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Investigation of Nutrition Habits and Body Mass Indexes of Coach and Sport Manager Candidates by Some Parameters

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ABSTRACT This paper aims at investigating nutrition habits and body mass indexes of Coach and Sport Manager Candidates. The sample of the research comprises of 69 females and 77 males in their freshman and senior years at the School of Physical Education and Sport of Istanbul University by some parameters. T-test, correlation and one-way ANOVA (variance) analyses were used to evaluate the data with p-value of 0.05. Nutrition Habits Index (NHI) was found 10.15± 3.73 and Body Mass Index (BMI) was found 22.09±2.76. As age increases, BMI increases as well. BMI mean values of males are significantly higher than females are ($p<0.05$). The BMI mean values are significantly higher than those of freshman students are ($p<0.05$). Therefore, it is inferred that although the students are trained for having regular physical exercise and nutrition habits, the level of education received is not sufficient for them to exhibit healthy nutrition behaviors.

INTRODUCTION

Nutrition is an important part of our life for healthy living, in addition to allowing for optimal growth and development. Macronutrients, micronutrients and fluids in the proper amounts are essential to provide energy for growth and activity (Purcell 2013). Proper nutrition and regular physical exercise are very important for a healthy life. In the recent years, the trend towards having healthier diets as well as doing regular physical exercise have increased the food-conscious attitudes too. Nutrition can be defined as the ability to meet the energy need of the body for vital activities, to protect health, ensure physical growing and development; to adopt training and maximize the effects of trainings, balanced consumption of carbohydrates, fats, proteins, vitamins, minerals and water being fundamental nutrition elements (Zorba 1999). Energy intake suitable with the exercise, balance of energy in distribution of nutrition elements, carbohydrate consumption, nutrition choice before and after exercise, sufficient liquid intake are the factors which affect the performance in terms of nutrition. However, studies show that athletes in many countries follow an insufficient and unbalanced nutrition program, which is contrary to the recommendations of nutritionists (Bozkurt and Nizamlioglu 2006; Paker 1990).

It is significant to adopt a healthy lifestyle including proper nutrition and regular physical exercise, beginning from the childhood period. Regular physical exercise improves muscle power, flexibility and endurance. It ensures cardiovascular harmony; prevents obesity and bone disorders to occur in advanced ages (Congar and Ozdemir 2004; Baysal 2002; Gunes 1998). A person who engages in sports, especially in growing and developing period should pay greater attention to nutrition for a healthy physical development (Congar and Ozdemir 2004; Kocoglu 1998). It is also very important for the students of the School of Physical Education and Sports who maintain their active sport life along with university education to nourish their bodies in a balanced and regular way without skipping a meal according to their own body requirements in terms of healthy life and their achievements in education and sports life (Sarioglu et al. 2012; Acik et al. 2003; Baysal 2002).

Nutrition is crucial for post-training recovery as well as post-competition period of the athletes. The athletes need to eat a balance diet, which contains fruits, vegetables and fibers. If the diet is poor, then there may be deficiencies, but the answer, even for the busiest professional athlete, should be to eat a proper diet (Kalpakcioglu 2008). A good nutrition plan for a young athlete is a well-balanced and nutrient-dense diet. This plan will provide adequate amounts of most nutrients (Sekhon 1996). For a regular nutrition, proportional and sufficient amounts should be taken from nutrition groups. Working order of the metabolism should be broken by taking few from one group and taking a lot from another

nutrition group (Sarioglu et al. 2012; Eisenman et al. 1990).

It is accepted that economically dependent students do not nourish their bodies sufficiently and regularly unless they have a family environment, they mostly nourish irregularly by skipping meals (Orak et al. 2006; Koksal and Ozturk 1993). Nutrition is a huge problem, especially for students who live in dormitory. One of the important factors affecting the nutrition of young people is the lack of nutrition knowledge. The lack of nutrition knowledge and severe economic conditions may lead young people to have insufficient nutrition (Vancelik et al. 2007; Aytekin and Bulduk 2000; Yagmur 1995).

The future of a country is dependent on younger generations who are equipped with knowledge, productive, in short qualified to be trained. It is a truth that such a quality can be supplied only through education (Yildiz 2007). Being considered as one of the important units of the Physical Education and Sports education, nutrition is an important issue to be focused on, as it not only affects general health but also performance of the athletes (Paker 1995). It is therefore, one of the vital contents available for learning in the curriculum of the School of Physical Education and Sports at Istanbul University. Students who went through this education upon graduation can pick up positions such as teacher, coach and sport manager. Within the scope of such positions, their knowledge on nutrition will bring significant contributions to national sport development. Actually, it is anticipated that they will be role models by influencing their students, athletes etc. with their healthy lifestyle habits in their professional lives. Accordingly, such a relationship can be observed in a doctor-patient relationship as well. Health professionals, especially doctors, have an important role to play in tobacco control. "Doctors are expected to serve as nonsmoking role models in the society; educate the public about the dangers of smoking; counsel and assist patients to quit smoking; and support governments in implementing anti-tobacco policies" (Dania et al. 2015). Nevertheless, quite a number of doctors still smoke and thus do not offer smoking cessations advice to patients (Okeke et al. 2004; Kawakami 1997; Dania et al. 2015). Nevertheless, it is not the same thing for a doctor to influence his/her patient and for a sports manager or coach to influence his/her athlete, because the latter has a permanent interaction with his/her athlete whereas the former has not. Therefore, one becomes a role model and the other does not. That is why; coaches are advised to model appropriate and desirable personal and prosocial behaviors that are of benefit to young athletes, keeping in mind the impact of their example on developmental outcomes for athletes (Vella et al. 2013).

