

## **STUDY PROTOCOL**

Official Title: The Effects of Kinesio Taping on Proprioception, Alignment, and Dynamic Balance in Individuals with Chronic Ankle Instability: A Randomized Controlled Trial

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## **Title of the Study**

The Effects of Kinesio Taping on Proprioception, Alignment, and Dynamic Balance in Individuals with Chronic Ankle Instability: A Randomized Controlled Trial

## **Background and Rationale**

Chronic ankle instability (CAI) is a common consequence of repeated ankle sprains, leading to impaired proprioception, misalignment, and deficits in postural control. Kinesio taping is a therapeutic technique widely used in clinical settings to enhance proprioception, support joint alignment, and improve neuromuscular control. However, there is limited high-quality evidence on the efficacy of Kinesio taping in individuals with CAI. This study aims to investigate the effects of Kinesio taping on proprioception, alignment, and dynamic balance.

## **Objectives**

### **Primary Objective:**

To evaluate the effects of Kinesio taping on proprioceptive ability in individuals with chronic ankle instability.

### **Secondary Objectives:**

To assess changes in lower extremity alignment and dynamic balance following the intervention.

## **Study Design**

This study is designed as a single-blind, randomized controlled trial with two parallel groups:

Intervention group: receiving Kinesio taping

Control group: receiving no taping

The intervention will last for 4 weeks, with assessments at baseline and post-intervention.

## **Participants**

A total of 40 individuals aged 18–35 years with a clinical diagnosis of chronic ankle instability will be recruited from university clinics and local physiotherapy centers.

**Inclusion criteria:**

History of at least one ankle sprain

Self-reported episodes of instability

Score below 24 on the Cumberland Ankle Instability Tool (CAIT)

**Intervention**

The intervention group will receive standardized Kinesio taping applied to the ankle and lower leg three times per week for four weeks by a certified physiotherapist.

The control group will receive no taping. Both groups will continue with routine activities but will be asked to refrain from other physiotherapy modalities during the study period.

**Outcome Measures****Primary Outcome:**

Proprioception assessed by Joint Position Sense Test (measured at baseline and post-intervention)

**Secondary Outcomes:**

Lower extremity alignment assessed using the Q-angle and navicular drop test

Dynamic balance assessed using the Star Excursion Balance Test (SEBT)

**Data Analysis**

Data will be analyzed using SPSS. Descriptive statistics will be used to summarize participant characteristics. Between-group comparisons will be performed using ANCOVA, adjusting for baseline values.

A significance level of  $p < 0.05$  will be considered statistically significant.

**Ethical Considerations**

Ethical approval has been obtained from the institutional review board. Written informed consent will be obtained from all participants prior to participation.