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Original research article

OBESITY AND THE PHYSICAL WORK CAPABILITY OF STUDENTS IN NOVI SAD

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Abstract. *The aims of the current research were to determine the body mass index (BMI), percentage of body fat, maximum oxygen consumption and level of habitual physical activities, and the differences in the student population of both sexes regarding data on health, exercise and nutrition. The sample of participants was composed of 160 students (94 male and 66 female), age 22±1 years. The overall sample of participants is divided into two subsamples, 95 of them were students of physical education that were informed through the study program about health, exercise and nutrition, while the second subsample consisted of 65 students of other study programs that did not receive the afore mentioned information. Body height, body weight and percentage of body fat were established, the body mass index was calculated, maximum oxygen consumption was estimated (by a direct method) and the (weekly) level of habitual physical activities. The data were processed by procedures of descriptive statistics, central and dispersive parameters and distribution of frequencies and comparative statistics, the t-test for independent samples, univariate analysis of variance and Chi-square test to analyze the significance of the differences between the subsamples of students regarding the study program and sex. The results show (complete sample) that almost 2/3 of male students are not physically active, and that the female students have significantly better indicators of body composition than their colleagues. The results for maximum oxygen consumption (complete sample) show that the statistically highest average was obtained in the subsample of students from the physical education study program (49.54 ml/kg/min), while the lowest was identified for a group of female students of other study programs (36.92 ml/kg/min).*

Key words: *obesity, work ability, exercises, students.*

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INTRODUCTION

Obesity, as a chronic non-contagious disease, represents a primary health problem for people all over the world. The overall prevalence of youth pre-obesity and obesity in the USA amounts to as much as 54.3% (Hedley et al., 2004; Ogden et al., 2006). In comparison with the USA, the frequency of overweight children and adolescents in the northern European countries is significantly lower, ranging from 10 to 20%. Still, the results that refer to the south of Europe indicate that the frequency of these disorders is greater (20–35%) than in the north of Europe, but still almost half of that in the USA (Lobstein, Baur & Uauy, 2004). According to the latest research published by the Serbian Institute for Health Protection, 54% of the adult population has (Institute of Public Health of Serbia, 2008) problems with being overweight (pre-obese and obese), with 36.7% pre-obese and 17.3% obese. The region of Vojvodina is the leading area in the Republic of Serbia obesity-wise, with 58.5% of its inhabitants being obese (Grujić, Martinov-Cvejin, Ač-Nikolić & Nićiforović-Šurković, 2005). Obesity and its consequences have a great impact on morbidity, mortality of the population and the quality of life, thus representing a very significant socio-economic problem in Serbia (Vlaški, 2009). Obesity is defined as a growth of body mass beyond the defined values, taking into account the gender, chronological age and bodily height of a person and characterized by excessive body fat in one's organism. In medical nomenclature it is regarded as an illness, and obesitology indicates that this problem goes beyond the medical aspects and takes on global social characteristics. The BMI parameter was suggested, by the World Health Organisation as the best one for the evaluation of the degree of nutrition and for defining and classifying obesity (Vlašić & Katanić, 2010). A study on the health and behavior of children and adolescents which includes independent research that was conducted in as many as 41 countries (Richter ,Hurrelmann, Klocke, Melzer & Ravens-Sieberer, 2008) along with a broad range of behavioral patterns of the school population related to dietary habits and a lifestyle characterized by physical inactivity and pronounced sedentary activities of the youth , which all indicate a trend of increase of health risks (Brettschneider & Naul, 2007; Owen, Healy, Matthews & Dunstan, 2010; Tremblay et al., 2011).

When it comes to the student population, it was initially presumed that a reduced work capability can be related to an unhealthy lifestyle and insufficient informedness about the proper dosing of physical activity and diet. An increasing number of studies indicates that the level of daily physical activity in the student population is not satisfactory and that the students are insufficiently involved in sports and physical activity (De Vahl, King & Williamson, 2005; Macanović et al., 2013). Barabash, Zadarko, Shyyan, Nakonechnyy & Pavlova (2011) included in their research, among other health indicators, the level of cardiorespiratory function which has been identified in the student population of Ukraine, Poland and Slovakia, among the students of different academic programs. The authors also indicate that their final years at university are the final step of learning where it is largely possible to influence the health education of the young in terms of maintenance and monitoring of positive health behavior (Barabash et al., 2011). The authors included in their research, among other health indicators, the level of cardiorespiratory function which was identified in the student population of Ukraine, Poland and Slovakia, including students of different academic programs. Apart from the need for precise data referring to the student population, the reason for selecting this segment of the population are also technical limitations, i.e. the impossibility of gathering a systematic mass sample of participants. The