As being the prospective role models of their athletes, it is expected that the School of Physical Education and Sports students/student-athletes adopt a healthy lifestyle including proper nutrition and regular physical exercise, because they are trained so. To this end, this research was planned to determine the effects of related courses and lectures in the School of Physical Education and Sports of Istanbul University on nutrition habits of students.

MATERIAL AND METHODS

In this part, the model of the survey, universality and sampling, data sources as well as how this data was collected and processed, and statistical techniques used in this survey are going to be given.

Survey Pattern

This research is done with survey model to investigate the nutrition habits and body mass indexes of the students in their freshman and senior years at the School of Physical Education and Sports of Istanbul University by some parameters such as age, sex, using alcohol, smoking, doing physical exercise as well as skipping meal.

Universality and Sampling

The population of this descriptive research consists of total of 146 students who are the students of Coaching and Sport Management Departments in their freshman and senior years at the School of Physical Education and Sports of Istanbul University. The data were collected between March-April 2014. In this paper, the researcher aimed at reaching the whole population of students without any sampling selection method.

Data Collecting Tools

The data was collected through a survey form created by the literature review (Yilmaz and Ozkan 2007; Sozen et al. 2009; Vancelik et al. 2007;

Demirezen and Cosansu 2005; Yurtseven et al. 2012).

Collecting the Data

A total of 160 student were intended to be reached, whereas 146 students were reached due to various reasons such as refusing to participate in the research, being absent at school during research dates, being on sick leave etc. (participation rate: 81.1%). Before the data was collected, the objectives of the study have been explained to the students by having face-to-face communication by the researcher.

The Analysis of the Data

t-test, correlation and one-way ANOVA (variance) analyses were used as a statistical analysis to evaluate the data with p-value of 0.05 method to assess with 0.05 significance degree.

RESULTS

Of 146 students in the research, 69 were female (47.26%), 77 were male (52.73%) and 80 were students in their freshman years (54.79%), 66 were in their senior years (45.20%).

According to the mean values of participant students, the mean age is 22.21±3.60, the mean BMI is 10.15± 3.73 and the mean NHI is 22.09±2.76 (Table 1). A significant relationship was found between Age and BMI values of the students participating in the research ($p<0.001$) (Table 2). According to the nutrition habits risk score means by sex, no significant difference was found between females' 9.91±3.66 score and males' 10.36±3.80 score ($p>0.05$). According to the BMI, females have 20.46±1.99 and males have 23.54±2.55 which indicates a significant difference ($p<0.05$). According to nutrition, habits risk score means by grades, the difference was not found to be significant between freshman students' 10.25±3.99 score and senior students' 10.03±3.41 score (Table 3). According to BMI, freshman students have 21.42±2.24 and senior students have 22.91±3.11 which indicates a significant difference ($p<0.05$). According to nutrition habits risk score means by habits, no significant difference was found between NHI scores of alcohol users being 10.30±3.88 and non-alcohol-users being 10.08±3.67 ($p>0.05$). No significant difference was found between NHI scores of smokers being 11.41±3.86 and non-smokers being 9.86±3.65 ($p> 0.05$) (Table 4). No significant difference was found between NHI scores of those doing regular physical exercise being 9.87±3.72 and those who are not doing regular physical exercise being 10.97±3.68 ($p> 0.05$).

Table 1: Age, BMI and NHI means

	N	*Mean*	*Std. deviation*
AGE	146	22.219	3.604
BMI		10.151	3.731
NHI		22.090	2.768

Table 2: Correlation values between age, BMI and NHI

	Age	*BAI*	*NHI_1*	*BMI*
Age	Pearson Correlation	1	.043	.302**
	Sig. (2-tailed)		.609	.000
	N	146	146	146
NHI	Pearson Correlation	.043	1	-.026
	Sig. (2-tailed)	.609		.760
	N	146	146	146
BMI	Pearson Correlation	.302**	-.026	1
	Sig. (2-tailed)	..000	.760	
	N	146	146	146

**. Correlation is significant at the 0.01 level (2-tailed).

Table 3: Assessment of NHI and BMI scores by sex and grade

		N	*Mean*	*Std. deviation*	*t*	*P*	*Result*
	Sex						
NHI	Male	77	10.364	3.801	.727	.468	Similar
	Female	69	9.913	3.665			
BMI	Male	77	23.542	2.558	8.028	.000	Different
	Female	69	20.469	1.993			
	Grade						
NHI	Freshman	80	10.250	3.992	.353	.725	Similar
	Senior	66	10.030	3.415			
BMI	Freshman	80	21.412	2.245	-3.369	.001	Different
	Senior	66	22.911	3.118			

Table 4: Assessment of NHI scores by alcohol, smoking and regular physical exercise habits

