ARENA-JPA, ISSN 2285-830X
5, pp. 155-167, 2016

Habits in healthy nutrition, obesity, alcohol, smoking, among students of the Faculty of Physical Activity and Recreation

Robert Çitozi, Spartak Bozo, Elton Spahiu
Sports University of Tirana. Faculty of Physical Activity and Recreation

Corespondence: Robert Çitozi (e-mail: rcitozi@yahoo.com)

Abstract

Albania is a country of Eastern Europe with a relatively young and predominantly rural population. After the end of the communist regime in 1991, Albania experienced a difficult economic transition and suffered two economic shocks due to the financial collapse of the so-called "pyramid schemes" in 1997 and to the Kosovo crisis in 1999. Since the 1990s, the supply of many food groups has increased, particularly for dairy products and eggs, and fruit and vegetables. Consequently the diet has become more diversified, especially in urban areas. Presently, at national level, the dietary energy supply is largely sufficient to meet the population's energy requirements. As a consequence, the dietary habits of young adults have been affected; thus, overweight and obesity are increasingly being observed among the young. The purpose of this study is to assess the prevalence of overweight and obesity on a sample of students from the Sports University of Tirana and to examine their eating habits. **Methods.** A cross-sectional survey of 150 students (63.3% male and 36.6% female), aged 18.69 years, were chosen randomly from the Sports University of Tirana (SUT) during October 2016. Students were asked to fill out a self-reported questionnaire that included questions

on their eating, drinking and smoking habits. Also, their weight, height, and body mass index were measured. Body mass index (BMI) was used to assess students' weight status. **Results.** This study showed that the majority of the students (75.52 %) were of normal weight (69.36 % male students compared to 81.16 % female students). The prevalence of overweight and obesity was not common among male students compared to females (24.98 % and 11.96 % vs. 3.86 % and 1.98 %, respectively). In contrast, 4.9% female students were underweight as compared to 1.8% males. Eating habits of the students showed that the majority (70%) reported taking meals regularly. Healthier eating habits of female compared to male students in terms of daily breakfast intake are the same. 38.23% of female students reported eating breakfast daily compared to 45.65% of male students. Intake of colored vegetables and fruits was common among students. A total of 32.5% reported daily intake of colored vegetables with a small gender differences (32.35% females vs. 32.6% males). Alcohol intake to male students in terms of 2or 3 times per week was 2.17% and rarely 56.52%, while to females students was 2.94% and rarely 35.29%. Males at least 1 packet is 23.91% and rarely 15.21% , females at least 1 packet is 11.76% and rarely 5.88%. 70% of our students are never smoker. **Conclusion.** In spite of the overall low prevalence of overweight and obesity in the studied sample, results indicate that university of sport students would possibly benefit from a nutrition and health promotion program to reduce the tendency of overweight and obesity, especially among male students, and to improve students' eating habits.

Keywords: healthy food, BMI, eating habits, gender differences.

Background

After the liberalization of the economy in the early 1990s, the daily supply of many food groups (fruit and vegetables, meat and offal, milk and eggs) increased. The supply is still characterized by the high share of cereals. However, their supply is reduced, giving way to an increase of other food groups, particularly dairy products, fruit and vegetables and meat. The daily supply of starchy roots, fruit and vegetables, milk, eggs and meat are more than doubled compared with the 1986/88 period. The increase suggests that diversity of the diet is improving for a major part of the population. On the contrary, cereal consumption was reduced about by one-third during the same period. This was caused by trade liberalization, shifting of the food supply from the traditional domestic production to imported products, together with life style changes.[8]

Dietary habits of young adults are affected by the fast-food market. As a consequence, overweight and obesity are increasingly observed among the young. Obesity in combination with unhealthy life style, such as smoking, alcohol and physical inactivity, may increase the risk of chronic diseases. In this regard, nutritional knowledge may act as a deterrent against fast-food trend. Thus, sport universities may contribute significantly in reducing the prevalence of obesity among the young population through the promotion of healthy eating habits. The purpose of this study was to assess the prevalence of overweight and obesity in a sample of students from the Sports University of Tirana and examine their eating habits. Assessing students' weight status and eating habits will help health educators to develop proper nutrition-related education programs that promote healthy food choices and good eating habits.

