DISCRIMINATIVE ANALYSIS OF MORPHOLOGICAL VARIABLES BETWEEN TWO BASKETBALL CATEGORIES (CADETS AND SENIORS)

Abstract

Main goal of the empiric research is to identify significant differences between the two groups of examinees in morphologic space. At the representative sample of N=75 examinees of basketball players and subspecimen of junior players aged 15 to 16 and seniors older than 21 we have measured 16 anthropometric variables according to the standards of International Biologic program. The data were processed by multivariate method of discriminative canonic analysis which differentiated statistically significant quantitative differences between the categories of players. (Wλ =.824; p<.05; χ^2=148.87>df=13.277). Obtained values of the coefficient of canonic correlation as well as 64.53% of the proportion of mutual variance of the system of analyzed variables define quantitative inequalities between the groups. Variables with highest orthogonal projection at bipolar structure of extracted discriminative function that mostly contributed to the differentiation of examined groups are: upper arm skinfold, forearm skinfold and chest skinfold. According to the univariant values of important canonic pressures of component variables, extracted discriminative factor is hypothetically interpreted as subcutaneous fat. Manifest distance between the centroids of the groups at discriminative function. i.e. their projection in space limited with the vectors of analyzed variables, showed that juniors have positive relation with isolated anthropometric discriminative, whereas seniors have negative relation with it, i.e. that seniors have less percent of fat in comparison to the values of the skinfold of juniors.

Key words*: discriminative canonic analysis, centroids, morphological variables, juniors, seniors*