	By Habits	*N*	*Mean*	*Std. deviation*	*t*	*P*	*Result*
NHI	Alcohol-user	46	10.304	3.887	.336	.737	Similar
	Non alcohol-user	100	10.080	3.675			
NHI	Smoker	24	11.417	3.866	1.889	.061	Similar
	Non- smoker	121	9.860	3.655			
NHI	Doing regular Physical exercise	109	9.872	3.722	-1.559	.121	Similar
	Not doing regular Physical exercise	37	10.973	3.686			

It was observed that 50 percent of the participants skip breakfast, 32.2 percent skip lunch, 7.5 percent skip dinner and 8.2 percent do not skip any meal (Table 5). The participant students of this research explained their reason to skip meals as follow: 54.4 percent due to lack of time; 17.2 percent due to loss of appetite; 14.9 percent due to not being able to get up (Table 6). According to nutrition habits risk score means by skipping meal, significant difference was found between NHI scores of those skipping meals being 10.48±3.57 and those who are not skipping being 8.45±4.12 ($p< 0.05$). According to BMI, no significant difference was found in BMI scores of those

Table 5: Distribution of skipped meals

	Frequency	*Percent*	*Valid percent*	*Cumulative*	*Percent*
Valid	Breakfast	73	50.0	54.5	54.5
	Lunch	50	34.2	37.3	91.8
	Dinner	11	7.5	8.2	100.0
	Total	134	91.8	100.0	
Missing	System	12	8.2		
	Total	146	100.0		

Table 6: Distribution of reasons of skipping meals

	Frequency	*Percent*	*Valid percent*	*Cumulative*	*Percent*
Valid	Not being able to get up	20	13.7	14.9	14.9
	Lack of time	73	50.0	54.5	69.4
	Being late to work	4	2.7	3.0	72.4
	No one is preparing	11	7.5	8.2	80.6
	Loss of appetite	23	15.8	17.2	97.8
	Other	3	2.1	2.2	100.0
	Total	134	91.8	100.0	
Missing	System	12	8.2		
	Total	146	100.0		

Table 7: Assessment of BMI and NHI scores by skipping meal

	Skipping meal	*N*	*Mean*	*Std. deviation*	*t*	*P*	*Result*
NHI	Skipping	122	10.484	3.573	2.473	.015	Different
	Not-skipping	24	8.458	4.128			
BMI	Skipping	122	22.022	2.899	-.670	.504	Similar
	Not-skipping	24	22.437	1.989			

Table 8: NHI and BMI scores by skipped meal

		N	*Mean*	*Std. deviation*	*t*	*P*	*Result*
	Breakfast	73	10.575	3.543	5.173	.007	Different
	Lunch	50	9.200	3.289			
	Dinner	11	12.636	3.931			
	Total	134	10.231	3.590			
BMI	Breakfast	73	22.336	2.700	1.119	.330	Similar
	Lunch	50	21.697	3.221			
	Dinner	11	21.301	1.736			
	Total	134	22.013	2.851			

skipping meal being 22.02±2.89 and those who are not skipping being 22.43±1.98 ($p > 0.05$) (Table 7). According to nutrition habits risk score means by skipped meal, significant difference was found between BMI scores of those skipping breakfast being 10.57±3.54; those not skipping lunch being 9.20±3.28 and those not skipping dinner being 12.63±3.93 ($p < 0.05$). According to BMI, no significant difference was found in BMI scores by skipped meal ($p > 0.05$) (Table 8).

It is shown that a significant difference was found in NHI scores of those who do not have breakfast and those who do not have lunch ($p<0.05$). In addition, significant difference was found between those who do not have lunch and those who do not have either breakfast or dinner ($p<0.05$). No difference was found in BMI ($p>0.05$) (Table 9). According to the nutrition habits risk score means by nutrition habits, no significant difference was found between NHI scores of those who have breakfast and those who do not have breakfast ($p > 0.05$). The difference between those having and those not having lunch, dinner and snacks. Significant difference was found in nutrition habits risk score means of those who have fast food and those who do not have ($p < 0.05$). According to BMI, no significant difference was found in BMI scores by nutrition habits ($p > 0.05$) (Table 10).

Accordingly, the most frequently used food is white bread with 53.3 percent and the less frequently consumed one is fish with 2.7 percent. 18.7 percent of students do not use margarine while 18 percent of them use olive oil (Table 11). Every day, it was found that 49.3 percent consume cheese, 36 percent consume fresh fruits, 32.7 percent consume sugar, 30.7 percent consume egg, 26.7 percent consume yoghurt, 9.3 percent consume red meat/turkey/chicken.

DISCUSSION

In the present study, the mean age of the participant students is 22.21±3.60; the mean BMI is 10.15± 3.73 and the mean NHI is 22.09±2.76 kg/m^2**.** Physical education students are in the moderate risk group by NHI and normal by BMI. In a research conducted by Demirezen and Cosansu (2005), all groups except for one student was found risky at various degrees in terms nutrition habits. In the present paper, 45.2 percent of the students participated to the research had a compulsory nutrition course, but still are in mod-

Table 9: Multiple comparisons

			LSD			
Dependent variable	*(I) 1: Breakfast 2: Lunch 3: Dinner*	*(J) 1: Breakfast, 2: Lunch, 3: Dinner*	*Mean difference (I-J)*	*Std. error*	*Sig.*	*Result*
BAI	1	2	1.37534*	.63922	.033	Different
		3	-2.06102	1.12622	.070	Similar
	2	1	-1.37534*	.63922	.033	Different
		3	-3.43636*	1.15965	.004	Different
BKI	1	2	.63844	.52297	.224	Similar
		3	1.03481	.92142	.263	Similar
	2	1	-.63844	.52297	.224	Similar
		3	.39637	.94876	.677	Similar

*. The mean difference is significant at the 0.05 level.

