

# Observation of food habits and awareness level of students studying at the School of Physical Education and Sports

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## Abstract

The purpose of the study is observing food habits and awareness of the students studying at Coaching Training and Sports Teaching Department of School of Physical Education and Sports and detecting whether there is a variance between departments. The study has been observed on 94 students at Physical Education Teaching Department and 106 Coaching Training Department, which makes 200 students in total. For data collection, a 30-question food habit questionnaire comprising of 20 food habit questions and 10 nutrition awareness questions prepared by Goral as well as a personal information form filled by researchers have been used. Data derived from the scale had been converted to form of tables by extracting distributions in terms of percentage. SPSS 16.0 has been employed for statistical estimations. The frequency and percentage values of the derived data have been calculated, and a chi-square had been utilized to detect any variance between the groups within different categories. In case of a value  $p>0.05$ , the variance between groups is accepted to be significant. The information collected has pointed out no significant variance between the awareness levels of the students at Coaching and Teaching Department with respect to the answers given by them about weight follow-up and body analysis, the number of meals in a day, use of alcohol, regular fluid intake and beginning day with breakfast. In respect of information resources of nutrition and nutrition awareness before and after training, significant relations have been uncovered about awareness of the relation between awareness of level of daily energy need, awareness and way of nutrition habits before and after training and success in sports. Finally, no significant variance has been detected between the nutrition awareness levels of the students at Coaching Department and the ones at Sport Teaching Department in some issues. It is important to improve both groups' awareness levels of athlete nutrition. Our study offers that some more extensive studies should be done on this matter.

**Keywords:** Coaching training, nutrition habits, physical education and sport, teaching.

## INTRODUCTION

It is accepted that sufficient and balanced nutrition does not guarantee success of the athletes but insufficient and unbalanced nutrition causes some health issues or decrease in performance. An athlete having a good diet is known to have some advantages compared to an athlete with poor diet. Although athletes exhibit some variations in requirements of energy and nutritional elements with respect to age, gender and sport branches, all athletes are subject to similar basic dietaries. Energy requirement varies based on some factors such as gender, age, body size and combination (height, weight, fat content, lean tissue mass), type, intensity and frequency of exercise. In relation to all those,

energy requirement of an athlete varies compared to another athlete.

At such a time when science and technology are rapidly changing social life, education is increasingly becoming crucial (19). The studies performed on various people from different sport branches in our country showed that most of the groups had health and nutrition disorders. An athlete in ages of growth and development should particularly pay attention to nutrition for a healthy physical development (2,17). The studies carried out have emphasized that trainers and athletes need to be guided about nutrition (10). Nutrition and doing exercises is vital for a healthy life. Regular exercises increase muscle strength, flexibility and stability, maintain cardiovascular compatibility and avoid

skeletal disorders to appear in increased ages (6,18). A science branch such as education covering all social life to that extent has a great role within the system. In this context, sport activities are included within education (13). In line with rapid technological developments, physical training and sports with an increasing role in human life is the sole discipline for gaining most of training objectives. This is because physical training and sports are keys to maintain physical, mental, emotional and social developments of individuals (22). From this point of view, the issue of first priority is the need for qualified staff for physical education and sports training. This need is substantially met by schools of physical education and sport in education faculties of universities in Turkey (1).

In Turkey, sports trainers are trained by the aforementioned two schools. These schools are bound to universities providing formal education and General Directorate of Youth and Sports as widespread education institutes. Universities provide four-year bachelor degree for physical education and sports teaching and educate trainers, sports managers and recreation leaders through education programs of coaching, sports managing and recreation leadership provided (11). It is expected that Turkish sports activities will be in better conditions in future than what they are now as vision of the administrators governing and guiding sports in Turkey will take form in parallel with Departments of Sport Management and Training Education of universities. Therefore, these individual's concerns for serving within public or private organizations as successful sports managers or trainers in future should be met by providing them education under optimum conditions (21).

Food habits and performance of athletes are directly related. Success in sports may be obtained by balancing the relation between nutrition and energy for either doing exercises for health or amateur or professional sports. Today, nutrition in sports attracts each athlete as an exclusive discipline. In fact, athlete nutrition is directly related to ever-growing scientific studies. It is crucial for athletes and trainers to be aware and apply information related to nutrition. However, it can, even today, be common among athletes and trainers to have incorrect knowledge and habits of nutrition (3,18). When making a schedule for nutrition, one should pay attention as though he is making a training schedule. The nutrition schedule should involve

balanced nutrition ingredients and energy contents (12).

