عنوان مقاله:

Compare the Effect of Traditional and Virtual Reality Training on Subjective-sense of Instability and Balance in Basketball-players with Functional Ankle Instability: Matched Randomized Clinical Trial

محل انتشار:

مجله فیزیک و مهندسی پزشکی, دوره 13, شماره 3 (سال: 1402)

تعداد صفحات اصل مقاله: 12

نویسندگان:

Niloofar Mohammadi - *Department of Physical Therapy, School of Rehabilitation, Tehran University of Medical Sciences, Tehran, Iran*

Mohammad-Reza Hadian - *Department of Physical Therapy, School of Rehabilitation, Tehran University of Medical Sciences, Tehran, Iran*

Gholam-Reza Olyaei - *Department of Physical Therapy, School of Rehabilitation, Tehran University of Medical Sciences, Tehran, Iran*

خلاصه مقاله:

Background: Functional ankle instability (FAI) is a common injury. Traditional training improved the reported balance impairment and subjective sense of instability in athletes with FAI.Objective: This study aims to compare the effects of traditional and virtual reality training on a subjective sense of instability and balance in athlete with FAI.Material and Methods: In this single-blinded matched randomized clinical trial design, Fifty-four basketball players were randomly assigned in the virtual reality (n=۲۷) or control (n=۲۷) groups. All athletes performed ۱۲ sessions Wii exercises or traditional training in the virtual reality and the control group, respectively, for three days a week. To assess the subjective-sense of instability and balance, we used Cumberland Ankle Instability Tool (CAIT) and Star Excursion Balance Test (SEBT), respectively. Measures were taken at pre- and post-test and one month after training as a follow-up. The between-group comparisons were done by the analysis of Covariance.Results: At the pre-test, the CAIT score was ۲۲.۳۷, ۲۲.۰۴ in the control and virtual reality groups, respectively and at the post-test, these scores increased to ۲۶.۶۳, ۲۷.۲۶. The involved limb showed significant differences in posteromedial and posterior directions of the SEBT and CAIT score in the post-test and in the posterior direction and CAIT score in the follow-up. The virtual reality group had better performance than the control group but the effect size is small (cohen's d<۰.۲). Conclusion: Based on our results, both training protocols were effective in reducing the subjective-sense of instability and improved balance in athletes with FAI. Moreover, virtual reality training was very attractive for the participants.

کلمات کلیدی:

Ankle Injuries, Virtual Reality, Joint Instability, Star Excursion Balance Test, Cumberland Ankle Instability Tool