

Abstract

Title: Strength intervention program used as knee injury prevention by soccer players U14 categories

Objectives: The main objective of this study was to determine the effectiveness of a strength intervention program aimed at strengthening the lower limbs. The secondary aim was then to increase the strength capacity of the participating probands (players), with a possible reduction in muscle asymmetries between the dominant and non-dominant limbs with an increase in their H/Q ratios.

Methods: The research population consisted of players of the U14 category of the football club FK Viktoria Žižkov, who were randomly divided into control and experimental groups. Both groups underwent entry and exit laboratory diagnostic measurements aimed at determining selected parameters of body composition and isokinetic muscle strength. The initial laboratory testing was followed by a six-week strength intervention program (experimental group), after which both groups underwent baseline/control measurements. The results of both groups were tabulated and compared with each other.

Results: The intervention showed a positive effect in reducing lower limb muscle strength asymmetries in the experimental group at all measured speeds.

Keywords: Lower limbs muscles, knee joint, laboratory testing, preventive procedure, isokinetic dynamometry