Methods

Design and sample

The study design was a cross-sectional survey conducted at the Sports University of Tirana (SUT) during October 2016. A sample of 150 students (63.3% male and 36.6% female), aged 18.69 years participated in this study. Students were recruited randomly by a trained student accompanied by an (SUT) professor. The response

rate among students was high. Students who agreed to participate in this study were asked to sign a consent form according to Helsinki declaration, (Ethical Principles for Medical Research Involving Human Subjects).

Data Collection

Data collection took place in two steps. The first step was to fill out the questionnaire and the second step was to perform the anthropometric measurements. Recruited students were asked to fill out a questionnaire related to their eating, drinking and smoking habits. The questionnaire was adopted from a previously published study where authors have standardized its use among university students [2]. Prior to questionnaire administration, students were informed by an (SUT) professor about the study. They were given instructions on how to fill out the questionnaire completely and truthfully. After filling out the questionnaire, anthropometric measurements, such as weight and height, and body mass index, were done. As fluctuations in body hydration status may affect body composition results, measurements were taken in the morning (at least three hours after waking up) when students were on an empty bladder, not having exercise, food or drink for at least three hours before having the measurements. Height measurements were taken with a secured metal ruler. Students were asked to take off their shoes for height measurements. Body mass index (BMI) was used to assess students' weight status. According to guidelines stated by the National Institutes of Health, weight status was classified into four categories:

1-Underweight (BMI $\leq$ 18.5)
2- Normal weight (BMI between 18.5 – 24.9)
3- Overweight (BMI between 25–29.9)
4-Obese (BMI $\geq$ 30) [3].

Results

Characteristics of the students' sample and BMI values

Characteristics of the participated students are presented in Table 1. A total of 150 students (95 males and 55 females), with a mean age of 18.69 years, participated in this study. The average

weight and height of the participated students were 64.33 kg and 1.705 cm, respectively. Mean BMI was 22.97.

Table 1. Characteristics of the participants.

Variable	Total	Males	Females
Number of Students	N=150	N = 95	N = 55
Age (years)	18.69	18.99	18.38
Weight (kg)	64.33	71.85	56.82
Height (cm)	1.705	1.78	1.63
BMI	22.97	24.58	21.36

Students' weight status based on BMI categories

The majority of the students (75.26 %) were of normal weight (69.36 % male students compared to 81.16 % female students). The prevalence of overweight and obesity was not common among male students compared to females (24.98 % and 15.14 % vs. 3.86 % and 2.92 %, respectively). In contrast, 3.35 % female students were underweight as compared to 1.8 % males.

Table 2. Prevalence of obesity among students based on BMI by gender

	Males		Females		Total	
Weight Status	*N*=	*Per-centage*	*N*=	*Per-cent-age*	*N*=	*Per-cent-age*
*Underweight**	1.7	1.8	2.69	4.9	2.19	3.35
*Normal***	65.9	69.36	44.63	81.16	55.26	75.26
*Overweight****	23.7	24.98	6.58	11.96	15.14	18.47
*Obese*****	2	3.86	1.08	1.98	1.54	2.92

*Underweight (BMI ≤ 18.5), ** Normal (BMI between 18.5 – 24.9), *** Overweight (BMI between 25–29.9), **** Obese (BMI ≥ 30).

Eating habits of the students showed that the majority (60.37%) reported taking meals regularly. Healthier eating habits of female compared to male students in terms of daily breakfast intake are not the same. 21.83% of female students reported eating breakfast daily compared to 40% of male students. Intake of colored vegetables and fruits was common among students. A total of 35.51% reported daily intake of vegetables with a big gender differences (43.64% females vs. 27.37% males). Alcohol intake to male students in terms of 2 or 3 times per week was 26.32% and rarely 18.95%, while to females students was 7.27% and rarely 25.45%. Males at least 1 packet daily smoking is 16.84% and rarely 38.95% , females at least 1 packet is 3.64% and rarely 23.64%. 57.47% of our students are never smoker.

Table 3. Question 1. Do you take your males regulary ?

