

INDICATORS REFERRING TO THE STATE OF AEROBIC FITNESS WITH THE PLAYERS OF HANDBALL, VOLLEYBALL AND FOOTBALL

Abstract

The aim of this survey was to test aerobic fitness with the players of handball, volleyball of the senior team from HC "Bosna" Sarajevo, VC "Kakanj" Kakanj and the football players of the junior team from FC "Čelik" Zenica. The test covered 18 handball players (aged 17-18), 15 volleyball players (aged 18-28) and 23 football players (aged 17-18) who were the members of the first league clubs. The multi-stage fitness test as a form of a simple process of measuring aerobic fitness was applied together with measuring of height, weight, BMI (index of body mass). In order to get some information on relations between aerobic fitness abilities and some parameters referring to age and morphological measures of the tested sportsmen, the canonic correlation analysis was applied with the predictors of the multi-stage fitness test and the criteria referring to age and morphological variables. The results showed that all the criteria were negative predictors of multi-stage fitness test value. The SDA discriminative analysis has been applied in order to determine the differences among the groups of sportsmen tested. There appeared some significant differences among groups and the conclusion was that an important generator for the mentioned differences was the multi-stage fitness test itself, which showed that football players were superior in aerobic fitness and that the second feature of these groups was represented by a better general status (described by age and morphological variables) with handball players in comparison with volleyball players. It was implied that the features of the chosen sport games were the crucial thing for such a kind of result.

Key words: handball, volleyball, football, expected breathing in of oxygen