

## Abstract

**Title:** Differences in somatic and functional parameters between soccer players from two teams placed on the opposite side of youth league table.

**Objectives:** The aim of this thesis is to determine the degree of the differences in the somatic and functional parameters between two teams of difference soccer performance, from the same competition.

**Methods:** The main research method was observation. Research sample contained a total of  $n = 40$  footballers AC Sparta Prague and SK Motorlet Prague. For determining the somatotype we used the methodology from Heath – Carter 1967. Proportional age was determined via KEI Index (Riegerová, et al., 2006). Biological maturation was determined by the equation Mirwald et al., (2002). Physical fitness aspects were assessed by (4x10m, sit downs, Leger test, broad jump) of UNIFIT 6-60. Bruininks Oseretsky Test of Motor Proficiency (BOT – 2) was used to assess participants neuromotoric. For data analysis were used: two-sample T - test, the analysis of variance. Statistical significance  $p < 0,05$  and effect size  $d > 0,06$ , Hays &  $\omega^2 > 0,06$  were defined. Degree of relationships between variables were determined via correlations.

**Results:** ACS players had significantly higher level ( $p = 0,039$ ;  $\omega^2 = 0,0818$ ) of mesomorphy (bone – muscle development) in comparison with SKM. Particular difference ( $p = 0,029$ ;  $\omega^2 = 0,092$ ) was determined at higher circumference of the arm without triceps skin fold in ACS soccer players. In physical fitness aspects ACS soccer players had significantly higher explosivity of lower limb (broad jump), ( $p = 0,001$ ;  $d = 0,98$ ) and endurance competence (Leger test), ( $p = 0,006$ ,  $d = 0,85$ ). ACS players also reached significantly better results in Short dribbling test ( $p = 0,0006$ ), (specific football skill). The same facts were found in neuromotorics, particularly in manual dexterity (copy square,  $p = 0,002$ ; transfer pennies,  $p = 0,001$ ) and in sit ups test where soccer players of ACS reached significantly better results ( $p < 0,001$ ) compared to SKM soccer players. Different biological profile was found between soccer players of both

teams. While 13 ACS soccer players were biologically accelerated, 6 were in adequate tempo and 1 was biologically delayed, at SKM only 8 soccer players were biologically accelerated, 8 were in adequate tempo however, 4 were biologically delayed.

**Conclusion:** From aforementioned findings, in youth soccer the team performance level is probably reflected in somatic and functional parameters. ACS players were significantly more developed in mesomorphy component and also reached better results in physical fitness aspects and in definite parameters of neuromotoric. On the other hand, its necessary to mention, that significant difference was also found in biological character (biological acceleration, adequate development, biologically delayed) between teams. ACS soccer players were around quarter of year further in contrast to SKM soccer players. This biology profile difference might be one of the cause why ACS soccer players reached better in selected somatic and functional parameters. The question remains what is the cause of this different biological characters, if specific training conditions or selective proces of players.

**Keywords:** somatotype, functional parameters, football, 12 years old