largest part of the surveyed sample consisted of students who are majoring in physical education, who are also taught about the importance of dosing physical activity and the principles of healthy diet. Apart from them, the sample also included a certain number of randomly chosen students from other study programs, thought to possess a lower degree of knowledge about the observed problems (primarily healthy physical activities and proper diet). The aims of the current research were to determine the body mass index, percentage of body fat, maximum oxygen consumption and level of habitual physical activities, and differences among the student population for both sexes in terms of information about health, exercise and nutrition.

THE METHOD

The survey included 160 students (age 22±1 years) of from the University of Novi Sad, 94 male and 66 female. Of these, 95 students (64 male and 31 female) are students of physical education (tims.) who receive information regarding exercise, nutrition and health, and 65 students (30 male and 35 female) are students of other study programs (others) who do not have implemented information regarding exercise, nutrition and health. The studied variables refer to their morphological, functional and sociological space. Standardized laboratory and field instruments were used to estimate the variables from the first two areas, while a specific questionnaire created for this research was used to gather data on some sociological characteristics (habits related to habitual physical activity). For the assessment of the morphological dimensions, the variables which were included are: body height (BH in cm) and body mass (BM in kg) that were measured to the nearest 0,5 cm (Martin`s anthropometer) and 0,1 kg (Tanita BF622, Tokyo, Japan), a relative indicator of body constitution was obtained – the Body mass index (BMI) - as well as fat percentage (%fat), measured using the bioelectrical impendance methodology (Tanita BF622, Tokyo, Japan). As the only variable of functional diagnostics, maximum oxygen consumption was used ($VO_{2max,}$) as a representative indicator of physical work capability. The assessment of the maximum oxygen consumption was done by a direct method where the treadmill was used, and the analysis of exhaled air by using the Vacu-Med CPX system (Ventura, USA). In the applied questionnaire, only two relevant predictor questions were included – those that referred to gender and the student's study program. Namely, in some of the previous research papers (Ahmetović, Pavlović & Popmihajlov, 1990; Ugarković, 1999; Perić, 2009) gender was recognized as a significant discrimination factor, primarily in terms of defining body composition. On the other hand, studying at certain faculties was a potentially significant discrimination factor in relation to the aim of the research. The participants were asked to grade the level (weekly) of their habitual physical activities by choosing one of the six offered answers, ranging from a complete absence of regular activities to daily exercise in the form of sports training.

The data obtained in the research were processed by means of descriptive and comparative statistics. From the field of descriptive statistics, the distribution of frequencies was set for each variable and representative central and dispersion parameters were calculated for those variables, while for the variables expressed in the ordinal scale, representative central and dispersion parameters were calculated. From the field of comparative statistics, the following procedures were used: the T-test for discriminative analyses of body dimensions (BH, BM) and body composition according to the criterion of faculty affiliation; a univariate analysis of variance was used for a discriminative analysis of the data of the complete sample referring to

VO_{2max}, while, depending on the research (statistical) task, the participant's gender, faculty affiliation and the quantity (level) of weekly physical activities were used as discriminative factors; the Chi-square test for testing the significance of the differences between empirical frequencies referring to the presence of habitual physical activities among the participants of certain subsamples, as well as the discriminative analyses of body composition and Body mass index between the individual subsamples; Pearson's model of correlation analysis for the establishment of the degree of relation between VO_{2max} and BMI. The significance level was set at $p<0.05$. All the data were screened for normal distribution using SPSS version 11.0 (SPSS, Chicago, IL).

RESULTS

The results were systematized in relation to the morphological and functional space and the space containing the assessed level (weekly) of habitual physical activities. The interpreted results of the descriptive analysis indicate, in each of the selected spaces, as a hypothetical predictor, gender and university affiliation. Seeing, as all previous anthropological studies have shown, that body height and mass of adult males and females differs significantly and that there are specific proportions between them, the descriptive statistical parameters of this research are presented in Table 1 and shown in relation to the participants' gender.

