ABSTRACT

Title: The relationship of BMI and body composition parametres in UK FTVS students

Objectives: The main goal of this diploma thesis is to evaluate the relationship between BMI and some selected parameters of body composition assessed using a bioelectric impedance device (BIA – Tanita MC – 980).

Methods: The diploma thesis has the character of an empirical research (observation method). The bioelectric impedance method (BIA – Tanita – MC – 980) was used to analyze the body composition. The relationships between BMI values and individual body composition parameters were evaluated using the Spearman's correlation coefficient. The statistical significance level was set at $\alpha = 0,05$. In total, 170 students were studied (85 physiotherapy students, 85 physical education students). The group was further subdivided into several specific subgroup by gender, field of study and physical activity.

Results: The results revealed a series of finding within the sample group including the following: an insignificant correlation ($r_s = 0,062$) between BMI and body fat (%), a significant correlation ($r_s = 0,386$) between BMI and fat mass (kg), a significant correlation ($r_s = 0,603$) between BMI and visceral fat, a significant correlation ($r_s = 0,624$) between BMI and fat-free mass (kg), a significant correlation ($r_s = 0,624$) between BMI and muscle mass (kg), a significant correlation ($r_s = 0,643$) between BMI and TBW (kg), an insignificant correlation ($r_s = - 0,027$) between BMI and TBW (%), a significant correlation ($r_s = 0,580$) between BMI and ICW (kg), a significant correlation ($r_s = 0,708$) between BMI and ECW (kg). The relationship between BMI and body composition parameters were also evaluated within each specific subgroup.

Keywords: BMI, body composition, risk factors, body weight, physical constitution