Table 10: Assessment of NHI scores by students' nutrition habits

Time	*Yes*		*No*		*t*	*P*	*Statistical result*
	N	*NHI*	*N*	*NHI*			
Having breakfast every day	76	9.82±3.89	69	10.52±3.56	-1.114	.267	Similar
Having lunch every day	93	10.32±3.94	52	9.86±3.36	.704	.482	Similar
Having dinner every day	131	10.07±3.81	14	10.85±2.85	-.744	.458	Similar
Consuming snack every day	72	10.50±4.03	73	9.79±3.39	1.155	.250	Similar
Consuming fast-food	96	11.44±3.38	49	7.55±3.56	6.804	.000	Different

Table 11: Distribution of Food Consumption Frequency of Students

Food group	*Every-day*		*3-5 per week*		*1-2 per wek*		*Once in 15 days*		*Once in a month*		*Very rarely*		*Never*	
	N	*%*	*N*	*%*	*N*	*%*	*N*	*%*	*N*	*%*	*N*	*%*	*N*	*%*
Milk	29	19.3	50	33.3	29	19.3	16	10.7	2	1.3	-	-	6	4.0
Yogurt	40	26.7	69	46.0	30	20.0	2	1.3	1	0.7	2	1.3	2	1.3
Cheese	74	49.3	51	34.0	14	9.3	3	2.0	-	-	1	0.7	3	2.0
Egg	46	30.7	45	30.0	39	26.0	5	3.3	2	1.3	5	3.3	4	2.7
Red meat	14	9.3	43	28.7	57	38.0	22	14.7	3	2.0	5	3.3	2	1.3
Chicken, turkey	14	9.3	57	38.0	58	38.7	10	6.7	5	3.3	-	-	2	1.3
Fish	4	2.7	14	9.3	62	41.3	37	24.7	17	11.3	6	4.0	6	4.0
Legumes	12	8.0	59	39.3	54	36.0	14	9.3	2	1.3	2	1.3	3	2.0
White bread	80	53.3	24	16.0	15	10.0	6	4.0	6	4.0	11	7.3	4	2.7
Other breads	31	20.7	30	20.0	21	14.0	6	4.0	12	8.0	23	15.3	23	15.8
Rice	24	16.0	65	43.3	49	32.7	4	2.7	1	0.7	2	1.3	1	0.7
Pasta	24	16.0	64	42.7	38	25.3	14	9.3	4	2.7	1	0.7	1	0.7
Fresh fruits	54	36.0	65	43.3	23	15.3	2	1.3	-	-	1	0.7	1	0.7
Fresh vegetables	42	28.0	61	40.7	30	20.0	9	6.0	1	0.7	2	1.4	1	0.7
Butter	10	6.7	23	15.3	43	28.7	19	12.7	13	8.7	28	18.7	10	6.7
Margarine	10	6.7	7	4.7	24	16.0	27	18.0	18	12.0	32	21.3	28	18.7
Sunflower oil	24	16.0	33	22.0	36	24.0	18	12.0	6	4.0	19	12.7	10	6.7
Olive oil	27	18.0	30	20.0	45	30.0	16	10.7	7	4.7	15	10.0	6	4.0
Honey. Jam	37	24.7	44	29.3	32	21.3	16	10.7	3	2.0	5	3.3	9	6.0
Sugar	49	32.7	27	18.0	29	19.3	7	4.7	5	3.3	11	7.3	18	12.0

erate risk group. This finding shows that students do not utilize the information given in this course in real life situations. However, as they are in a student group that makes active exercise due to their department, their BMI<25 kg/m^{2}kg. Although they have moderate-risky nutrition habits, their BMI values are normal**,** which one more time reveals the importance of exercise.

According to sex, although NHI values of females (9.91±3.66) and males (10.36±3.80) are similar; BMI values of females (20.46±1.99) were found to be significantly better than those of males (23.54±2.55). In the same research, the mean NHI of male students were found to be significantly higher (Demirezen and Cosansu 2005). In another research, NHI means of males were found to be significantly higher (Yurtseven et al. 2014). In studies conducted by Vancelik et al. (2007), similar results were found. These findings are not similar to the findings of the present paper. In the present paper, NHI means of females and males were similar. These findings prove that most of the students have athletic background and thus they have a common nutrition approach. In another paper conducted by Ulas and Genc, BMI values of males were found to be significantly higher than those of other women (Ulas and Genc 2007). In addition, in other studies, it was found that BMI values of men are significantly higher than those of women (Yurtseven et al 2014; Ulas and Genc 2010). These findings are parallel to this research.