Table 1 Descriptive parameters of variables of morphological space, calculated for gender subsamples, with results of the t-test

Variable	Subsamples (N)	Male students			Female students		
		Mean	Std. Dev.	Std. Error Mean	Mean	Std. Dev.	Std. Error Mean
BH	95	182.31	8.47	1.06	169.05	6.36	1.14
	65	181.64	7.67	1.40	170.13	5.98	1.01
	T-test	t = .369	Sig. = .713			t = -.711	Sig. = .480
BM	95	83.45	12.47	1.56	60.45	7.33	1.32
	65	89.92	10.89	1.99	65.02	11.65	1.97
	T-test	t = -2.436*	Sig. = .017			t = -1.877	Sig. = .065
BMI	95	25.07	3.04	0.38	21.14	2.09	0.38
	65	27.22	2.49	0.46	22.39	3.28	0.55
	T-test	t = -3.384*	Sig. = .001			t = -1.830	Sig. = .072
%fat	95	16.45	5.67	0.71	22.98	3.60	0.65
	65	22.29	3.03	0.55	26.73	6.55	1.11
	T-test	t = -5.285*	Sig. = .000			t = -2.827*	Sig. = .006

Based on the results, one can see a significant difference in body mass (BM), body mass index (BMI) and fat percentage for the male student subsample, while the differences in the female student subsample are no greater than the variable – body fat percentage (%fat).

Data referring to the indirect indicator of body composition of the surveyed population are shown in tables 2 and 3, given in four characteristic groups (underweight, persons with a good constitution, overweight and obese). According to Perić (2009) and on the basis of the application of standards recommended by the World Health Organization, it was determined that 58.5% of the male students had a good body composition, while 28,7% of

them were overweight (Table 2). For the female student population, in comparison to the male student population, the results are somewhat more favorable, seeing as there is a visibly greater percentage of those with a good constitution (66.7%) and a markedly lower presence of those overweight (12.1%).

Table 2 Participant distribution (complete sample) according to gender, obtained through relative BMI values

BMI – category	Male students	Female students	Σ
Underweight	10.6%	21.2%	15.0%
Good constitution	58.5%	66.7%	61.9%
Overweight	28.7%	12.1%	21.9%
Obese	2.1%	0.0%	1.3%
Σ	100.0%	100.0%	100.0%

$\chi^2 = 9.597$*; *Sig.* = **.022** df=3

The data on the distribution of the participants according to BMI of the participants attending different faculties, gender-wise and for all characteristic groups, indicate that 21.9% of the students of *tims.* are overweight, while such presence in the students attending other faculties (others) is significantly higher (43.3%). The situation with the female student population is somewhat more favorable, as indicated by the somewhat greater percentage of good constitution (71.0%) of the female students of *tims.*, but there is also a high percentage (62.9%) among students attending other faculties (others). However, in this participant category, the female students of *tims.* were less frequently found to be overweight - merely 3.2% in comparison with the female students of other faculties, who were found to be overweight in as many as 20.0% of the cases.

Table 3 Distribution of participants from different faculties according to gender, obtained according to relative BMI values

BMI	Male students			Female students		
Category	tims.	others	Σ	tims.	others	Σ
Underweight	15.6%	0%	10.6%	25.8%	17.1%	21.2%
Good constitution	60.9%	53.3%	58.5%	71.0%	62.9%	66.7%
Overweight	21.9%	43.3%	28.7%	3.2%	20.0%	12.1%
Obese	1.6%	3.3%	2.1%	0.0%	0.0%	0.0%
Σ	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	$\chi^2 = 8.65$*; *Sig.* = **.037** df=3			$\chi^2 = 4.560$; *Sig.* = .102 df=3		

The results referring to an estimate of aerobic ability (VO_{2max}) were the indicators of physical work capability of the surveyed population. In relation to the subsamples formed according to gender and faculty affiliation, the obtained average values were mostly expected. In relation to the maximum oxygen consumption, various authors cite various borderline values, offering the possibility of grouping participants in 3 to 7 categories. The norms used in this study were the ones suggested by Cooper (1972) and Astrand (1974), supported by the American College of Sports Medicine (Thompson, Gordon & Pescatello, 2010). According to these sources, adults aged between 20 and 29 coming from a healthy average population and in relation to the work capability expressed in maximum oxygen consumption (*ml/kg/min*) can

be grouped into five categories: very weak work capability (men ≤38, women ≤28), weak work capability (men 39-43, women 29-34), average work capability (men 44-51, women 35-43), good (desirable) work capability (men 52-56, women 44-48) and a high work capability (men ≥57, women ≥49). Starting from these standards, established on the basis of a large body of previous research, it can be noticed that the greatest number of participants in this research have average VO_{2max} values, with the number of those with average work capability being significantly higher among the female students (Table 4).

