



10.22282/ojrs.2017.15

## **EXAMINATION OF THE LEVEL OF PHYSICAL ACTIVITY IN TERMS OF SOME VARIABLES OF SPORTS SCIENCE FACULTY STUDENTS**

**<sup>1</sup>Akan BAYRAKDAR, <sup>1</sup>Merve KARAMAN, <sup>2</sup>Ergün ÇAKIR,  
<sup>1</sup>Metin YAMAN, <sup>1</sup>Erdal ZORBA**

Gazi University, Faculty of Sport Sciences, Ankara/Turkey

<sup>2</sup>Kafkas University, School of Sarıkamış physical education and sport, Kars/Turkey

### **ABSTRACT**

The study was conducted in order to examine levels of physical activity in terms of some variables of sports science faculty students. This study covered 50 female and 52 male, 102 student in total with a mean age of  $22.21 \pm 3.46$ , attending in faculty of sports science in university of Gazi. To the students who have attended the research study; height, body weight, body mass index, with the pedometer physical activity level measurements and questionnaire form of 10 questions generated by researchers have been applied. Physical activity level has been evaluated with the average of 1 week step numbers. SPSS 23.0 Statistical package was used for analyzing the data. Through the analysis of the data, percentage, frequency, T-test for independent samples, single factorial variance analysis (ANOVA), Tukey (HSD) test, and correlation analysis have been used. According to the findings of the research study; when BMI of

students of Faculty of Sports Sciences it can be seen that 86.3% of them have good fitness, 9.8% of them have over weight and 3.9% of them are in obesity level. When physical activity levels are reviewed majority of the students (47.1%) have sedentary lifestyle, following this on the second row (23.5%) of them are low active individuals and as the least (15.7%) are active and highly active individuals. As a consequence, while Faculty of Sports Sciences students have generally sedentary lifestyle they are at good fitness levels, as long as Daily usage periods of computer increases weekly stepm numbers decrease thus physical activity levels are influenced in a bad way, and as long as ages increase or sleeping periods decrease television watching periods decrease, and as long as computer usage period increase body mass index is influenced badly and the women step numbers are lower compared to men thus physical activity levels are lower

**Key Words:** Physical Activity, Body Mass Index, Sport, Student

## INTRODUCTION

Physical activity is defined as any bodily movement produced by skeletal muscles that results in energy expenditure(Caspersen et. al. 1985). All kinds of physical activity require energy expenditure(Zorba & Saygin 2009). Increased physical activity is associated with improvements in numerous health conditions, including coronary artery disease, hypertension, stroke, insulin sensitivity, osteoporosis, and depression(Alevizos et. al. 2005). Because of these extensive health benefits, the Department of Health and Human Services recommends “physical activity most days of the week for at least 30 minutes for adults.” Despite these recommendations and the well-documented evidence that physical activity is beneficial, more than half of all adults in the World do not get adequate physical activity and approximately one quarter do not get any leisure time physical activity(Bravata, et. al. 2007). The costs associated with physical inactivity are high(Tudor-Locke & Bassett, 2004). The most important reasons that increase the prevalence of chronic diseases and conditions such as obesity, cardiovascular diseases, hypertension, diabetes and osteoporosis include low level of knowledge about importance of physical activity, lack of awareness about importance of physical activity for health and adoption of a more sedentary way of life(Baltaci, 2008). Nevertheless, human body needs to move constantly by its innate nature(Zorba & Saygin, 2013). Previous work on inactivity have reported that the sedentary lifestyle plays an important role in the development of obesity, defined by the World Health Organization (WHO) as abnormal and excessive fat accumulation in the body(Peker et. al. 2000). The study was conducted in order to examine levels of physical activity in terms of some variables of sports science faculty students.

## METHOD

Subjects: This study covered 50 female and 52 male, 102 student in total with a mean age of  $22.21 \pm 3.46$ , attending in faculty of sports science in university of Gazi.

Height (cm) and Weight (kg) Measurements: Height was measured to the nearest 0.1 cm by using a stadiometer. Weight was measured to the nearest 0.1 kg on an electronic scale (Seca Corp, Birmingham, United Kingdom)

Measurement of Physical Activity Level: Physical activity levels were measured on 5 weekdays and 2 weekend day using Kenz Lifecorder pedometer. Pedometers were placed on the hip and they were checked against any problems by taking a few steps before the measurements (Saygin, 2012). They were made to wear these pedometers after getting up and

kept them until going to bed. Daily step standards graphics were developed for youth by Tudor-Locke et al. (2008).

**Table 1. Physical Activity Levels Classification**

Sedentary lifestyle	Low active	Somewhat active	Active	Very active
<5000	5000-7499	7500-9999	10000-12499	>12500

**BMI (Body Mass Index):** BMI was calculated as body mass in kilograms divided by height in meters squared ( $\text{kg}/\text{m}^2$ ). Body Composition was evaluated by using Body Mass Index criteria which were designed by Corbin et. al.(2000).

