THE EFFECT OF BILATERAL APPLICATION OF KINESIO TAPE (KT) ON BROAD JUMP AND VERTICAL JUMP

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ABSTRACT

Purpose: The popularity of Kinesiotape (KT) use is increasing in professional and Olympic level competitions to improve physical performance, diminish pain, or both. However, little conclusive data exists, especially regarding its effectiveness on lower extremity functional power. Therefore, the purpose of the study is to examine the impact of KT application on vertical and broad jump performance in healthy, college students. Methods: A total of 39 college-age participants (16 male, 23 female) were split randomly into two groups: KT group (application from the anterior superior iliac spine to the proximal patella with a 75% tension) and placebo group (with no tension). Both groups underwent pre-testing with no KT application as a baseline assessment. Once each participant signed the consent form, he/she completed a general demographic questionnaire, viewed instructional videos on vertical and broad jumps, performed a 10-minute standardized warm-up, and underwent a testing session (2 practices, 3 true trials per jump test). On the treatment day, KT was applied to each participant (with or without tension) prior to testing. We expected that KT group would display greater increase from baseline to treatment day in vertical and broad jump tests than placebo group. Results: The data analysis showed no significant difference between the proper KT application and placebo group for vertical jump (p=0.058) or for the broad jump (p=0.669). Conclusions: Although a noticeable improvement in VJ and BJ was measured, it was too small to be significant and more likely due to a learning effect. It is not recommended that KT be applied for the purpose of improving muscular power of the lower extremity. However, more research needs to be done involving more comprehensive muscular coverage of the quadriceps.Also, future research is recommended that application and baseline trials be randomized in order of completion to reduce the occurrence of any learning effect that could be taking place.

INTRODUCTION

Kinesiotape (KT) has been used primarily as a method of alleviating pain and other ailments but, in recent years, professional interest has changed focus to its potential in improving human performance. Among current research there is little conclusive data to take an official stand on whether KT has a significant impact on MS and MP, and if so, to what degree. Measuring jump distances better correlates to direct power output than other methods of testing speed and force. Although jumps are typically scored in units of distance it is possible to derive power output by inputting an individual’s weight (mass) into a formula.

Purpose and Hypothesis

The purpose of this study is to determine whether the proper application of KT has an effect on lower body power. We believe that proper application of KT will provide an increase in vertical and broad jump distances while the placebo application will not.

METHODS

Subjects

39 Caucasians, 23 females and 16 males

Participants recruited via Classroom Presentations and Posters at the University of Wisconsin – Eau Claire

Exclusion criteria: Previous symptomatic lower body injury within past year

Informed consent gathered according to IRB guidelines at UW-Eau Claire

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Table 1: Descriptive Variables of Participants

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SUMMARY AND CONCLUSIONS

KT provides no noticeable improvement in VJ or BJ performance over a placebo treatment or no treatment.

From the data collected in this study, it is not recommended that KT be applied to improve muscular power.

Modest improvements were measured in VJ and BJ, but this is likely due to a learning effect on performing VJ and BJ movements.

More research needs to be done involving more comprehensive muscular coverage of the quadriceps and a randomization of treatment order.

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REFERENCES