

## OVERWEIGHT IN STUDENTS AND COMMITMENT TO PHYSICAL ACTIVITY

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### Abstract

Purpose of research; The research shows that the level of nutrient and physical activity of the students of the University of Prizren "Ukshin Hoti" has been established and the association of overweight with physical activity. Methods: The research was conducted in a sample of 215 (114 males and 101 females). Students were randomly selected by several faculties within the University of Prizren "Ukshin Hoti". The respondents were treated in accordance with the Helsinki Declaration. The International Physical Activity Questionnaire IPAQ was applied for the assessment of physical activity. For the assessment of the state of nutrition, morphological parameters are applied: 1. Body height, 2. Body weight and 3. Body mass index. For the processing of results, descriptive analysis, nonparametric techniques and regressive analysis are applied. Results: The results obtained show that the average male student body height is Mean = 177.57±7.69; Body weight, Mean = 71.04±14.00; Mass index trupore, Mean = 22.41±3.45. The male overweight is 23.69%. Mean = 163.82±4.54; Body weight, Mean = 57.30±8.73; Body mass index, Mean = 21.30±2.74. The male overweight is 17.54% and in women 12.87% of respondents. The question of how much time you usually spend sitting during a working day over 3 hours male students have the largest percentage in the number, over 50%. Regressive analysis indicates a link between non-physical activity and overweight with P<0.05 probability. Findings: The results show a pronounced difference between male and female students in body mass index (BMI) indicating that women have a greater nutritional and physical activity during the day. The data indicate a trend towards increased overweight among the male student population. This requires creating the best conditions for the greatest possible participation of students in sports and recreational activities.

*Keywords:* Students, morphological parameters, physical activity, IPAQ, Heating square test

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### 1. Introduction

Modern lifestyles primarily eliminate physical activity as a fundamental stimulus of life (World Health Organization, 2006). It is estimated that physical inactivity in Europe is responsible for around 600,000 deaths per year. Two-thirds of adults in the European Union (people over 15) do not reach the recommended level of physical activity (WHO, 2005 - Regional Office for Europe, 2006). Data obtained in this way relates to socioeconomic situation, which is directly related to participation in physical activities in leisure time. People with low material status have less free time and less access to leisure environments, or live in an environment that does not encourage physical activity, so they themselves are less involved in it (Haymer, 2010). According to the The World Health Organization (WHO, 2020) report, the physical insufficiency has been declared an independent risk factor and represents the largest health problem of a nation. Hypogynesia (reduced movement, reduced physical activity) is a factor that contributes to the development of many chronic diseases and disorders, as well as leads to an increase in risk factors for cardiovascular and other chronic diseases, such as diabetes, obesity, hypertension, bone and joint diseases, etc. (Warburton, Gledhill, & Quinney, 2001; Alexopoulos, Fayfman, Zhao, et al. (2016). Diseases that arise due to this lifestyle and negative

environmental factors are dominant in modern health statistics. Active participation of individuals is crucial for reducing and preventing such a situation, so it is particularly important to provide information to the "ordinary" person on how and in what way they should live and maintain their health through physical exercise (Alamuddin, Bakizada). Wadden, 2016; Miller, J., Rosenbloom, A., & Silverstein, J. (2004). The threat to the health of sitting people is caused by a decline in the functioning of locomotor, cardiovascular, respiratory and other organs and organic systems of the body (Caballero, 2019). By engaging people in physical activity, the risk of developing cardiovascular disease, diabetes, high blood pressure, certain forms of cancer, musculoskeletal diseases and psychological disorders would be reduced. With food available and readily accessible (fast), most Western countries have experienced a worrying rise in obesity in recent years (WHO - Regional Office for Europe, 2006; Saris, et al., 2003). Obesity is not alone a matter of beauty, but it is accompanied by severe health disorders: significant increased risk of diabetes and cardiovascular disease. Nisur nga It is clear that physical activity is a key factor in maintaining or improving the human body's abilities, as well as in decreasing the consequences of functional and degenerative diseases Miller, Rosenbloom, & Silverstein, 2004; Jastreboff, Kotz, Kahan, Kelly, Heymsfield, 2019). Regular physical activity has many benefits for physical, mental and social health. According to the World Health Organization, physical activity, along with a healthy diet and non-smoking, is the main component in chronic disease prevention (World Health Organization). (1998). It is estimated that physical inactivity causes 1.9 million deaths worldwide each year (WHO, 2020), Physical Activity: Direct and Indirect Health Benefits). Almost a quarter of ischemic heart disease (22%) and 10-16% of breast and colon cancer cases, as well as diabetes, are caused by inactivity. The importance of physical activity for duration and quality of life, as shown by rich epidemiological data, encouraged the search for factors that influence physical activity (Đorđević, 2005). Identifying these factors can mainly contribute to designing more effective strategies for raising the level of physical activity in certain targeted groups (for example, women, children, adolescents, the poor, etc.).