**Table 2. Body Mass Index Classification**

	Too low	Borderline	Good fitness	Overweight	Obesity	
<b>Male</b>	12 or less	13-16	17-25	26-30	30+	Body Mass Index
<b>Female</b>	12 or less	13-16	17-25	26-30	30+	( $\text{kg}/\text{m}^2$ )

**Statistical Analysis:** SPSS 23.0 Statistical package was used for analyzing the data. Through the analysis of the data, percentage, frequency, T-test for independent samples, single factorial variance analysis (ANOVA), Tukey (HSD) test, and correlation analysis have been used.

## Results

Body Mass Index (BMI) of the students of Faculty of Sports Students, findings belong to physical activity levels and according to weekly step numbers' comparison according to some variables and findings belonging to the relationships among are given on the below table.

**Table 3. Body Mass Index (BMI) and Physical Activity Levels**

N=102		f	%
<b>BMI</b>	Good Fitness	88	86.3
	Over Weight	10	9.8
	Obesity	4	3.9
<b>Physical Activity Level</b>	Sedantery Lifestyle	48	47.1
	Low Active	24	23.5
	Somewhat Active	14	13.7
	Active	7	6.9
	Highly Active	9	8.8

When BMI values of students of Faculty of Sports Sciences are assessed 86.3% of them are seen to have good fitness, 9.8% of them have over weight and 3.9% of them have obesity. When physical activity levels are reviewed majority of the students (47.1%) are seen to have sedantery lifestyle, and following this on the second row (23.5%) of them are seen to be low active individuals and in a least manner (15.7%) of them are seen to be active and highly active individuals (Table 3).

**Table 4. Relationship between Weekly Step Numbers and Some Variables**

		Weekly Step Numbers	BMI	Age	Daily Sleep Periods	Daily TV Watching Periods	Daily Computer Usage Periods
<b>Weekly Step Numbers</b>	Pearson Correlation	1					
	Sig. (2-tailed)						
<b>BMI</b>	N	102					
	Pearson Correlation	.002	1				
<b>Age</b>	Sig. (2-tailed)	.983					
	N	102	102				
<b>Daily Sleeping Period</b>	Pearson Correlation	.100	.011	1			
	Sig. (2-tailed)	.317	.916				
<b>Daily TV Watching Period</b>	N	102	102	102	102		
	Pearson Correlation	.086	-.043	-.075	1		
<b>Daily Computer Usage Period</b>	Sig. (2-tailed)	.392	.665	.451			
	N	102	102	102	102	102	
	Pearson Correlation	.016	-.012	-.200*	.233*	1	
	Sig. (2-tailed)	.817	.906	.044	.018		
	N	102	102	102	102	102	
	Pearson Correlation	-.348**	.224*	-.063	-.176	-.181	1
	Sig. (2-tailed)	.000	.023	.530	.077	.069	
	N	102	102	102	102	102	102

\*p<0.01 \*\* p<0.05

According to the Pearson Correlation Analysis done in order to reveal the relationship between Table 4 Faculty of Sports Sciences Students weekly step numbers and some variables, with the weekly step numbers BMI ( $r=0.002$ ), age ( $r=0.100$ ), Daily sleeping period ( $r=0.086$ ), daily television watching period ( $r=0.016$ ), among them while there is no relationship ( $p>0.01$ ), among daily computer usage period there is a negative sided weak relationship ( $r=-0.348$ ,  $p<0.05$ ). Also among daily television watching period and age there is a negative sided weak ( $r=-0.200$ ), among daily sleeping period there is a positive sided weak ( $r=0.233$ ) and among Daily computer usage period and BMI there is a positive sided weak ( $r=0.224$ ) relationship ( $p<0.01$ ).

**Table 5. Comparision of Weekly Step Numbers according to some variables**

Weekly Step Numbers		N	$\bar{x}$	sd	t	p
	Gender	Female	50	5506.38	2998.79	-1.86 .001*
		Male	52	7141.73	5446.60	
	Situation of Regular Sport Making	Yes	51	6854.41	4380.77	1.16 .248
		No	51	5825.77	4550.18	
	Reaching Way to school	Vehicle	83	6108.33	4377.80	-0.09 .276
		By Foot	19	7352.52	4866.41	
	Form of choice of Spare Times	Active Activities	61	6279.96	4754.65	-0.16 .869
		Passive Activities	41	6429.55	4076.76	
Excluding Meals State of consumtion of junk food	Yes	65	5763.62	4095.36	-1.74 .085	
	No	37	7352.81	4968.77		
	N	$\bar{x}$	sd	F	p	
Most significatn meal	Breakfast	30	6073.31	3184.88	0.36 .699	
	Supper	16	7200.70	5432.23		
	Dinner	56	6237.12	4806.00		
BMI	Good Fitness	88	6270.97	4208.65	0.87 .419	
	Over Weight	10	7733.64	6731.28		
	Obesity	4	4376.75	3544.41		

\* $p<0.05$

In order to test weekly step numbers of students of Faculty of Sports Sciences on Table 5 according to some variables executed when t test and ANOVA results are reviewed, according to the gender among the weekly step numbers of students there is no statistically significant difference ( $t=-1.86$ ,  $p<0.05$ ). Step numbers of female students weekly step numbers

( $5506.38 \pm 2998.79$ ) are lower than male students ( $7141.73 \pm 5446.60$ ). Excluding this weekly step numbers of students are differentiated according to the variables such as regular sport making status ( $t=1.16$ ), way to reach school ( $t=-0.09$ ), spare time evaluation form ( $t=-0.16$ ), junk food consumption excluding meals ( $t=-1.74$ ), most significant meal ( $F=0.36$ ) and BMI ( $F=0.87$ ) ( $p>0.05$ ).

