Abstract

Name: Analysis of external indicators of physical activity in professional football players

Objectives: Find out the amount of movement load of professional football players using selected external indicators with regard to different player positions. At the same time, the aim of the work is to determine the ratio of training load between a microcycle and a championship match

Methods: The research group consisted of 19 football players from a professional football club, their movement load was analyzed in 15 championship matches and 37 training units within eight weekly training microcycles. All data on the physical activity of players was recorded using a global portable system (GPS; Catapult Sports). The Hedges g factor was used to evaluate the significance of the differences between the two group ratios.

Results: In the indicator of the total distance covered (CPV) in the match, the central defenders (10 131,1 ± 1588,7 m) did not differ significantly from other game positions, except for the central midfielders, who recorded the highest values (11 495,2 ± 533,3 m). On the contrary, the lowest values were reached in CPV by players in the position of external defenders (9 629,8 ± 1 380 m). In the indicator, the high-intensity running (> 18 km.h-1) in the match was covered by the longest distance from the attackers (2 054,2 ± 887.6 m), followed by the central midfielders (1 626,7 ± 551 m). On the contrary, the lowest values were observed in the central defenders (1 197,7 ± 477,5 m), who differed significantly from the central midfielders, attackers and halfback. In the CPV indicator, the highest multiples of movement load from the match in the weekly training cycle were achieved by central defenders, external defenders and attackers (2,2x), followed by external midfielders (2,1x) and central midfielders (1,9x). In the BVI indicator, the attackers reached the highest multiple (2,2 times), whose performance was significantly higher compared to the lowest performance of central midfielders (1,2 times).

Conclusion: The central defenders are not fundamentally different from other game positions in the CPV during the match, on the contrary, they reach the lowest values in the BVI parameter (> 18 km.h-1). In the weekly microcycle, the central midfielders in the CPV and BVI parameters (> 18 km.h-1) reached the lowest values compared to the match in terms of multiples.