## **2. Purpose of research**

The aim of the research was to prove the level of nutrients, respectively the ratio of overweight of students and the engagement in recreational physical activities of the students of the University of Prizren "Ukshin Hoti".

## **3. Material and method**

The study was conducted on a sample of 215 (114 males and 101 females). Students were randomly selected by several faculties within the University of Prizren "Ukshin Hoti". Respondents are treated in accordance with the Helsinki Declaration. The international physical activity questionnaire IPAQ is used for evaluation of physical activity. For evaluation of the state of nutrition, morphological parameters are applied: 1. Body height, 2. Body weight and 3. Body mass index. For the processing of results, descriptive analysis, nonparametric He square test techniques as well as regressive analysis are applied.

#### 4. Result

In table 1 are presented the parameters: number of students, minimum and maximum results, arithmetic average, standard deviation, asymmetry test (skewness), Curve of results (kurtosis). The results show that the values of (Skewness) of 4 variables are above the recommended value from -1 to +1 due to the large share of results. The curve indicator (Kurtosis) of the two variables values are above 3 (leptocurtic). The KV variation coefficient test shows that respondents to these variables present themselves as homogenous groups.

**Table1.** Basic statistical and distribution parameters

	N	Minimum	Maximum	Mean	Std. Dev	Skewness	Kurtosis	KV
AGEF	101	17	27	19.72	2.19	1.558	2.314	11.11
HIGHSF	101	150	175	163.82	4.54	-0.245	0.244	2.77
WEIGHTF	101	42	94	57.31	8.73	1.109	2.765	15.23
BMIF	101	15.62	33.3	21.3	2.74	1.132	3.63	12.86
AGEM	114	18	29	20.07	2.59	1.834	3.142	12.90
HEIGHTM	114	163	205	177.58	7.69	0.409	0.056	4.33
WEIGHTM	114	50	115	71.04	14.01	0.764	0.048	19.72
BMIF	114	16.51	33.21	22.41	3.46	0.723	-0.041	15.44

**Tabela 2.** P1 Over the last 7 days, how many days have you done excessive physical activity, such as for example heavy lifting, digging, aerobic exercise or fast driving bicycle

<b>P1M</b>			<b>P1F</b>		
	Students	%		Students	%
1 day a week	16	14		4	3.96
2 day a week	15	13.2		8	7.92
3 day e week	20	17.5		12	11.9
4 days a week	6	5.26		9	8.91
5 days a week	11	9.65		16	15.8
6 days a week	7	6.14		4	3.96
7 days a week	2	1.75		15	14.9
8 I have not done physical activity and the painful	37	32.5		33	32.7
Total	114	100		101	100
Intragroup difference	Chi-Square	58.6		Chi-Square	48.8
	Ddf	7		Ddf	7
	Asymp. Sig.	0		Asymp. Sig.	0
Difference between groups			Chi-Square=5.29; Df =1; Asymp. Sig.0.022		

**Table 3.** P2 On days when you have been doing extremely hard physical activity, how much time you have usually spent doing them?

<b>P2M</b>			<b>P2F</b>	
	Students	%	Students	%
5 minutes	5	4.39	2	1.98
10 Minute a day	20	17.5	2	1.98
15 Minute a day	14	12.3	8	7.92
20 Minute a day	22	19.3	4	3.96
30 Minute a day	18	15.8	6	5.94
40 minute e day	20	17.5	18	17.8
50 minute a days	8	7.02	9	8.91
60 minute a day	7	6.14	52	51.5

Total	114	100	101	100
	Chi-Square	22.3	Chi-Square	155
	Df	7	Df	7
	Asymp. Sig.	0	Asymp. Sig.	0
	Chi-Square = 58.60; 8Df =1; Asymp. Sig.0.000			

In table 2. The frequency of male and female students stated in the P1 question is presented. In this table, the figures that the largest number of students are the answers, I have not performed physical activity with 32.7%, and the same answer with 37%. Within groups as well as between groups there is a significant statistical difference  $p < 0.05$ .

