



COMPARISON OF THE NUTRITIONAL HABITS OF THE STUDENTS AT THE FIRST AND FOURTH CLASSES IN THE PHYSICAL EDUCATION AND SPORT TRAINING DEPARTMENT OF AKSARAY UNIVERSITY

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Abstract

Purpose. The goal of this study was to compare the nutritional habits of the students studying at the first (1st) and fourth (4th) classes in the Physical Education and Sport Training Department of Aksaray University.

Methods. The students at the first and fourth classes in the Physical Education and Sport Training Department of Aksaray University constitute the sampling of this research. Contrary to first-year students, fourth class students have taken nutrition class. Data were collected by performing a questionnaire including 33 items and analyzed by using SPSS 15.0 software. For statistical analysis, frequency and percentage (%) distributions and Chi-square test were used.

Results. Significant differences found between first and fourth class students such as skipping the meals, using foods as a reward to themselves, the amount of daily water consumption, and the reason behind the consumption of vitamin-mineral supplements ($p < 0.05$). Frequency data of also gave important results.

Conclusions. Taking nutrition course gave rise to significant differences. Results reinforce that university students' nutrient intakes are less than ideal. Results have to be taken into account by students and lecturers of nutrition in order to increase health and nutrition conscious.

Key words: Nutritional habits, university students' nutrition

Introduction

The term 'Eating Habits' can be defined as what and how people eat, their selection of foods, their way of getting food. A good eating habit is necessary for human of all ages to maintain the proper nutrition their body needs and to perform well. It is also important for man to take in the right amount and eat at the right time for the metabolism and energy consumption of the body to do their tasks. On the other hand, nutrition education is a key element to promoting lifelong healthy eating and exercise behaviours and should start from the early stages of life (Perez-Rodrigo, Aranceta, 2001).

Physical Education and Sports School students need the proper intake of food to improve their study skills, memory, thinking capabilities and sporting achievements.

There are so many research studies carried out on the nutrition habits of university and Physical Education and Sports School students (Abu-Moghli, Khalaf, Barghoti, 2010; Bravo, Martin, Gonzales et al. 2006; Celik, 2006; Filiz, Demir, 2004; Friedman, Portela, Rodriguez et al. 2008; Korkmaz, 2010; Kumartaşlı, 2006; Li, Conception, Lee et al. 2012; Sevindi, Yılmaz, İbiş et al. 2007; Şanlıer, Arıkan, 2000; Ortega, Requejo, Sanchez Muniz et al. 1997; Rakıcıoğlu, Akal Yıldız, 2011; Vançelik, Önal, Güraksın et al. 2007; Yıldırım, Yıldırım, Tortop et al. 2011; Yılmaz, Özkan, 2007).

Thus, the objective of this study, was to compare the

nutritional habits of the students studying at the first and fourth classes in the Physical Education and Sport Training Department of Aksaray University.

Methods

The study was carried out during November-December 2012 and the universe of the study consisted of the students of Physical Education and Sports School of Aksaray University. The students at the first (n=32) and fourth (n=74) classes in the Physical Education and Sport Training Department of Aksaray University constitute the sampling of this research. Contrary to first-year students, fourth class students have taken nutrition class.

There is not any sampling method used in this study. The research's data are collected by using questionnaire technique including 33 items to 106 students and analyzed by using SPSS 15.0 software. For statistical analysis, frequency and percentage (%) distributions were used and the Chi-square test was conducted for variables. Differences were considered statistically significant at p value < 0.05 .

Results

In this study, comparison of the nutritional habits of the students studying at the first and fourth classes in the Physical Education and Sport Training Department of Aksaray University was investigated.

The research's data are collected by using questionnaire technique including 33 items to 106

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students.

It is well known that eaten three main meals per day is recommended by the nutritionists. The frequency and percentage (%) distributions of the reasons of students skipping meals are presented in Table 1.

It was determined that 55.3% (n=21) of the 4th class students were passed meals because of time, while the

result for 1st class students was 44.7% (n=17). Most of the 4th class students skipped meals because of unwillingness (68.1%, n=32), on the other hand the value for the 1st class was 31.9% (n=15) (Table 1). The difference between the groups was compared according by Chi-square test and found to be statistically significant ($p < 0.05$).