## **Discussion and Result**

This research aims to reveal the relationship between Students of Faculty of Sports Sciences physical activity levels some variables and relationship in between. In direction of this purpose in the research independent variables are determined to be gender, regular sport making status, reaching to school form, spare time assessment form, excluding the meal junk food consumption status, body mass index, most significant meal and body mass index level, and independent variable is determined to be as weekly step numbers. According to this influences weekly step numbers of independent variables are tested. Also weekly step numbers of students of Faculty of Sports Sciences and body mass indexes, ages, Daily sleep periods, Daily television watching and computer usage periods relationships have been examined.

As a result of the executed analysis majority of the students Faculty of Sports Sciences are revealed to be body mass index are at good fitness level and while being examined physical activity levels are sedentary lifestyle. According to among weekly step numbers and variables executed correlation analysis body mass index, age, daily sleeping period, Among daily television watching and step numbers while there is no relationship, among Daily computer usage period and step numbers, among daily television watching period and age negative sided weak relationships is seen and also among together with Daily television watching period and sleeping period, among Daily computer usage period and body mass index positive sided relationship has been found. When analysis regarding the comparison of weekly step numbers according to variables are reviewed status of regular sport making, reaching to school form, form of evaluating spare times, excluding meal junk food consumption period, most significant meal, while according to body mass index step numbers are not getting differentiated, they vary according to gender. Haase and others (in year 2004 on a study that university students made; 21% of the North and West Europe of university students are

inactive, 49% of them have low-frequency activity and 30% of them have recommended frequency activity. On the Pacific Asia countries it has been detected that 34% of university students are inactive, 48% of them have low-frequency activity and with 18% they have recommended frequency activity (Haase and et. all. 2004). Findings of the executed research study have similarities with our study.

As a consequence, generally possess Faculty of Sports Sciences students sedentary lifestyle they are at good fitness level, while Daily computer usage periods increase weekly step numbers decrease thus physical activity levels are influenced in negative direction, while their ages increase or while sleeping times decrease television watching periods decrease, while computer usage period increase body mass index is negatively influenced and from the ones to be women step numbers are lower compared to step numbers of men thus it can be stated that physical activity levels are lower.

## References

- Alevizos A, Lentzas J, Kokkoris S, Mariolis A, Korantzopoulos P.(2005). Physical activity and stroke risk. *Int J Clin Pract.* 59(8):922-930
- Baltaci G 2008. Cocuk ve spor. Ankara: Klasmat.
- Bravata, D. M., Smith-Spangler, C., Sundaram, V., Gienger, A. L., Lin, N., Lewis, R., ... & Sirard, J. R. (2007). Using pedometers to increase physical activity and improve health: a systematic review. *Jama,* 298(19), 2296-2304.
- Caspersen C. J., Powell K. E., Christenson G. M. (1985). Physical activity, exercise and physical fitness: definitions and distinctions for health-related research. *Public Health Rep.* 100 126–131.
- Corbin, C. B., Lindsey, R., Welk, G., & Corbin, W. R. (2000). *Concepts of fitness and wellness: A comprehensive lifestyle approach.* Boston: McGraw-Hill.
- Haase, A., Steptoe, A., Sallis, J. F., & Wardle, J. (2004). Leisure-time physical activity in university students from 23 countries: associations with health beliefs, risk awareness, and national economic development. *Preventive medicine,* 39(1), 182-190.

Peker I, Ciloglu F, Buruk S, Bulca Z 2000. Egzersiz biyokimyasi ve obesite. Istanbul: Nobel Tip Kitabevleri Ltd.

Saygin O 2012. Cocuklarin fiziksel aktivite duzeyleri ve vucut kompozisyonlarinin belirlenmesi, M.U. Yayinlari Mugla.

Tudor-Locke CY, Hatano RP, Pangrazi M 2008. Revisiting “how many steps are enough?” Med Sci Sports Exerc, 40(7 Suppl): S537-S543.

Tudor-Locke C, Bassett DR Jr. How many steps/day are enough? preliminary pedometer indices for public health. *Sports Med.* 2004;34(1):1-8

Zorba E, Saygin O 2013. Fiziksel aktivite ve fiziksel uygunluk. Ankara: Firat Matbaacilik.

Zorba E., Saygin Ö.(2009)Fiziksel Aktivite ve Fiziksel Uygunluk, Bedray Yayınları, İstanbul, Ekim.