In table three. The frequency of male and female students stated in the P2 question is presented. In this table, the largest number is the students with the answer, 60 minutes with 51.5%, and 20 minutes with 19.3%. Within groups as well as between groups there is a significant statistical difference  $p < 0.05$ .

In table 4. The frequency of male and female students stated in the P3 question is presented. In this table, the largest number of students is pergijien, 6 day to week with 22.8%, indrasa take me 3 days a week with 28.1%. Within groups and between groups there is a significant difference Statistician  $P < 0.05$ .

**Table 4.** P3 - Over the last 7 days, how many days have you performed moderate physical activity such Neither p.sh. carry light weight, regularly ride a bike or play tennis? Please don't Included in the CS.

<b>P3M</b>			<b>P3F</b>	
	Students	%	Students	%
1 day to week	18	15.8	3	2.97
2 days a week	24	21.1	12	11.9
3 day to week	32	28.1	10	9.9
4 days a week	15	13.2	20	19.8
5 days a week	11	9.65	15	14.9
6 days a week	9	7.89	23	22.8
7 day to week	5	4.39	18	17.8
Total	114	100	101	100
	Chi-Square	31.9	Chi-Square	19
	Df	6	Df	6
	Asymp. Sig.	0	Asymp. Sig.	0
	Chi-Square = 36.413; Df =1; Asymp. Sig.0.000			

Table 5 The frequency of male and female students stated in question P4 is presented. The table shows that the highest number of students are with the answer, 50 minutes per day with 46.5%, while in men with 20 minute responses per day with 21.1%. Within groups as well as between groups there is a significant statistical difference  $p < 0.05$ .

**Table 5.** P4 – On the day you have done moderate physical activity, how much time you usually spend performing these activities?

<b>P4M</b>			<b>P4F</b>	
	Students	%	Students	%
5 minute a day	7	6.14	1	0.99
10 minutes a day	14	12.3	3	2.97
15 minutes a day	10	8.77	4	3.96
20 minutes a day	24	21.1	2	1.98
25 minutes a day	9	7.89	6	5.94

30 minutes a day	14	12.3	9	8.91
40 minutes a day	14	12.3	29	28.7
50 minutes a day	22	19.3	47	46.5
Total	114	100	101	100
	Chi-Square	17.8	Chi-Square	152
	Df	7	Df	7
	Asymp. Sig.	0.01	Asymp. Sig.	0
	Chi-Square = 39.069; Df =1; Asymp. Sig.0.000			

In table 6 The frequency of male and female students stated in question P5 is shown. In this table, the highest number of students are the answers, 7 days a week with 44.6%, and in men with answers 7 days a week with 30.7%. Within groups as well as between groups there is a significant statistical difference  $p < 0.05$ .

Table 6. Q5 - Over the last 7 days, how many days have you walked for at least 10 minutes without interruption?

<b>P5M</b>			<b>P5F</b>	
	Students	%	Students	%
1 day a week	3	2.63	1	0.98
2 day a week	8	7.02	2	1.97
3 day a week	12	10.5	5	4.94
4 day a week	12	10.5	14	13.9
5 day a week	28	24.6	7	6.91
6 day a week	16	14	27	26.7
7 day a week	35	30.7	45	44.6
Total	114	100	101	100
	Chi-Square	47.2	Chi-Square	114
	Df	6	Df	6
	Asymp. Sig.	0	Asymp. Sig.	0
	Chi-Square = 10.202; Df =1; Asymp. Sig.0.001			

Table 7. The frequency of male and female students stated in question P6 is presented. The table shows that the highest number of students are with the answer, 40 minutes a day with 26.7%, while in men with 30 minute responses a day with 30.7%. Within groups as well as between groups there is a significant statistical difference  $p < 0.05$ .

Table 7. P6 – On the days when you've been walking longer, how much time you've usually spent walking?

<b>P6M</b>			<b>P6F</b>	
	Students	%	Students	%
5 minutes a day.	5	4.39	2	1.98
10 minutes a day.	15	13.2	5	4.95
15 minutes a day	9	7.89	11	10.9
20 minutes a day	23	20.2	12	11.9
25 minutes a day	20	17.5	21	20.8
30 minutes a day	23	20.2	19	18.8
40 minutes a day	8	7.02	27	26.7
50 minutes a day	3	2.63	4	3.96
nuk e di	8	7.02	0	0
Total	114	100	101	100
	Chi-Square	38.1	Chi-Square	44.8
	Df	8	Df	7

