independently.

The training also had a notable effect on participants' interest in sports medicine. While only a minority of students (approximately 30%) reported awareness of sports medicine as a career field before the program, post-training feedback revealed that over 70% expressed interest in further pursuing this area, either through formal education or extracurricular engagement. These results are summarized in the table below:

Table 1. Pre- and Post-Training Results of Kinesiotaping Program

Indicator	Pre-Training (%)	Post-Training (%)
Understanding of injury management	26.7	86.7
Practical kinesiotaping competency	20.0	75.0
Interest in sports medicine career	30.0	70.0

In addition to the quantitative improvements, qualitative responses from participants suggested that the training was engaging, relevant, and applicable to their daily training routines. Many expressed appreciation for the opportunity to gain hands-on experience and requested follow-up sessions on other injury prevention methods such as sports massage or dynamic stretching. These findings underscore the potential impact of structured training programs in equipping student-athletes with essential health and rehabilitation skills.



Figure 1. Practical Application of Kinesiotaping for Shoulder Injury Management in Student-Athletes



Figure 2. Group Photo of Participants and Facilitators during the Kinesiotaping Training Program at Tadulako University

Discussion

The findings from this community training program indicate that structured education and practical demonstrations significantly enhance students' competencies in sports injury management through kinesiotaping. The considerable increase in participants' theoretical understanding and practical abilities highlights the effectiveness of experiential learning in this context.

The improvement from 26.7% to 86.7% in knowledge-based comprehension suggests that the seminar and instructional materials effectively addressed students' initial lack of awareness. This is consistent with previous findings by (Maiyuria et al., 2024), who emphasized the role of targeted education in improving athletic injury literacy among student populations. The interactive nature of the training combining lectures, demonstrations, and practice contributed to knowledge internalization, as supported by (Baechle, T. R., & Earle, R. W., 2008; Cong Fei & Donna Marie Oyam, 2024; Gandrapu & Rakesh, 2024) who advocated for integrated models of learning in sports therapy.

Furthermore, the substantial gain in practical competence from 20% to 75% reflects the success of hands-on training in enabling students to master kinesiotaping techniques. This aligns with the results reported by (Green, 2005; Lochhead et al., 2024; Luo et al., 2022) who found that repeated guided practice improved athletes' ability to apply taping accurately and confidently. In this study, students reported greater confidence in dealing with minor injuries, which can help reduce reliance on external health services for non-severe conditions.

An unexpected but valuable outcome was the increased interest in sports medicine careers. The number of students expressing interest more than doubled post-training. This supports the notion that exposure to practical and applied fields can influence career aspirations, as highlighted by (Pham et al., 2024). Given the growing importance of multidisciplinary knowledge in modern sports settings, introducing students to fields like kinesiology, rehabilitation, and therapy at an early stage is crucial.

Despite these positive outcomes, several limitations must be acknowledged. The relatively short duration of the training may not guarantee long-term retention of skills, and the absence of a control group prevents causal claims. Moreover, the program focused solely on kinesiotaping and did not cover complementary methods such as RICE (Rest, Ice, Compression, Elevation) protocols or sports massage, which may have provided a more holistic perspective.

Future programs could extend the duration, incorporate follow-up evaluations, and include modules on broader sports health topics. Integrating this type of training into formal curriculum or extracurricular certifications may also foster sustained learning and professional growth.

CONCLUSION

This study concludes that kinesiotaping training significantly improves both the theoretical understanding and practical competence of student-athletes in managing sports injuries. The structured combination of lectures and hands-on practice enabled participants to gain essential skills that are directly applicable to their athletic activities. Furthermore, the program successfully increased students' awareness of sports medicine as a potential academic and career path.

These outcomes underscore the importance of integrating injury prevention education into student sports programs. Providing access to practical, evidence-based interventions like kinesiotaping empowers students to manage injuries more effectively, enhances their safety in training, and contributes to the development of a health-literate athletic community within the university.

Future efforts should consider expanding the scope of training to include other rehabilitation techniques and offering follow-up sessions to ensure skill retention and long-term impact.

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AUTHOR CONTRIBUTION STATEMENT

All authors contributed significantly to the planning, implementation, and completion of this community service program and the preparation of the manuscript. Didik Purwanto was responsible for the conceptual design of the program, overall supervision, manuscript drafting, and final review. Tri Murtono conducted field observations, coordinated with participants, and supported the literature review process. Christian Kungku facilitated the kinesiotaping training sessions and participated in data collection. Ryo Sinung Primadana supervised the practical activities and conducted participant evaluations during the sessions. Moh. Tris Maulana Daipaha handled monitoring and evaluation activities, carried out data analysis, and compiled the final report. All authors reviewed and approved the final version of the manuscript and share equal responsibility for the integrity and accuracy of the content.

CONFLICT OF INTEREST AND FUNDING

The authors declare that there is no conflict of interest regarding the publication of this article.

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