In the present paper, the relationship between age and BMI was found significant. In many studies, it was found that obesity prevalence increases by age (Kutluturk et al. 2011; Akbay et al . 2003; Rosmond and Bjorntorp 1999; Tasan 2005).

No significant difference was found in NHI by grades, but BMI values of senior students (22.91±3.11) were found to be significantly higher than those of freshman students (21.42±2.24). This finding can be explained by the fact that freshman curriculum includes more physical activity courses and the studies show that BMI increases with age. In another paper, BMI values of military officers and non-commissioned officers are significantly higher than soldiers and other civil personnel. These results from the fact that regular physical exercise rates of military officers and non-commissioned officers are lower than soldiers (Ulas and Genc 2007).

Of students in the sample group 31.15 percent use alcohol, 49.49 do not use alcohol, 16.55 percent smoke, 83.44 do not smoke. It was found that BMI and NHI means are similar by alcohol use and smoking. In a similar research, NHI risk score means of smokers were found to be significantly higher than non-smokers. However, no

difference was found by alcohol use (Yurtseven et al. 2014). In another research about the smoking habits of 373 Physical Education and Sports students, 94 (25.2%) were current smokers and the average age to begin smoking was 18.03 ± 2.6. (Ulus et al. 2012). It is reported that there is a reverse correlation between smoking and obesity. Smokers are leaner and they start to gain weight when they quit smoking and due to the changes in nutrition behaviors.

In the present paper, the reason of the lack of difference by smoking is the low smoking rates among students. In addition, no significant difference was found in BMI and NHI scores of those who do regular physical exercise and those who do not. This finding results from the fact that physical activities of students are more intense due to their department and even those who say they cannot do regular physical exercise, they do exercise in their courses and this is the limitation of this research. In a research conducted by Vancelik et al. (2007), the difference in nutrition habit score means of those who do sport and those who do not was found to be statistically significant. In another research, nutrition habit level of those who do regular physical exercise was found to be higher (Acik et al. 2003).

According to nutrition habits risk score means by skipping meal, it was found that NHI scores of those skipping meals being 10.48±3.57 are significantly higher than those who are not skipping being 8.45±4.12 ($p< 0.05$). According to BMI, means are similar. It was found that, in terms of their daily consumptions, NHI values of students who do not have breakfast are significantly higher than those who do not have lunch; BMI values of those who do not have dinner are significantly higher than those who do not have lunch. No difference was found in BMI.

Not having breakfast decreases problem-solving skills while having breakfast increases school success and academic score, because it positively affects brain and behavior functions including learning and memory (Baysal 1999). The participant students report that they mostly skip breakfast (50%) and skip dinner least (7.5%). Only 8.2 percent of students do not skip meals. The reasons of skipping meals were reported as follows; 54.4 percent lack of time, 17.2 percent loss of appetite, 14.9 percent not being able to get up. The research findings support the literature findings. In a paper conducted by Seven (2014), most of the participants (43.6) skip meal and the reason of meal skippers (50%) is lack of time. In a paper conducted by Aksit (1997), it was found that out of university students, 13 percent skip breakfast and 19 percent skip lunch generally; the reason is lack of time for 55 percent. Elmacioglu (1995) reported that out of university students, 32 percent skip breakfast and Akdag (1997) reported 43.8 percent have breakfast, 34 percent have lunch and 10.8 percent have dinner irregularly. In similar studies, it was found that students mostly have breakfast irregularly (Vancelik et al. 2007; Tokgoz et al 1995; Alphan et al. 2002). The reason for skipping breakfast mostly among university students is believed to result from being late to courses and distances.

Within the light of this paper, it can be seen that university students skip their meals for various reasons. Colleges and universities are excellent avenues for promoting the health and well-being of young adults. However, researchers are often alarmed by the high percentages of students who are overweight or obese (Feldman et al. 2013; Patricia et al. 2014). On the hand, a study conducted in Ukraine by evaluating the nutrition habits and body mas indexes of the students shows that the physical development of most students, expressed by BMI factor, is normal with the existence of a small group of respondents with overweight problems. Besides, the amount and frequency of meals reveals a positive picture of healthy behaviors and significantly determines the level of total physical activity (Tsos et al. 2014). The reason is that most of the Ukrainian students (74.2%) mean BMI score is at normal level, because 44.6 percent of them does moderate physical activity and 50.2 percent of them does high physical activity.

The increased level of prosperity not only increased the supply and choice of foods and drinks in shops and at home, but also affected the amount and type of products available in school canteens/cafeterias. Schools are in a unique position to improve dietary behavior of juveniles and thereby prevent future health problems like fatness, obesity, diabetes and dental problems. In some countries, sugar-containing beverages have been banned at schools and they were replaced by sugar-free alternatives, and non-artificially sweetened fruit juices. Students should receive comprehensive recommendations about eating and drinking habits to prevent them-

selves unhealthy food and drinks and obesity (Gambon et al. 2012). The students are at risk for not only obesity, but also the hypertension, diabetes, metabolic syndrome that are consequences of excess weight. If they are obese in childhood, they are likely to become obese adults (Piziak 2014). Provision of opportunities to adopt healthy eating and activity behaviors may reduce obesity risk and assist achieve a healthier body composition. Engagement in food preparation and choice, and education around healthy eating can assist with the adoption of healthier eating habits, and may have an impact on an individual's food choice later life (Todd et al. 2015).