Table 1. The Chi-square test results for reason of skipping meals at the first and fourth class students in the Physical Education and Sport Training Department of Aksaray University

Reasons	N/%	First Class	Fourth Class	Total	p
Did not have time	Count	17	21	38	0.005
	%	44.7	55.3	100.0	
Unwillingness	Count	15	32	47	
	%	31.9	68.1	100.0	
Wish to loose weight	Count	0	11	11	
	%	0	100.0	100.0	
Due to dissatisfaction of the food in workplace	Count	0	10	10	
	%	0	100.0	100.0	
Total	Count	32	74	106	
	%	30.2	69.8	100.0	

According to the results of our study, there were also statistically significant differences found between the groups (1st and 4th classes) in terms of having lunch and dinner when compared according to Chi-square test ($p < 0.05$) (Data not given).

The Chi-square test results of the answers of the students for the question "What is your style of breakfast?" at the first and fourth classes in the Physical Education and Sport Training Department of Aksaray University are given in Table 2.

Table 2. The Chi-square test results for breakfast style of the first and fourth class students in the Physical Education and Sport Training Department of Aksaray University

Breakfast Style	N/%	First Class	Fourth Class	Total	p
Classic Turkish breakfast	Count	27	47	74	0.051
	%	36.5	63.5	100.0	
Breakfast cereals	Count	1	15	16	
	%	6.3	93.8	100.0	
No breakfast	Count	4	12	16	
	%	25.0	75.0	100.0	
Total	Count	32	74	106	
	%	30.2	69.8	100.0	

Eating breakfast is a good way to start the day. Many nutritionists have been concerned about the numbers of students arriving at school without having had breakfast. It was determined that 63.5% (n= 47) of the 4th class students have classic Turkish breakfast, whereas the result for 1st class students was 36.5% (n= 27). Totally 16 of the students replied that they have no breakfast for both of the 1st (n= 4) and 4th (n= 12) classes, respectively.

According to the result of a study (Mason, Savage, 1997), 15% of the students surveyed on a weekday had not eaten any breakfast. It was also determined that breakfast and lunch were the most

frequently skipped meals, with a total of 47.7% of students skipping breakfast and 25.2% skipping lunch (Rakicioglu, Akal Yıldız, 2011). According to Yıldırım, Yıldırım, Tortop et al. (2011), 61.5% of the students' did not do the regular breakfast and a very low proportion of students have regularly breakfast (38.5%). The difference between the groups was compared according to Chi-square test and found to be statistically significant ($p < 0.05$).

Eating snacks is a common habit among students and the term "snack" generally refers to all foods and drinks taken outside the context of the three main meals (De Graaf, 2006). It was determined that 84.0%



(n= 21) of the 4th class students were not eating snack, while the result for 1st class students was 16.0% (n= 4). Moreover, most of the students (n= 32) replied that they were eating cakes, bagels, cookies etc as snack with the ratio of 59.4% for the 4th class students (n= 19) and 40.6% for the 1st class (n= 13). The result followed by eating candies, chocolate, waffles etc with the ratio of 85.0% for the 4th class students (n= 17) and 15.0% for the 1st (n= 3) class. The difference between the groups was compared according to Chi-square test and found to be statistically significant ($p < 0.05$). One of the questions that asked was “how satisfied you are with the given workplace canteen meals”. Most of

the 4th class students answered that question as “glad” (64.7%, n= 22), and “so-so” (58.1%, n= 25). On the other hand, the answers of the 1st class students for the same question were “glad” (35.3%, n= 12), and “so-so” (41.9%, n= 18), respectively. The difference between the groups was compared according to Chi-square test and found to be statistically significant ($p < 0.05$). The Chi-square test results of the students satisfaction with the workplace canteen meals at the first and fourth classes in the Physical Education and Sport Training Department of Aksaray University are shown in Table 3.

Table 3. The Chi-square test results of the students satisfaction with the workplace canteen meals at the first and fourth classes in the Physical Education and Sport Training Department of Aksaray University

Students satisfaction with the workplace canteen meals	N/%	First Class	Fourth Class	Total	p
Very glad	Count	0	16	16	0.009
	%	0	100.0	100.0	
Glad	Count	12	22	34	
	%	35.3	64.7	100.0	
So-so	Count	18	25	43	
	%	41.9	58.1	100.0	
Not glad	Count	2	11	13	
	%	15.4	84.6	100.0	
Total	Count	32	74	106	
	%	30.2	69.8	100.0	

The Chi-square test results of the daily water consumptions of the students at the first and fourth classes in the Physical Education and Sport Training Department of Aksaray University are shown in Table 4. The question “what is your daily water

consumption” was answered by the 4th class students as “3 or less glasses of water”, “4-6 of glasses of water” and “6-8 of glasses of water” with the ratios 89.3% (n= 25), 72.7% (n= 32) and 60.0% (n= 12), respectively. (Table 4).