## MATERIAL & METHODS

The population for the study consists of the students enrolled to School of Physical Education and Sports in Agri province, and the sample group consists of 200 randomly-selected students totally, 106 students at Coaching Training Department and 94 students at Sports Teaching Department, age average of which is 21.15.

For data collection, a 30-question food habit questionnaire comprising of 20 food habit questions and 10 nutrition awareness questions prepared by Goral (15) as well as a personal information form filled by researchers have been polled on the students by the researcher during rest times following a clear explanation (16). Data derived from the scale had been converted to form of tables by extracting distributions in terms of percentage.

### Statistical analysis

SPSS (version 16.0) has been employed for statistical estimations. Frequencies and percentage values of the derived data had been calculated, and a chi-square test had been applied to detect diversities between the groups belonging to different categories. In cases where the value P is less than 0.05, the difference between the groups is accepted to be significant.

## RESULTS

One-hundred students studying at Coaching Department and 94 students studying at Sports Teaching Department within the school of physical education and sports in Agri Ibrahim Cecen University had participated within the study. The relation of the attitudes of the Coaching and Sports Teaching Department students about nutrition of athletes are provided in the tables.

Table 1. Distribution of students at coaching and teaching department with respect to department attended.

Department Being Attended	N	%
Coaching	106	53.0
Teaching	94	47.0
Total	200	100.0

One-hundred students at Coaching Department and 94 students at teaching Department, 200 students in total, have participated in the study.

Table 2. Distribution of general physical attributes of students at coaching and teaching department.

Varying	Minimum	Maximum	Mean
Age (Year)	18	25	21.15
Weight (kg)	43	97	67.7
Height (m)	1.45	1.91	1.745

The observation of the distribution of physical attributes of the students at Coaching and Teaching Department has yielded an age average of 21.5, a weight average of 67.7 and a height average of 174.45.

No significant variance up to significance value  $p=0.05$  is the case between the department where the participant students attend and their knowledge of nutrition. It has been observed that the students attending both departments have set out that their knowledge of nutrition is nearly sufficient.

A significant variance up to significance value  $p=0.05$  is the case between the department where the participant students attend and their resources of

information. While the students at Coaching Department figure out that they acquire information from their coach by a weight of 44.44%, the students at Teaching Department do the same from media by a weight of 45.00%.

No significant variance up to significance value  $p=0.05$  is the case between the department where the participant students attend and their weight follow-up and body analysis. The students attending both departments have been seemed not to make a weight follow-up or body analysis.

A significant variance up to significance value  $p=0.05$  is the case between the department where the participant students attend and their answers for the question about food to be consumed prior to matches. While the students at coaching department set out that, prior to matches, carbohydrate-containing food should be consumed by a weight of 72.00%, the students at teaching department vote for protein-containing food by a weight of 38.00%.

Table 3. Distribution of the students at the department of coaching and teaching according to their awareness of athlete nutrition.

Evaluating Knowledge About Athlete Nutrition	Coaching		Teaching		Total	P
	N	%	N	%		
Sufficient	65	65.00	52	52.00	118	
Not Sufficient	24	24.00	29	29.00	52	
No Idea	17	17.00	13	13.00	30	1.00
Total	106		94		200	

  

Chi-Square Tests			
	Value	df	Sig. (2-sided)
Pearson Chi-Square	,000 <sup>a</sup>	2	1,000

Table 4. Distribution of information resources of athlete nutrition of coaching and teaching students.

Resources	Coaching		Teaching		Total	P
	N	%	N	%		
From Coach	32	44.44	9	16.36	41	
From Physician	8	11.11	5	9.09	13	
From Dietitian	8	11.11	4	7.27	12	
From Media	7	9.72	25	45.00	32	
From Books	10	13.89	9	16.00	19	0.00*
From Friends	7	9.72	3	5.00	10	
Total	72		55		127	

  

Chi-Square Tests			
	Value	df	Sig. (2-sided)
Pearson Chi-Square	156.750 <sup>a</sup>	6	0.000*

Table 5. Follow-up of weight and body analysis of students at coaching and teaching.

Weight Follow-up and Body Analysis	Coaching		Teaching		Total	P
	N	%	N	%		
Yes	28	28.00	13	13.00	41	
No	78	78.00	81	81.00	159	
Total	106		94		200	0.55

  

Chi-Square Tests			
	Value	df	Sig. (2-sided)
Pearson Chi-Square	3.125 <sup>a</sup>	1	0.077

Table 6. Distribution of answers of the students at the department of coaching and teaching for the queries about food to be consumed prior to matches.