Table 4 Distribution of the participants of different gender in relation to work capability (VO_{2max})

Category of work capability	Male students	Female students
Very weak	11.7%	0.0%
Weak	12.8%	30.3%
Average	37.2%	62.1%
Good (desirable)	19.1%	7.6%
Very good	19.1%	0.0%

$\chi^2 = 34.993$*; *Sig.* = **.000**

The data on the values of maximum oxygen consumption according to gender for the entire sample, along with the level of significance, are given in the Table 5. It can be noticed that male student participants had significantly higher average values compared to their female colleagues.

Table 5 Descriptive parameters (according to gender for the entire sample) calculated for the VO_2max variable

Gender	Mean	Std. Deviation	Std. Error	Min	Max
Male students	48.86	8.25	.85	29.01	65.97
Female students	37.29	4.08	.50	28.87	45.85

t = 10.512*; *Sig.* = **.000**

In Table 6, the data indicate the values of the maximum consumption of oxygen in various subsamples formed according to the criteria of gender and faculty affiliation. Significant differences have, however, disappeared when the arithmetic means of students from different faculties were compared (arguably, athletes and non-athletes). The highest statistical average was obtained in the subsample of the *tims.* students (49.54 ml/kg/min), while the lowest one was in the group of female students of other faculties (others) (36.92 ml/kg/min).

Table 6 Average values calculated for the VO_2max variable of different subsamples formed according to the criteria of gender and faculty affiliation

Faculty	Male students		Female students		F-test (faculty)
	Mean (ml/kg/min)	Std. Dev. (ml/kg/min)	Mean (ml/kg/min)	Std. Dev. (ml/kg/min)	
Tims.	49.54	7.99	37.71	4.06	F = 4.691
Others	47.40	8.74	36.92	4.12	*Sig.* = .275
F-test (gender)	F = 274.874*		Sig. = .038		

The level of habitual physical activity of the surveyed population was expressed based on the assessment of volume (but not the content) of physical activities, with the participants choosing 1 out of 6 answers, in an order indicative of the categories ranging from a very pronounced lack of movement (hypokinesia) to daily sport exercise. The information on the character and the volume of physical activity for the complete sample of participants according to gender is shown in table 7. Regular training is least present in both genders. The male students most often train irregularly, while female students are characterized by much sitting, along with walking. Based on the empirical frequencies of certain answers, one can conclude that the male students are, generally speaking, significantly more physically active than their female colleagues.

Table 7 Distribution (for the complete sample) of answers by the participants of different genders in relation to the level of habitual physical activities

Volume of physical activity	Male students	Female students	Σ
Minimal	13.8%	13.6%	13.8%
Much sitting, but also walking	12.8%	33.3%	21.3%
Occasional	23.4%	19.7%	21.9%
Often, with colleagues	21.3%	10.6%	16.9%
2-3 times in the fitness centre	17.0%	18.2%	17.5%
Regular training	11.7%	4.5%	8.8%
Σ	100.0%	100.0%	100.0%

$\chi^2 = 12.879$*; *Sig.* = **.025**

Results of the research referring to the identification of data on the level of habitual physical activities among the students of different faculties are presented in Table 8. It can be realistically presumed that the students of the so-called sporting faculties (in this case – the Faculty of Sport and Tourism from Novi Sad) take more part in dosed physical activities and take more care to regularly take part in these activities. This presumption has been confirmed, both with male and female students.

Table 8 Distribution of the participants' answers (according to gender for the entire sample) in accordance to the question related to the level of habitual physical activities

Volume of physical activity	Male students			Female students		
	tims.	others	Σ	tims.	Others	Σ
Minimal	9.4%	23.3%	13.8%	9.7%	17.1%	13.6%
Much sitting, but also walking	7.8%	23.3%	12.8%	25.8%	40.0%	33.3%
Occasional	23.4%	23.3%	23.4%	9.7%	28.6%	19.7%
Often with colleagues	23.4%	16.7%	21.3%	16.1%	5.7%	10.6%
2-3 times in the fitness centre	20.3%	10.0%	17.0%	29.0%	8.6%	18.2%
Regular training	15.6%	3.3%	11.7%	9.7%	0.0%	4.5%
Σ	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	$\chi^2 = 11.085$*; *Sig.* = **.050** df=5			$\chi^2 = 13.498$*; *Sig.* = **.019** df=5		

DISCUSSION

Based on the obtained results, a conclusion can be drawn that obesity among the students in Novi Sad is present to a large extent, while, at the same time, the physical work capability is at an unsatisfactory level. This is corroborated by the data based on which a low level of movement activities of the surveyed population is identified. Due to this, the impression is gained that general health of the examined students is exposed to significant risks. The established facts indicate that these type of scientific studies are justified, since they confirm that general trends perceivable in modern lifestyle (primarily that of the young) can be applied to the Novi Sad student population as well.

