

Abstract

Title: Effect of short-term programme in slackline on skills acquisition and ankle strength.

Objectives: The aim of the work is to assess the short-term programme of specific skills and muscular strength of the ankle joint during mastering the slackline.

Methods: Research sample consists of 20 probands without any experience with walking on a slackline. Probands were divided into three groups. The first training group consisted of 4 women and 2 men with mean age/body weight and height ($24,5 \pm 1,3$ years / $63,7 \pm 9$ kg and $167,4 \pm 8,3$ cm). This group have trained on the slackline 2 times per week (1 training lesson lasted 60 minutes). The second training group consisted of 5 women and 3 men with mean age/body weight and height ($24,6 \pm 0,69$ years / $70,05 \pm 9,1$ kg and $176,6 \pm 7,7$ cm). This group have trained on the slackline 1 time per a week. The third control group consisted of 5 women and 1 man with mean age/body weight and height ($25,7 \pm 3$ years, $63,2 \pm 7,4$ kg and $168,7 \pm 5$ cm). Training programme lasted 8 weeks. Skill level was measured at the beginning, in the middle and in the end of the training programme. Measurement was carried out in a place on the slackline called „sweet spot“. Further, we measured the strenght of dorsal and plantar flexion of the ankle joint. This strength was measured by isokinetic dynamometer before and after training programme. The strength was assessed by maximum force moment at 30 angular speed.

Results: The first group increased their abilities by 51.2% between the first and second measurement however between the second and third only by 12.6%. The second group increased their abilities by 27.5% between the first and second measurement and between the second and third by 25.3%. Short-term training on slackline is not significantly increasing the power of the ankle joint.

Conclusion: Different power of left and right ankle joint in plantar flex among training groups did not confirm the relation to increasing strength during adopting skills on slackline.

Keywords: slackline, muscular strength, balance