Questions	Levels	*Total* N=150	MALES N=95	MALES %	FEMALES N=55	FEMALES %	*TOTAL* %
1-Do you take your meals regularly?	**Always**	**35**	**25**	**26.31**	**10**	**18.1**	**22.2**
	Regular	90	56	58.94	34	61.8	60.37
	Irregular	**25**	**14**	**14.73**	**11**	**20.1**	**17.41**

Table 4. *Question 2. Do you take breakfast ?*

Questions	Levels	*Total* N=150	MALES N=95	MALES %	FEMALES N=55	FEMALES %	*TOTAL* %
2-Do you take breakfast?	**Daily**	**50**	**38**	**40**	**12**	**21.83**	**30.91**
	Three or four times per week	40	24	25.26	16	29.09	27.18
	Once or twice per week	**38**	**21**	**22.10**	**17**	**30.90**	**26.5**
	Rarely	22	12	12.63	10	18.18	15.41

Table 5. Question 3. How many times do you eat meals except snacks?

Questions	Levels	*Total* N=150	MALES N=95	MALES %	FEMALES N=55	FEMALES %	*TOTAL* %
3-How many times do you eat meals except snacks?	**One time**	**22**	**13**	**13.68**	**9**	**16.36**	**15.02**
	Two times	51	34	35.79	17	30.90	33.35
	Three times	**48**	**29**	**30.53**	**19**	**34.55**	**32.54**
	Four times	29	19	20	10	18.18	19.09

Table 6. Question 4. How often do you take snacks apart from regular meals?

Questions	Levels	*Total* N=150	MALES N=95	MALES %	FEMALES N=55	FEMALES %	*TOTAL* %
4-How often do you take snacks apart from regular meals?	**Daily**	**28**	**18**	**18.95**	**10**	**18.18**	**18.57**
	Three or four times per week	57	39	41.05	18	32.72	36.86
	Once or twice per week	**41**	**25**	**26.31**	**16**	**29.09**	**27.7**
	Rarely	24	13	13.68	11	20	16.84

Table 7. Question 5. How often do you eat vegetables?

Questions	Levels	*Total* N=150	MALES N=95	MALES %	FEMALES N=55	FEMALES %	*TOTAL* %
5-How often do you eat vegetables?	**Daily**	**50**	**26**	**27.37**	**24**	**43.64**	**35.51**
	Three or four times per week	54	38	40	16	29.09	34.55
	Once or twice per week	**36**	**27**	**28.42**	**9**	**16.36**	**22.39**
	Rarely	10	4	4.21	6	10.90	7.56

Table 8. Question 6. How often do you eat fruits?

Questions	Levels	*Total* N=150	MALES N=95	MALES %	FEMALES N=55	FEMALES %	*TOTAL* %
7-How often do you eat fried food?	**Daily**	**53**	**41**	**43.16**	**12**	**21.82**	**32.49**
	Three or four times per week	41	26	27.37	15	27.27	27.32
	Once or twice per week	**33**	**14**	**14.74**	**19**	**34.55**	**24.65**
	Rarely	23	14	14.74	9	16.36	15.55

Table 9. Question 7. How often do you fried food?

Questions	Levels	*Total* N=150	MALES N=95	MALES %	FEMALES N=55	FEMALES %	*TOTAL* %
6-How often do you eat fruits?	**Daily**	**60**	**38**	**40**	**22**	**40**	**40**
	Three or four times per week	48	29	30.53	19	34.55	32.54
	Once or twice per week	**26**	**16**	**16.84**	**10**	**18.18**	**17.51**
	Rarely	16	12	12.63	4	7.27	9.95

Table 10. Question 8. How often do you eat with friends and family?

Questions	Levels	*Total* N=150	MALES N=95	MALES %	FEMALES N=55	FEMALES %	*TOTAL* %
8-How often do you eat with friends and family?	**Daily**	**40**	**24**	**25.26**	**16**	**29.09**	**27.18**
	Three or four times per week	39	22	23.16	17	30.90	27.03
	Once or twice per week	**59**	**39**	**41.05**	**20**	**36.36**	**38.71**
	Rarely	12	10	10.53	2	3.64	7.09

Table 11. Question 9. What type of food do you think you should eat to have a balanced nutrition?

