Abstract

Title: Profile of youth footballers as goalkeepers

Objectives: The objective of this study was to compare selected parameters of body composition, level of static postural stability and level of lower extremities explosive strength between male and female goalkeepers in soccer and between selected age categories.

Methods: A total of 33 male (n = 22) and female (n = 11) soccer goalkeepers participated in the study. They were divided into six test groups based on gender and age category (14-15, 16-17 and 18-19 years) for performance assessment. These groups were assessed for basic anthropometric data (body height and weight), body composition parameters (% body fat, fat free mass), and level of static postural stability (deviations of the total center of pressure path) in four types of stands (narrow stand open eyes/closed eyes, right/left lower limb stand) and lower extremities explosive strength (jump height, relative force impulse, relative maximum force produced) in four types of jumps (counter movement jump free arms, counter movement jump, squat jump, drop jump). We used a Tanita MC-980MA bioimpedance device (Tanita Corporation, Japan) to assess body composition parameters, a Footscan pressure plates (RSscan International, Belgium) to assess postural stability, and a KISTLER 8611 force plates (Kistler, Switzerland) to assess lower explosive strength parameters.

Results: When examining the results of the measurements, we found a significantly higher percentage of body fat and significantly lower values of total fat free mass in girls of all ages compared to boys. Furthermore, we found a significant increase in differences in total active body weight in favour of boys as age increased. For postural stability, we expected a higher level in girls compared to boys. This assumption was confirmed for category U15 and U17, but the results were not significant for category U19. Another assumption of decreasing differences between girls and boys as a function of age was also not confirmed. For vertical jumps, boys of all ages achieved significantly higher values for jump height and relative force impulse, but results of relative maximum force produced were not significant. We also did not observe differences in the level of explosive strength of lower extremities as a function of age in favour of boys.

Keywords: Body composition, postural stability, explosive strength, vertical jump