In relation to the aim of the research, the differences in the percentage of obesity have been confirmed only among the male participants, in favor of those who study at the faculties of sport, while there were no significant differences among the female students. This study also indicates that the female students, by all accounts, take better care of preventing obesity, seeing as they had, on the level of the complete sample, significantly better body composition indices, as compared to their male colleagues.

Barabash et al. (2011) in their work, among other things, compared the level of cardiorespiratory endurance (VO_{2max}) of Ukrainian students with their colleagues from Poland and Slovakia. If we compare the average values of the VO_{2max} of the participants in our survey, and the respondents of the stated study (based on the presented results) we can notice that they are on average higher for the subsample of female students. The VO_{2max} values for the subsample of students in our research, who are studying physical education, are on average higher than those of the students of the stated research (Poland - 48.9 ml/kg/min; Ukraine - 45.9 ml/kg/min; Slovakia - 47.9 ml/kg/min), while the average value of the VO_{2max} of the students attending other study programs is approximately the same as that of students from Slovakia. The average values for the parameter VO_{2max} obtained in this study for the subsample of students from the physical education study program are higher than the average values of the VO_{2max} of the students of the Physical Education and Sport Department (48.1 ml/kg/min) published by the authors Karatosun & Unal (2013). Compared to the results of the mentioned paper for the average value of VO_{2max} for the subsample of female students (40.5 ml/kg/min), the respondents in our survey who attended the physical education study program achieved slightly lower values. When it comes to our survey, in relation to the estimate of the physical work capability, there was, unexpectedly, no statistically significant difference between the average values of the maximum oxygen consumption of the participants studying at the faculties of sport and those studying at other faculties, arguably unrelated to sport. It was noticed, that, in both gender subsamples of the students that attend the physical education study education program, there is a somewhat higher average value of aerobic capabilities in comparison to those of their colleagues from other study programs, but those differences were insufficient in terms of statistical significance.

Taking the standards defined in previous studies as a starting point, an unfavorable impression of the working capabilities of the students from Novi Sad was formed. In the female student subsample, two ultimate intervals, denoting very weak and very good work capabilities were not observed at all. It is noticeable that the greatest number of participants in both subsamples, have average values of maximum oxygen consumption, although the female students were those among whom average work capabilities were identified far more often. In the female student subsample, a high percentage of weak work capability is conspicuous, which, along with merely 7.6% of female students with a good (desirable) aerobic power, creates an ultimately more unfavorable image of the work

capability of the female students. The male students had not only higher absolute values of oxygen consumption than their female colleagues, but, owing to the result distribution, they could be rated as the more work capable part of the surveyed population.

According to the cited sources (Kuper, 1972; Astrand, 1974; Thompson et al., 2010), adults aged between 20 and 29 coming from an average healthy population can be classified under the following five categories of work capabilities: very weak, weak, average, good and very good. Taking into account the aforementioned standards, a generally unfavorable image is created of the surveyed physical work capabilities. Although our research identifies significantly higher average values for the male student subsample in comparison to the female student subsample, significant differences have unexpectedly disappeared upon comparing the arithmetic means for the sample of male students attending various faculties (athletes and non-athletes). Statistically, the highest average value was obtained in the subsample of students attending the physical education study program (49.54 ml/kg/min), while the lowest one was observed in the group of female students attending other study programs (36.92 ml/kg/min).

