Abstract

Title: Evaluation, comparison and relationships of selected strength parameters of lower limbs and trunk in basketball players

Objectives: The objective of this thesis is to evaluate the relationships between the selected forces trunk parameters and selected strength parameters of the lower limbs. Eight probands aged 33–45 who play second grade Prague championship in basketball were tested.

Methods: 8 basketball players participated in the experiment. Flexion and extension strength in the knee joint was recorded with a Cybex Humac Norm isokinetic dynamometer at an angular velocity of 60°·s-1. The same device was used to determine the strength of the trunk in rotation. The ForceFrame™ device was used to diagnose abduction, adduction at the hip, and internal and external rotation at the shoulder. The measurements were one-time. Selected relationships were interpreted using Pearson's correlation coefficient and paired t-test.

Results: In this work, significant ($p < 0,05$) relationships between the strength parameters of the trunk and the lower limb were demonstrated. Strength differences between the right and left sides were not statistically significant. The results suggest that typical relationships between strength parameters emerge in amateur level basketball players, but it is a question for the future whether the evidence on this topic will be further developed.

Keywords: dynamometry, asymmetry, strength abilities, amateur sport