

# DISPROPORTION OF THE DOMINANT AND ANCILLARY EXTREMITIES IN DISPLAYING EXPLOSIVE POWER WITH YOUNG BASKETBALL PLAYERS

Original scientific paper

## **Abstract**

*Disproportion is an omnipresent occurrence typical for both man and the natural world. Everything that is not identical on both sides of the axis can be considered disproportionate. Explosive (speed) power represents the ability of placing the maximum amount of energy in one movement in the shortest period of time possible. Basketball is comprised of the following activities: running, jumping, changes of direction, abrupt stops, dribbling, passes, shooting, etc. All the activities mentioned represent the essential part of the game but with all of them there is a tendency towards the disproportionate uses of the extremities so the left and the right sides of the body are employed differently. The aim of this research was to determine mutual disproportion, which occurs as the consequence of the quality of life and the sport the examinees play. One of the key things was finding out all the possible differences among the three age categories, that is, among the relevant variables and the extent to which they are manifested. 64 young basketball players took part in the research. They were divided into three age groups according to the propositions of the Serbian Basketball Association. The set of measuring instruments comes from the anthropometrical and the motoric space and the examinees had to fill in the questionnaire, the function of which was to determine the dominant extremity on the grounds of the answers given. A formula for calculating the disproportion coefficient (Jatrjemskaia & Titov, 1999) was used in this research for all the measured variables related to extremities. The formula is as follows:  $AS = D - ND / D \times 100$ . Along with the given formula which was used for determining the mutual relation between the dominant and ancillary parts of the body, another formula which unified all the relevant variables was used:  $AS(n) = \sum AS / n$ . The methods used from the field of comparative statistics were: T-test and the variance analysis (ANOVA), and in the post-hoc analysis Tuckey test was used. The results show the anticipated differences in the explosive power between the extensors of the lower extremities and the dominant ones. The explosive power of the upper extremities is bigger in dominant extremities.*

**Key words:** *disproportion, extremities, explosive power, young basketball players*