By analyzing the collected answers about the level of habitual physical activities (the volume, but not the content), statistically significant differences between the answer structure of the male and female students were observed. The male students proved to be overall more physically active than their female colleagues. Although all the offered answers were among those chosen by both genders, there were twice as many male students who often took part in physical activities with their colleagues (playing football, street basketball, etc.) or trained every day (in the form of active sport training). Significantly more female students have stated that they sit for significant periods of time and walk only occasionally. The number of participants of both genders was almost equal in the categories of minimal movement and regular exercise (in fitness centers, 2-3 times a week). On the level of the entire sample, one can observe that almost 2/3 of the students are not physically active, i.e. lead a predominantly sedentary lifestyle. This trend of behavior of the youth population is the subject matter of more recent studies with a special reference to health implication in terms of the impact of the risk factor, such as obesity and insufficient physical activity (Serra-Majem, Bartrina, Perez-Rodrigo, Ribas-Barba & Delgado-Rubio, 2006; Moreno et al., 2008; Paulweber et al., 2010; Colley et al., 2011). When it comes to the application of regular programmed activities (training), a significant difference regarding female students is noticed – female students from non-sport related faculties pay less attention to regular physical exercise. This data indicates the need to pay greater attention to the physical activities of the students. The once regular (and obligatory) physical exercise as a part of university courses was abolished long ago, while the academic community, apparently, has not yet found a better solution for a mass inclusion of students in dosed physical activities. This fact is corroborated by the data provided by the pilot study in which over eighty percent of the students of the University of Novi Sad (female students 81.72% and male students 87.65%) have stated that they support the reintroduction of physical education classes at the University of Novi Sad (Protić-Gava, 2007).

CONCLUSION

Based on the percentage of obese people in this survey, a difference is observed between the male students attending different faculties in favor of those who studied at the faculty of sport. At the same time, significant differences among the female students were

not observed. The female students also, on the level of the complete sample, had significantly better indicators than their male colleagues.

The subsample results according to gender and faculty affiliation indicate that physical education students (tims.) had somewhat higher average values of aerobic capacities than their colleagues from other study programs (others), but those differences were not statistically significant

In addition to the obesity identified for the individual subsamples, the average work capability for the complete sample and the data which indicate a low level of movement activities observed among the students point to the fact that there is a strong connection between physical work capability and obesity. The correlation analysis was used to conclude that the students with higher values of maximum oxygen consumption have a systematically lower fat tissue percentage in their body composition. Generally speaking, and considering the standards defined in previous research, an unfavorable impression was created regarding the physical work capability of the students from Novi Sad.

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GOJAZNOST I FIZIČKA RADNA SPOSOBNOST NOVOSADSKIH STUDENATA

Ciljevi aktuelnog istraživanja bili su da se utvrde indeks tlesne mase (BMI), procenat telesnih masti, maksimalna potrošnja kiseonika i nivo nedeljnih habitualnih fičkih aktivnosti, i razlike u studentskoj populaciji za oba pola a u odnosu na informacije u vezi sa zdravljem, vežbanjem i ishronom. Uzorak ispitanika činilo je 160 novosadskih studenata (94 ispitanika i 66 ispitanica) starosti 22±1 godina. Ukupan uzorak ispitanika je stratifikovan u dva subuzorka, njih 95 bili su studenti fizičkog vaspitanja koji su u okviru studijskog programa bili informisani u vezi sa zdravljem, vežbanjem i ishranom, a drugi subuzorak činilo je 65 studenata drugih studijskih programa na kojima studenti nisu dobijali informacije koje se dovode u vezu sa zdravljem, vežbanjem i ishranom. Utvrđene su telesna visina i telesna težina, procenat telesnih masti, izračunat je indeks telesne mase, procenjivana maksimalna potrošnja kiseonika (direktnom metodom) i nivo (nedeljni) habitualnih fizičkih aktivnosti. Podaci su obrađeni postupcima deskriptivne statistike, centralni i disperzioni parametri i distribucuja frekvencija, i komparativne statistike, t-test za nezavisne uzorke, univarijantna analiza varijanse i Hi-kvadrat test za analizu značajnosti razlika između subuzoraka studenata u odnosu na studijski program i pol. Rezultati (celokupnog uzorka) ukazuju da gotovo 2/3 studenata nije fizički aktivno, a da studentkinje imaju značajno bolje pokazatelje telesne kompozicije od svojih kolega. Rezultati maksimalne potrošnje kiseonika (celokupnog uzorka) pokazuju da je statistički najviši prosek maksimalne potrošnje kiseonika dobijen u subuzorku studenata sa studijskog programa fizičkog vaspitanja (49,54 ml/kg/min), a najniži se identifikuje u grupi studentkinja drugih studijskih programa (36,92 ml/kg/min).

Ključne reči: *gojaznost, radna sposobnost, vežbe, studenti*.