

Author: Eliška Drábková

Title of the bachelor's thesis: Correlation of selected fitness indices and performance in throwing disciplines

Supervisor: PhDr. Radim Jebavý, Ph.D.

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Objectives: To determine the minimum limit values for speed-power fitness tests in Czech performance female throwers.

Methods: First, in our bachelor's thesis we applied a comparative analysis regarding fitness tests in throwing disciplines. Subsequently, we focused on the use of a quantitative method of questioning, when we mainly examined the level of speed-strength fitness tests of individual test subjects by means of a survey. The basic rules for the selection of the subjects were related to age (from 19 years old), a minimum of 650 points in the IAAF scoring tables and a minimum of 4 years of competition experience. We also defined the term "female representative" according to the established limits of the U19 SCM representation. We created bar graphs for individual speed-power fitness tests and established the limit level for Czech female throwers according to two criteria: the recommended limit given in the German literature (Killing a kol., 2011; Strüder a kol., 2017) and the test values found above the average of all Czech female throwing disciplines.

Results: The correlation between selected fitness indices and performance has been confirmed by several studies, demonstrating that setting a minimum threshold level for speed-strength tests can be beneficial for coaches and trainees. Using the arithmetic mean calculation method, we have been able to determine the minimum threshold level for speed-strength fitness tests.

Keywords: anthropometry, athletics, physical fitness, throws, testing