Table 4. The Chi-square test results of the daily water consumptions of the first and fourth class students in the Physical Education and Sport Training Department of Aksaray University

Daily water consumption	N/%	First Class	Fourth Class	Total	p
3 or less glasses of water	Count	3	25	28	0.004
	%	10.7	89.3	100.0	
4-6 of glasses of water	Count	12	32	44	
	%	27.3	72.7	100.0	
6-8 of glasses of water	Count	8	12	20	
	%	40.0	60.0	100.0	
8-10 of glasses of water	Count	4	4	8	
	%	50.0	50.0	100.0	
10 or more glasses of water	Count	5	1	6	
	%	83.3	16.7	100.0	
Total	Count	32	74	106	
	%	30.2	69.8	100.0	

On the other hand, the following answers were obtained from the 1st class students for the consumption levels mentioned above as 10.7% (n= 3), 27.3% (n=

12), and 40.0% (n= 8), respectively. The difference between the groups was compared according to Chi-square test and found to be statistically significant ($p < 0.05$).



0.05). Moreover, 75 of the students (n= 106) believed that consuming plenty amounts of water are beneficial to health (Table 5). The Chi-square test results of using vitamin and mineral supplements of the students at the first and fourth classes in the Physical Education and Sport Training Department of Aksaray University are given in Table 6. The question “what is your reason for using vitamin and mineral supplement? was answered as “to be fit and healthy” (59.3%), “suggestion of

medical doctor”(80.0%), “to be prevented from illness” (57.1%), and “to heal” (100.0%) by the fourth class students, the corresponding results for the first class students were 40.7%, 20.0%, 42.9%, 0%, respectively. The difference between the groups was compared according to Chi-square test and found to be statistically significant ($p < 0.05$).

Table 5. The Chi-square test results of the students at the first and fourth class in the Physical Education and Sport Training Department of Aksaray University that “believing consumption of plenty amounts of water are beneficial to health ?

Consumption of plenty amounts of water are beneficial to health?	N/%	First Class	Fourth Class	Total	p
Yes	Count	27	48	75	0.043
	%	36.0	64.0	100.0	
No	Count	5	26	31	
	%	16.1	83.9	100.0	
Total	Count	32	74	106	
	%	30.2	69.8	100.0	

Table 6. The Chi-square test results of using vitamin and mineral supplements of the first and fourth class students in the Physical Education and Sport Training Department of Aksaray University

Reason for using vitamin and mineral supplements	N/%	First Class	Fourth Class	Total	p
To heal	Count	0	15	15	0.035
	%	0	100.0	100.0	
To be fit and healthy	Count	11	16	27	
	%	40.7	59.3	100.0	
Suggestion of medical doctor	Count	4	16	20	
	%	20.0	80.0	100.0	
To be prevented from illness	Count	6	8	14	
	%	42.9	57.1	100.0	
Other	Count	6	11	17	
	%	35.3	64.7	100.0	
Total	Count	27	66	93	
	%	29.0	71.0	100.0	

Most of the fourth class students replied the question about the amount of fat consumption as normal or less (48.8-92.3%). The answers of the first class students for the same question were ranged in between 7.7-51.7%. The Chi-square test results of “How much fat do you consume for your meals? for the first and fourth

class students in the Physical Education and Sport Training Department of Aksaray University are given in Table 7. The difference between the groups was compared according to Chi-square test and found to be statistically significant ($p < 0.05$).

Table 7. The Chi-square test results of “How much fat do you consume for your meals?” for the first and fourth class students in the Physical Education and Sport Training Department of Aksaray University

“How much fat do you consume for your meals?”	N/%	First Class	Fourth Class	Total	p
Without fat	Count	1	12	13	0.001
	%	7.7	92.3	100.0	
Low fat	Count	8	28	36	
	%	22.2	77.8	100.0	
Normal	Count	22	21	43	
	%	51.2	48.8	100.0	
Much fat	Count	1	13	14	
	%	7.1	92.9	100.0	
Total	Count	32	74	106	
	%	30.2	69.8	100.0	

The Chi-square test results of “What kind of fat do you generally prefer for your meals?” for the first and fourth class students in the Physical Education and Sport Training Department of Aksaray University are given in Table 8. The difference between the groups was

compared according to Chi-square test and found to be statistically significant ($p < 0.05$). Sun flower oil and corn oil were chosen the most preferred oils with the total number of 58 students, 26 of them were 1st class and 32 of them were 4th class students.

