

Abstract

Title: Relationship between selected laboratory and field indicators of movement abilities in soccer players

Objectives: The aim of this study is to determine a degree of association between selected laboratory and field indicators assumptions motion at the elite junior footballers.

Methods: The research group consisted of 51 probands aged 18-19, who are in the highest first-league domestic competition of U19 team. Players undergone laboratory and field trials under the supervision of qualified professionals, which were running under the standard conditions described within the Methodology section of the theses. To verify aerobic capacity under laboratory conditions, we chose a load test on the Quasar running belt (Cosmos, Germany). Dynamic application of force to the pad was evaluated by force sensors in stable Kistler 9281E platforms (© 2014, Kistler Group, Switzerland). Linear acceleration and maximum run speed tests were conducted in field conditions on artificial grass.

Results: The results of the work provide information on the significance of the associations between the selected laboratory and terrain indicators of motion assumptions in elite football players. The analysis of our results reached values between the intermittent sustainability recovery test (LEVEL 1) and VO₂ max, $r = 0.112$. The vertical jump (SJ) showed a significant association rate with acceleration rate tests at 10 m ($r = -0.323$, $p < 0.01$) and a maximum speed of 20 m ($r = -0.387$).

Conclusions: The results of this work brought interesting findings because we confirmed only one of four hypotheses where the terrain indicator of agility (K-test) showed no significant rates associated with selected laboratory indicators according to the chosen significance.

Keywords: football, motion assumptions, movement skills, game performance, correlation coefficient