

MODEL CHARACTERISTICS OF ATHLETES IN WATER POLO AND HANDBALL

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Game activity of athletes is characterized by richness of the contents and a variety of actions. In water polo teams three game roles are distinguished: center forwards, mobile forwards and defenders. In handball there are two main game roles: players specializing on throws from far distances (central) and those who ends the “fast breaks” (extreme). The aim of the paper is to reveal model characteristics of the athletes depending on their game roles. Anthropometrical, bioergometrical and psychophysiological indicators were studied in 50 male water polo players, 20–25 years of age. Center forwards and defenders possess more massive body build, while mobile forwards have more gracile structure. Factor analysis isolated five factors, the 1st having the greatest loadings in total, length and girths traits. Longitudinal study of 46 boys, of 10–16 years of age, engaged in handball for 7 years, has been conducted. Players of the central zone possess macrosomatic type (MAS) at 10–13 years (74–82%), and at the age of 14–16 years they have mesosomatic type (MES) (43–62%). Extreme players represent three types: MAS, MES and micromesosomatic (MIMES) at the age of 10–13 years, with almost equal proportion of these somatotypes. At the 14–16-years period players of MIMES (53.8–85%) and MES type (15.4–46%) prevails, thus showing their instability in the pubertal period. It may be concluded that at the very first stage of training in handball it is possible to differentiate young athletes of macrosomatic type as the future players of the central line, and those of micromesosomatic type as extreme players. Thus, the morphological component should take a leading position in the system of training of players.

Key words: *sports anthropology, game role of athletes, model characteristics, body types*

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SENSATION SEEKING AND HEALTH-PROTECTING AND REPRODUCTIVE STRATEGIES

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Sensation seeking (Zuckerman, 1971) can be seen as personality trait representing the psychological basis of adaptation strategies, formed in evolution. Higher sensation seeking (SS) is associated with reproductive behavior (Farthing, 2005; Cooping et al., 2013). SS correlates with status and reputation, higher SS is associated with short-term relationship (Egorova et al., 2013). The study sample was 280 students, 18-20 years of age. The following characteristics are assessed: sensation seeking (thrill and adventure seeking, experience seeking, disinhibition, boredom susceptibility, intelligence seeking, novelty avoidance) psychological well-being (Ryff, 1989) and health protecting behavior (leisure time, drinking and smoking). Higher level of SS was found in the male sample. This allows us to consider SS as the trait contributing to reproductive behavior. Men with higher levels of SS tend to be more preferred partners. SS is negatively associated with a preference for sports as leisure time, regardless of gender. “Intelligence seeking”, “novelty avoidance” are positively correlated with a tendency to consume high spirits and with smoking. Psychological well-being scales traits, such as “positive relations with others” and “personal growth”, have negative correlations with the “general sensation seeking”, “experience seeking” and “thrill and adventure seeking”. These results suggest that high SS acts in the opposite manner to different adaptive strategies. High SS leads to a focus on short-term relationship and simultaneously to low health-protecting behavior. This situation can be regarded as a preference for the

traditional strategy of adaptation in terms of evolutionary psychology. Low SS on the contrary would lead to a preference strategy aimed at preserving themselves and at long-term relationship. The study was supported by Program of Strategic development of Perm state humanitarian-pedagogical university, project No. 26-F.

Key words: *sensation seeking, health-protecting behavior, reproductive strategies*

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INTERDAILY VARIATIONS OF BODY COMPOSITION PARAMETERS IN YOUNG WOMEN

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The objective of the study is to determine the size of the changes of the selected body composition parameters during one week. The research was executed with a group of 40 women with the average age of 21.29 ± 1.45 years. The measured parameters were: total body weight (BW), body fat representation (BF) and total body water (TBW). The monitored parameters were measured using the Tanita BC 418 MA tetrapolar bioimpedance scale. The measurements took place during one week (Monday – Friday). The error of the device was expressed with the typical error of measurement (TE) by Hopkins from three repeated measurements in one day (Monday). Only one measurement was taken on the remaining days. To evaluate the size of changes during the week, we used the ANOVA repeated measures. The practical significance was verified using Eta-squared. To express the size of the error of measurement in the weekly analysis, we used typical error of measurements (TE). The TE values expressing the accuracy of the device measurements were the following: BW 0.06 kg, BF representation 0.22 kg and 0.39%, TBW representation 0.17 kg and 0.29%. The differences found between the mean values of the monitored parameters during the week ranged from 0.00 – 0.15 kg in BW, 0.03 – 0.29 kg and 0.01 – 0.48% in BF, 0.00 – 0.21 kg and 0.00 – 0.35% in TBW. The practical significance was not established despite the fact that statistically significant differences were determined. The changes in the monitored body composition parameters during the week were very small, which was confirmed by the low practical significance values. When interpreting the results of repeated measurements, the values exceeding the level of the TE weekly analysis are considered to be a change. In BW, the value was 0.33 kg, in BF 0.41 kg and 0.70% and in TBW 0.41 kg and 0.51%.

Key words: *body weight, body fat, total body water, typical error of measurement, statistical significance, practical significance*

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CHARACTERISTICS OF PHYSICAL GROWTH AND DEVELOPMENT IN MONGOLIAN MALE ATHLETES

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Sports training is the process which requires years of hard work and can not accomplish its main goal without considering human growth and body development characteristics, level of physical preparation. Anthropometric and morphologic examination of Mongolian athletes has not been conducted. Therefore, the results are of great value to theory and practice of sports science. Anthropometric examination and data collecting have been carried out at Sport Center of Mongolian Olympic team of the city Ulaanbaatar.