Table 8. The Chi-square test results of “What kind of fat do you generally prefer for your meals?” for the first and fourth class students in the Physical Education and Sport Training Department of Aksaray University

What kind of fat do you generally prefer for your meals?	N/%	First Class	Fourth Class	Total	p
Sun flower oil, corn oil etc	Count	26	32	58	0.001
	%	44.8	55.2	100.0	
Soft margarine	Count	4	26	30	
	%	13.3	86.7	100.0	
Solid margarine	Count	2	16	18	
	%	11.1	88.9	100.0	
Total	Count	32	74	106	
	%	30.2	69.8	100.0	

The Chi-square test results of “how often do you use foods as a reward to yourself?” for the first and fourth class students in the Physical Education and Sport Training Department of Aksaray University are given in Table 9. The difference between the groups was

compared according to Chi-square test and found to be statistically significant ($p < 0.05$). Moreover, most of the 4th class students replied that they use foods as a reward to themselves with the ratio of 95.0% ($n= 19$) as everyday and 75.7% ($n= 28$) as 1-3 times in a week.

Table 9. The Chi-square test results of “do you use foods as a reward to yourself?” for the first and fourth class students in the Physical Education and Sport Training Department of Aksaray University

How often do you use foods as a reward to yourself?	N/%	First Class	Fourth Class	Total	p
Every day	Count	1	19	20	0.001
	%	5.0	95.0	100.0	
A few times a week	Count	9	28	37	
	%	24.3	75.7	100.0	



A few times a month	Count	11	9	20	0.001
	%	55.0	45.0	100.0	
Less frequent	Count	3	6	9	
	%	33.3	66.7	100.0	
Total	Count	24	62	86	
	%	27.9	72.1	100.0	

According to the result of this study, most of the students answered the question “What kind of changes occur in your diet when you are sad, tired, happy or excited?” as “eat less than usual” or “eat nothing” with the count of 51 and 19, respectively. The difference between the groups was compared according to Chi-square test and found to be statistically significant ($p < 0.05$).

Discussions

All human being must eat food to survive. Food also produces immunity against disease. People are accustomed with the habit of eating three meals in a day. In general breakfast meals consist of lighter food as compare to lunch and dinner. As time passes by, they have indulged themselves into loads of work. People nowadays lead very hectic lifestyles.

Eating, which was once a main priority, has now become a chore that they have to fit into their schedules, or something that they do rather thoughtlessly and carelessly. Most of them don't pay much attention anymore to what they put into their bodies. Furthermore, most of them develop bad eating habits because of their efforts to shed those excess pounds, with the belief that starving themselves on some occasions will actually help them.

Eating habits help a person to perform work especially for the young ones who are studying. With the right quality and quantity of the food taken into our bodies, our mental and physical capacities can be enhanced. This can improve our health and thus avoid risks for certain diseases and illnesses.

According to the results of the statistical analyses, there were significant differences found between first and fourth class students such as skipping the meals, using foods as a reward to themselves, the amount of daily water consumption, and the reason behind the consumption of vitamin-mineral supplements. According to the literature (Sakamaki et al, 2005), medical students (540) from Beijing University (135 men and 150 women) in Northern China and Kunming Medical College in southern China (95 men and 160 women) participated in a study and results indicated that habits involving regular eating patterns and vegetable intake were reported and represent practices that ought to be encouraged. The university and college arenas represent the final opportunity for the health and nutritional education of a large number of students from the educator's perspective. Their findings suggest

the need for strategies designed to improve competence in the area of nutrition. According to the results of Lin, Cobiac, Skrzypiec (2002), similar consequences were reported. In that study was undertaken on a sample of 180 students pursuing different academic programs in a Malaysian university. The study objectives were to determine the students' eating behavior including body weight control and the extent of fear of being fat, their social self concept that reflects the five selves namely, the psychological self, the social self, the sexual self, the family self and the physical self. It was concluded that future studies on a larger sample size may help to unravel the extent to which psychological factors influence eating behavior of students, and the underlying psychosocial basis for some of the gender differences reported in this study. Similar results were also determined by Orak, Akgün, Orhan (2006), Vançelik, Önal, Güraksın et al. (2007) and Yılmaz, Özkan (2007) in relation with skipping meals and their preferences for drinks.

Conclusions

As a result, our findings showed that more attention to the nutrition course should be given in Physical Education and Sports Training Schools. In addition to theoretical and practical courses, information applicable in everyday life must also be given to the students.

Sound scientific data about the nutritional habits of university students are limited, therefore, it is not clear as to whether university students are following nutrition recommendations and maintaining nutritionally sound diets.

So, it was concluded that students need more information about healthy nutritional habits and adequate intake of nutrients. Also, this topic must be supported by new studies.

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