In this paper, no significant difference was found between Nutrition Habits score means and BMI scores of those who have breakfast, lunch, dinner and snacks every day and those who do not have. No research was found in Turkey on this topic. Consuming a pre-workout snack may improve performance during workouts and contribute to their high caloric needs; however, athletes in the present study did not properly fuel pre and post workouts (Brown et al. 2015). A study conducted in the USA by evaluating the nutrition habits of the student-athletes of Idaho University shows that the collegiate athletic program would utilize a sports dietitian or a training table.

The percentage of the participant students who consume fast food is 66.20 and it was found that nutrition habit index means of those who eat fast food are significantly high. BMI means are similar. Yoksvad and Jiranyakul (2011) found in their research conducted in Thailand that 25.8 percent of the participants eat at fast-food restaurants a couple of times a week, while 44.3 percent of them go to these restaurants a couple of times a month. Ozcelik et al. (2007) found that 63.5 percent of the participants going to a fast-food restaurant with their friends and 48.3 percent of them go there on both weekdays and weekend days. Besides, civil society actors criticize that fast food is available nearly everywhere (local communities, schools, universities, and hospitals). Markel criticized the fact that school children and university students do not have to leave the campus to buy fast food products (Markel 2003; Schrempf 2014). Zive et al. (2002) concluded that "middle school students eat excessive amounts of fat at school." This situation is more or less the same in Turkish primary, middle, high schools as well as universities. The foods of the canteen/cafeteria of the university in which this paper is carried out are not very healthy, because there are lots of fast food products and junk foods. The healthy things such as fruits and grain-rich products are never been sold.

Accordingly, the most frequently used food among students is white bread with 53.3 percent and the less frequently consumed one is fish with 2.7 percent. 18.7 percent of students do not use margarine while 18 percent of them use olive oil. It was found that 49.3 percent of them consume cheese, 36 percent consume fresh fruits, 32.7 percent consume sugar, 30.7 percent consume egg, 26.7 percent consume yoghurt, and 9.3 percent consume red meat/turkey/chicken everyday. In order to decrease the risk of chronic diseases such as diabetes, cancer and cardiovascular diseases which may emerge in adulthood period, it is recommended that a minimum of five portions of vegetables and fruits should be eaten (Barclay and Weaver 2006). It is observed that the students do not have a balanced diet including the foods recommended by the nutritionists.

CONCLUSION

Coaches and sports managers are expected to be role models by showing appropriate and desirable personal and prosocial behaviors that are of benefit to young athletes, keeping in mind the impact of their example on developmental outcomes for athletes.

In reality, the present paper shows that even though the students of the School of Physical Education and Sports, who will be coaches and sports managers in the future, receive functional education on nutrition, it has not been enough for them to adopt healthy nutritional behaviors. Actually, they are the people who are the athletes or the ones doing regular physical exercise, so that it is expected that they should have adopted a healthier lifestyle. Besides, the difference between the BMI scores of the freshman students in comparison with the related scores of senior students indicates that increase in the level of education does not directly generate the behavioral habits of a healthy lifestyle.

RECOMMENDATIONS

It is important that families, coaches and sports managers should serve as a role model,

showing necessary sensitivity on improving himself or herself on healthy nutrition. As being the prospective role models of the athletes, it is important that the School of Physical Education and Sports students have some opportunities to adopt a healthier lifestyle too. Therefore, the nutrition and physical activity course programs should be reviewed and a functional curriculum, which will provide a healthier lifestyle, should be developed within the university. Besides, in order to promote the decrease of unhealthy nutrition habits of the School of Physical Education and Sports students, the foods that contains fruits, vegetables and fibers should be sold in the canteens/cafeterias of the university.

REFERENCES

Acik Y, Celik G, Ozan A, Oguzoncul A, Deveci S, Gulbayrak C 2003. Universite ogrencilerinin beslenme alýskanliklari. *Saglik ve Toplum*, 13(4): 74-80.

Akbay E, Bugdayci R, Tezcan H, Konca K, Yazar A, Pata C 2003. The prevalence of obesity in adult population in a city on the mediterranean coast of Turkey. *Turkish J Endocrinol Metab*, 7(1): 31-35.

Akdag B, Bostanci M, Ture M, Ozsahin A, Ozturk M 1997. Ogun duzenlerinin arastirilmasi. *V. Halk Sagligi Gunleri-Beslenme Sorunlari ve Yasal Durum*. Isparta, Eylul 8-10, 1997.

Aksit S, Egemen A, Kitapcioglu G, Kusin N, Kurugol Z, Ozturk M 1997. Universite Ogrencilerinin fast food ile beslenme aliskanliklari. *V. Halk sagligi gunleri-beslenme sorunlari ve yasal durum*. Isparta, Eylul 8-10, 1997.

Alphan ME, Keskin Y, Tatli F 2002. Ozel okul ve devlet okullarinda ogrenim goren adolesan donemindeki cocuklarin beslenme aliskanliklarinin karsilastirilmasi. *Beslenme ve Diyet Dergisi*, 31: 9-17.

