



## DIFFERENCES IN MOTOR ABILITIES MANIFESTATIONS DEPENDING ON QUANTITATIVE PARAMETERS OF BODY MASS INDEX OF STUDENTS

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### Abstract:

Motor abilities as the anthropological status segment of a human participate in the implementation of various movement structures, and are an indispensable part of human latent and manifested space. Depending on the type of movement structures depends on their mode of manifestation. Most of them are more or less correlated with other segments of the anthropological area. The most common connection is related to the morphology and dimensions of the individual parameters of the morphological status, for example, Lorentz constitution index, body mass index (BMI), and so on. The current research was conducted on a sample of 40 male students, aged  $16 \pm 0.5$  years from Busovača (BIH) in order to determine possible differences between individuals with different values of BMI. According to the objective of the research was selected the intentional sample of subjects: 20 normal weight students ( $BMI=20.79 \pm 1.79 \text{ kg/m}^2$ ) and 20 students with excessive nutritional status ( $BMI=26.55 \pm 0.88 \text{ kg/m}^2$ ). For the evaluation of motor abilities were defined tests for the assessment of the balance (flamingo-MFLA), flexibility (reaching in sitting-MFLE). To determine the difference between respondents was applied the module T-test for small independent samples. The results obtained confirm statistically significant differences between normal and over-fed students in the realization of defined motor abilities required a level of significance ( $p < 0.001$ ).

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## 1. Introduction

Today we live mainly in terms of the accelerated pace, poor quality and unhealthy diet, reduced or lack of movement, in one word - hypokinesian lifestyle. Hypokinesia consequences are many and most are related to diseases of the cardiovascular system, the respiratory system and the emergence of diabetes. In addition, it can be stated that uneven growth and development of the individual lead to a negative trend in the development of some anthropometric characteristics and even the physical status of the individual (Pavlović, Raković, & Pupiš, 2016).

It is known that correct and systemic activities of physical activities and sports have a positive impact on health, physical development and functional capabilities (Morris and Froelicher, 1991; Pate, Pratt, Blair, et al, 1995; Vadasova & Balogha, 2012), both in younger and in an older age (Trudeau, Laurencelle, Tremblay, et al, 1999). However, it also points to the possibility of health damage, as well as some diseases in which these activities will have the opposite effect, i.e. deterioration of health conditions (Koplan, Siscovick, & Goldbaum, 1985 Ghilarducci, Holly, & Amsterdam, 1989; Malina & Bouchard, 1991). It is therefore necessary to ensure that in these activities are included only healthy people, or those to whom these activities will be beneficial, and that we can continuously monitor their physical development through systematic and sports activities exercise (Telama, Leskinen & Yang, 1996, Stewart, Dennison, Kohl & Doyle, 2004).

One of the most important health problems of modern society is obesity, and worst of all, it seems to have a major negative impact on children. In today's modern world, children's obesity is on the rise and an epidemic. Very often at school age, caloric intake, which is on the rise is not accompanied by an increasing trend of physical activity, i.e. they are inversely related (Berkey, Rockett, Field, et al., 2000; Boreham, & Riddoch, 2001).

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