Questions	Levels	*Total* N=150	MALES N=95	MALES %	FEMALES N=55	FEMALES %	*TOTAL* %
9-What type of food do you think you should eat to have a balanced nutrition?	**Mainly meat**	**39**	**31**	**32.63**	**8**	**14.55**	**23.59**
	Mainly vegetables	34	15	15.79	19	34.55	25.17
	Meat, vegetables and other variety of foods	**56**	34	**35.79**	**22**	**40**	**37.89**
	Fast-Food	21	15	15.79	6	10.90	13.35

Table 12. Question 10. How often do you drink alcohol?

Questions	Levels	*Total* N=150	MALES N=95	MALES %	FEMALES N=55	FEMALES %	*TOTAL* %
10-How often do you drink alcohol?	**Two or three times per week**	**29**	**25**	**26.32**	**4**	**7.27**	**16.79**
	Never	89	52	54.73	37	67.27	61
	Rarely	**32**	**18**	**18.95**	**14**	**25.45**	**22.2**

Table 13. Question 11. Please state your smoking history?

Questions	Levels	*Total* N=150	MALES N=95	MALES %	FEMALES N=55	FEMALES %	*TOTAL* %
11-Please state your smoking history	**At least 1 packet**	**18**	**16**	**16.84**	**2**	**3.64**	**10.24**
	Rarely	50	37	38.95	13	23.64	31.29
	Never smoke	**82**	42	**42.21**	**40**	**72.73**	**57.47**

Discussion

The purpose of this study was to assess the prevalence of overweight and obesity and examine eating habits in a sample of Sport University of Tirana students. Body mass index was used to assess weight status. Based on BMI classification of weight status, findings of this study indicate that the majority of students were of normal weight. Normal weight was more prevalent among females (81.16%) as compared to males (69.36%), whereas, overweight and obesity were more common among male than female students. Prevalence of overweight was 24.98% in males as compared to 11.96% in females. Obesity was no problem for both genders. A total of 3.86% of the males were obese compared to 1.98% of the females. The lower rate of obesity among female students is expected since females are more cautious about their weight status than males, due to society perceptions which encourage females to be slender. This assumption was supported by the fact that only 1.8% of males were underweight as compared to 2.19% of females in this studied sample. Obviously, pictures of movie stars and models in fashion magazines and mass media have a strong impact on girls' body shape and image perception [4]. University Sport girls see the shape and weight of fashion models as the ideal body shape and figure to attain. Girls with such strong body weight perception can be at risk of developing eating disorders [5]. Similar findings of prevalence of obesity among male university students were reported in recent studies [6,7 In this study, data analyses of students' eating habits revealed that the majority of students eat meals irregu-

larly and eat breakfast daily (30.91%), or rarely (15.41%). 60.37% of the students eat meals regulars. As expected, intake of vegetables and fruits was also common among students. Alcohol intake and smoking were common among students. The majority of students believe that eating meat, vegetables and other foods will provide them with a balanced diet. 35.79% male students and 40% female students in this study agreed that it is important to eat a variety of foods to have a balanced and nutritious diet. Daily intake of snacks was reported by the majority of students (18.57%). The unhealthy eating habit of students was noticed in the intake of fried food (majority 59.81% were reported eating fried food daily or three or four times per week), because 55.7% of them are living not with their parents but with friends. Frequent snacking and eating fried food can adversely affect students' health status, given the abundance of energy dense and high fat ingredients they contain. Improving students' knowledge about nutrition and healthy eating habits may promote healthy body weight management among students and reduce the prevalence of overweight and obesity. Therefore, developing nutrition education programs that promote healthy eating habits for university students should be encouraged. Alcohol intake and smoking were common in our sample of sport students.

Limitations

The findings of this study are limited by the use of a sample of students from just one university which may not be a representative of all university students in Albania. Furthermore, students attending the Sport University of Tirana are usually of middle socio-economic standards; therefore, samples from different universities in different cities may provide a more inclusive picture of university students taking into consideration of socio-economic status. However, baseline information about weight status and eating habits among a sample of university of sport students was certainly obtained from the present study.

Conclusion

Despite the low prevalence of overweight and obesity in the studied university students' sample, results indicate that university students would benefit from a nutrition and health promotion program to reduce the tendency of overweight and obesity among students, particularly males, and to improve students' eating habits.

Acknowledgements

A special note of appreciation goes to all our students of Faculty of Physical Activity and Recreation.(SUT).

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