	Asymp. Sig.	0	Asymp. Sig.	0
	Chi-Square = 5.408; Df =1; Asymp. Sig.0.020			

**Table 8.** P7 - How long have you usually spent sitting during a working day?

<b>P7M</b>			<b>P7F</b>	
	Studentt	%	Studentet	%
30 minutes a day	19	16.7	1	0.99
1 hour per day	16	14	14	13.9
2 hour per day	17	14.9	10	9.9
3 hour per day	19	16.7	14	13.9
4 hour per day	17	14.9	8	7.92
5 hour per day	14	12.3	15	14.9
6 hour per day	10	8.77	39	38.6
7 hour per day	2	1.75	0	0
Total	114	100	101	100
	Chi-Square	16.2	Chi-Square	81.4
	Df	7	Df	7
	Asymp. Sig.	0	Asymp. Sig.	0
	Chi-Square = 26.817; Df =1; Asymp. Sig.0.000			

In table 8 The frequency of male and female students stated in question P6 is shown. In this table, the highest number of students are comprised of 6 hours a day with 38.6%, and in men with answers 3 hours a day with 16.7%. Within groups as well as between groups there is a significant statistical difference  $p < 0.05$ .

Regressive analysis in students has been noted the multiple connections and impact of student engagement on physical activities and body mass index (ABMI).

**Table 9.** Regressive analysis. The effect of physical activity on body mass index (BMI)

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	18.1	1.21		15	0
	P1	-0.16	0.11	-0.12	-1.48	0.14
	P2	0.18	0.22	0.11	0.83	0.41
	P3	0.13	0.14	0.08	0.95	0.35
	P4	0.26	0.12	0.18	2.1	<b>0.04</b>
	P5	-0.03	0.17	-0.01	-0.15	0.88
	P6	-0.22	0.22	-0.13	-0.99	0.32
	P7	0.92	0.14	0.53	6.69	<b>0</b>

a. Dependent Variable: BMI; R=.603; R Square=.364; F=8.650; Sig.= 0.0000

Linking the entire system of independent predicate variables (Survey Questionnaires): Physical activity during free time (during the day): P1, P2, P3, P4, P5, P6, P7, P8 and P9 has multiple correlation coefficients (multiplier) with body mass index value  $R = 0.603$  which explains the common variability between system and criterion variables of about 36% ( $R^2 = 0.364$ ). The F-test value is valued (62,843) because the multiple correlation is of such value that the reliability is valuable, in the concrete case of this paper is significant ( $Sig = 0.000$ ). Variables, respectively, P4 – On the day you have done moderate physical activity, how much time have you usually spent doing these activities? and P7 - Over the course of 7 days, how much time

have you usually spent sitting during a workday? they had significant statistical regression coefficients and have a greater impact on reducing body mass index (table 9).

Results from table 10 show that 19.8% of respondents (students) are underweight or underweight or malnormnivable compared to the respondents (students where 13.2% are underweight or malnormned). Overweight are 12.9% of respondents (students) and 17.5% of respondents (students).

**Table 10:** Classification of outcomes by adult body mass index (taken from: World Health Organization, & World Health Organization). (1998). Obesity: preventing and managing the global epidemic: reportof a WHO consultation. WHO technical reportseries, 894, 253)

BMI	Women		Men		Total	
	Frequency	%	Frequency	%	Frequency	%
Malnourishing 16,00–18,50	20	19.8	15	13.2	35	16.20%
Weight normal andbody18,50–24,99	68	67.3	79	69.3	147	68.40%
Overweight 25,00–29,99	10	9.9	16	14	26	12.10%
Obesity $\geq$ 30,00	3	2.97	4	3.51	7	3.30%
Total	101	100	114	100	215	100

## 5. Conclusion

The study shows that combining exercise and proper nutrition not only enables loss of fatty tissue, but also increases muscle mass a little. Depending on the type, intensity and frequency of exercise, as well as hormonal characteristics and human genetic predispositions, changes in weight gain occur. The aim of the research was to prove the level of nutrients, respectively the ratio of overweight of students and the engagement in physical activities of the students of the University of Prizren "Ukshin Hoti" The results obtained show that physical activity has had a positive impact that is characterized mainly by the reduction of the amount of subcutory adipide tissue, either through reducing the thickness of the skin or reducing the amount of fatty tissue affects the reduction or decrease of body mass index. The results also show that 68.4% of the student population have a normal body mass index of 18.50–24.99. It is the worrying fact that 16.20% of student populations have below normal values (18.5) of body mass index. The results show that only 15.4% of student populations are overweight. We can conclude that physical activity is among the most important factors in preventing body weight, which is the main cause of many different diseases.

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