Aytekin F, Bulduk S 2000. Universite ogrencilerine verilen egitim modellerinin ogrencilerde davranis degisikligine etkilerinin incelenmesi. *Milli Egitim Dergisi*, 148: 1-5.

Barclay A, Weaver L 2006. Feeding the normal infant, child and adolescent. *Medicine*, 34: 551-556.

Baysal A 1999. Kahvalti ve okul basarisi. *Beslenme ve Diyet Dergisi*, 28(1): 1-3.

Baysal A 2002. *Beslenme*. Dokuzuncu baski. Ankara: Hatipoglu yayinevi.

Bozkurt B, Nizamlioglu M 2006. Beden egitimi ve spor yuksekokullarinda okuyan aktif spor yapan ogrencilerin beslenme aliskanliklarinin belirlenmesi ve degerlendirilmesi. *SDU. Tip Fak Derg*, 13(2): 5-11.

Brown K, Imthurn K, Ramsay S 2015. Nutritional needs and attitudes towards having a training table: Insight form players from a division 1 Football Team. *Enliven: J Diet Res Nutr*, 1(1): 005.

Congar O, Ozdemir L 2004. Sivas il merkezinde beden egitimi ogretmenlerinin genel beslenme ve sporcu beslenmesi ile ilgili bilgi duzeyleri. *C U Tip Fakultesi Dergisi*, 26 (3): 113– 118.

Dania MG, Ozoh OB, Bandele EO 2015. Smoking habits, awareness of risks, and attitude towards tobacco control policies among medical students in Lagos, Nigeria. *Ann Afr Med*, 14: 1-7

Demirezen E, Cosansu G 2005. Adolesan cagi ogrencilerde beslenme aliskanliklarinin degerlendirilmesi. *Surekli Tip Egitimi Dergisi*, 14 (8): 176-180.

Elmacioglu F 1995. Klinik oncesi tip ogrencilerinin beslenme ve yemek aliskanliklarinin degerlendirilmesi. *Beslenme ve Diyet dergisi*, 24(2): 263-271.

Eisenman PA, Johnson SC, Joan EB 1990. *Coaches Guide to Nutrition and Weight Control*. Illinois: Leisure Pres,

Feldman C, Harwell H, Brusca J 2013. Using student opinion and design inputs to develop an informed university foodservice menu. *Appetite*, 69(1): 80-88.

Gambon DL, Brand HS, Veerman IC 2012. Dental erosion in the 21st century: What is happening to nutritional habits and lifestyle in our society? *British Dental Journal*, 55-57.

Gunes Z 1998. *Spor ve Beslenme Antrenor ve Sporcu el Kitabi*. Bagirgan Yayin Evi, Ankara.

Kalpakcioglu B 2008. Nutrition in sportsmen. *Rheumatism*, 23: 24-7.

Kawakami M, Nakamura S, Fumimoto H, Takizawa J, Baba M . Relation between smoking status of physicians and their enthusiasm to offer smoking cessation advice. *Intern Med*, 36: 162-165.

Kocoglu G 1998. *Saglikli yasam icin yeterli ve dengeli beslenme*. Sivas: Cumhuriyet Universitesi Tip Fakultesi Halk Sagligi Anabilim Dali Yayinlari.

Koksal O, Ozturk Y 1993. Universite gencliginin beslenme konusu ve sorunlar. *III. Halk Sagligi Gunleri*, Kayseri, Mayis 5-7, 1993.

Kutluturk F, Ozturk B, Yildirim B, Ozugurlu F, Cetin I, Etikan I, Sazlidere H, Tetikcok R, Akbas A, Sahin I 2011. Obezite prevalansi ve metabolik risk faktorleri ile iliskisi: Tokat ili prevalans calismasi. *Turkiye Klinikleri J Med Sci*, 31(1): 156-163.

Lee DR, Nieman DC 1996. *Nutritional Assessment*. Boston: WCB/Mc Graw Hill Companies, Inc.689.

Markel H 2003. Take bite out of obesity by getting fast food out of hospitals. *AAP News*, 23(6): 269.

Okeke TA 2004. Smoking habits of physicians in Enugu, Nigeria. *J Community Med Prim Health Care*, 16: 34-38.

Orak S, Seniha A, Orhan H 2006. Suleyman Demirel Universitesi ogrencilerinin beslenme aliskanliklarinin arastirilmasi. *S D U Tip Fak Derg*, 13(2): 5-11.

Ozcelik AO, Akan LS, Surucuoglu MS 2007. An evaluation of fast-food preferences according to gender. *Humanity Soc Sci J*, 2: 43-50.

Paker HS 1990. Spor beslenmesinde karbonhidratlarin yeri. Hacettepe Universitesi Spor Bilimleri *1. Ulusal Sempozyumu Bildirileri*, Ankara, Mart, 15-16, 1990.

Paker HS 1995. Aktif sporcularin beslenme durumlarinin belirlenmesi. *Bilim Uzmanligi Tezi*, Hacettepe Universitesi Saglik Bilimleri Enstitusu, Ankara.

Piziak V 2014. The development of a bilingual interactive video to improve physical activity and healthful eating in a head start population. *Int J Environ Res Public Health*, 11: 13065-13073.

Purcell LK 2013. Sport nutrition for young athletes. *Paediatrics and Child Health (Canada)*, April, 18:14.

Rosmond R, Bjorntorp P 1999. Psychosocial and socioeconomic factors in women and their relationship to obesity and regional body fat distribution. *Int J Obesity*, 23(2): 138-145.

Sekhon SS 1996. Insights into South Asian culture: Food and nutrition values. *Topics in Clinical Nutrution*, 11: 47-56.

Sabbag C 2003. Ilkogretim okullarinda gorevli ogretmenlerin beslenme aliskanliklari ve beslenme bilgi duzeyleri. *Yuksek lisans tezi (Basilmamis)*. Ankara Universitesi, Ankara.

Sarioglu O, Imamoglu O, Atan T, Turkmen M, Akyol P 2012. Beden egitimi bolumunde okuyan farkli branslardaki ogrencilerin beslenme aliskanliklarinin incelenmesi. *Selcuk Universitesi Beden Egitimi ve Spor Bilim Dergisi*, 14(1): 88-94.

Schrempf J 2014. A social connection approach to corporate responsibility: The case of the fast food industry and obesity. *Business and Society*, 53(2): 300–332.

Seven Hande 2014. Yetiskinlerde duygusal yeme davranisinin beslenme durumuna etkisi. *Yuksek lisans tezi, Basilmamis*. Istanbul: Halic Universitesi,

Sozen S, Bilir N, Yildiz AN, Yildiz E, Sozen T 2009. Metal sektorunde bir isyerinde calisanlarin beslenme aliskanliklari ve iliskili antropometrik olcumleri. *Toplum Hekimligi Bulteni*, 28(3): 7-14.

Tasan E 2005. Identification, evaluation and epidemiology of obesity. *Turkiye Klinikleri J Int Med Sci*, 1(37): 1-4.

Todd AS, Street, SJ, Ziviani J, Byrne NM, Hills AP 2015. Overweight and obese adolescent girls: The importance of promoting sensible eating and activity behaviors from the start of the adolescent period. *Int. J Environ. Res Public Health*, 12: 2306-2329.

Tokgoz P, Ertem M, Celik F, Gokce S, Saka G, Hatunoglu R 1995. Universite ogrencilerinin beslenme aliskanliklarinin saptanmasina iliskin bir arastirma. *Beslenme ve Diyet Dergisi*, 24(2): 229-238.

Tsos A, Bergerier B, Bergerier J 2014. Physical activity, physical development and eating habits within the lifestyle of students from Ukraine. *Health Problems of Civilization*, 4(8): 46-53.

Ulas B, Genc M.F 2010. Malatya asker hastanesinde 2007 yilinda gorev yapan personelin saglikli beslenme konusundaki tutum ve davranislari. *Inonu Universitesi Tip Fakultesi Dergisi*, 17(3): 187-193, Malatya.

Ulus T, Yurtseven E, Donuk, B 2012, Prevalence of smoking and related risk factors among physical education and sports school students at Istanbul University. *Int J Environ Res Public Health*, 9: 674-684.

Vella SA, Oades LG, Crowe TP 2013. The relationship between coach leadership, the coach–athlete relationship, team success, and the positive developmental experiences of adolescent soccer players. *Physical Education and Sport Pedagogy*, 18: 5, 549-561.

Vancelik S, Onal S.G, Guraksin A, Beyhun E 2007. Universite ogrencilerinin beslenme bilgi ve aliskanliklari ile iliskili faktorler. *TSK Koruyucu Hekimlik Bulteni*, 6(4): 242-248.

Yagmur C 1995. Cukurova universitesi ogrencilerinin beslenme durumu uzerine bir arastirma. *Beslenme ve Diyet Dergisi*, 24(2): 239-251.

Yildiz SM 2007. Beden egitimi ve spor yuksekokullarýnda egitim hizmetleri kalitesini etkileyen faktorler. *Kastamonu Egitim Dergisi*, 15(1): 451-462.

Yilmaz E, Ozkan S 2007. Universite ogrencilerinin beslenme aliskanliklarinin incelenmesi. *Firat Saglik Hizmetleri Dergisi*, 2(6): 87-104.

Yoksvad C, Jiranyakul P 2011. *Consumer Attitudes Toward Quick Service Restaurants in Thailand: The Study of Influencing Factors Affecting Purchase-making Decision.* Master Thesis. Sweden: Malardalen University.

Yurtseven E, Eren F, Vehid S, Koksal S, Ergin Oz E, Erdogan MS 2014. Beyaz yakali calisanlarin beslenme aliskanliklarinin degerlendirilmesi. *Kocatepe Tip Dergisi*, 15(1): 20-26.

Zablotsky D, Mack KA 2004. Changes in obesity prevalence among women aged 50 years and older: Results from the behavioral risk factor surveillance system. 1990-2000. *Research on Aging*, 26(1): 13-30.

Zive MM, Elder JP, Prochaska JJ, Conway TL, Pelletier RL, Marshall S, Sallis JF 2002. Sources of dietary fat in middle schools. *Preventive Medicine*, 35: 376.

Zorba E 1999. *Herkes Icin Spor ve Fiziksel Uygunluk*. Ankara: G.S.G.M. Egitim Dairesi.