Which food should be preferably consumed prior to matches?	Coaching		Teaching		Total	P
	N	%	N	%		
Carbohydrate containing	72	72.00	28	28.00	100	0.00*
Protein containing	22	22.00	38	38.00	60	
Vitamin-mineral containing	12	12.00	28	28.00	40	
Total	106		94		200	
Chi-Square Tests						
	Value	df	Sig. (2-sided)			
Pearson Chi-Square	32,667 <sup>a</sup>	2	,000*			

Table 7. Distribution of answers of the students at the department of coaching and teaching for the queries about food to be consumed subsequent to matches.

Which type of food should be consumed after matches?	Coaching		Teaching		Total	P
	N	%	N	%		
Carbohydrate containing	22	22.00	35	35.00	57	0.00*
Protein containing	72	72.00	30	30.00	102	
Vitamin-mineral containing	12	12.00	29	29.00	41	
Total	106		94		200	
Chi-Square Tests						
	Value	df	Sig. (2-sided)			
Pearson Chi-Square	28,906 <sup>a</sup>	2	,000*			

Table 8. Distribution of answers to the question about the average number meals an athlete should have by students at coaching and teaching.

How many meals should an athlete have daily?	Coaching		Teaching		Total	P
	N	%	N	%		
1-2 meals	6	6%	2	2%	8	0.00*
2-4 meals	87	87%	67	67%	154	
4-6 meals	8	8%	22	22%	30	
6 or more	5	5%	3	3%	8	
Total	106		94		200	
Chi-Square Tests						
	Value	df	Sig. (2-sided)			
Pearson Chi-Square	73,829 <sup>a</sup>	3	,000*			

Table 9. Distribution of answers to question about average energy need by students at coaching and teaching.

How much average daily energy do you need	Coaching		Teaching		Total	P
	N	%	N	%		
1000-2000 calories	8	8.00	3	3.00	11	0.00*
2000-3000 calories	36	36.00	57	57.00	93	
3000-5000 calories	56	56.00	0	0.00	56	
I have no idea	6	6.00	34	34.00	40	
Total	106		94		200	
Chi-Square Tests						
	Value	df	Sig. (2-sided)			
Pearson Chi-Square	88,089 <sup>a</sup>	3	,000*			

A significant variance up to significance value  $p=0.05$  is the case between the department where the participant students attend and their answers for the question about food to be consumed after matches. While the students at coaching department set out that, after matches, protein-containing food should be consumed by a weight of 72.00%, the students at teaching department vote for carbohydrate-containing food by a weight of 38.00%.

No significant variance up to significance value  $p=0.05$  is the case between the department where the participant students attend and their answers for the question about the number of meals an athlete should have daily. It has been stated that the students at both departments have figured out that an athlete should have 2-4 meals daily in average by far.

A significant variance up to significance value  $p=0.05$  is the case between the department where the participant students attend and their answers for the question about their daily energy need. It has been observed that while the students at coaching department have stated that their daily energy need is 3000-5000 calories in average by a weight of 56.00%, the students at teaching department have stated that it is 2000-3000 calories in average by a weight of 57.00%.

No significant variance up to significance value  $p=0.05$  is the case between the department where the participant students attend and use of alcohol. It has been observed that the students attending both departments do not use alcohol.

No significant variance up to significance value  $p=0.05$  is the case between the department where the participant students attend and their answers for the question about whether they care about fluid intake

during training. It has been observed that the students attending both departments care about fluid intake during training.

No significant variance up to significance value  $p=0.05$  is the case between the department where the participant students attend and their answers for the question about whether they begin a day with breakfast. It has been observed that the students attending both departments care about beginning a day with breakfast with an identical quantity.

A significant variance up to significance value  $p=0.05$  is the case between the department where the participant students attend and their answers for the question about whether they care about nutrition before and after training. It has been observed that the students at coaching department care about nutrition before and after training by majority of 71.00% while the students at teaching department do not care about the same by a majority of 65.00%.

Table 10. Distribution of answers to question about alcohol use by coaching and teaching department.

Do you use alcohol?	Coaching		Teaching		Total	P
	N	%	N	%		
Yes	15	15%	10	10%	25	0.50
No	91	91%	84	84%	175	
Total	106		94		200	
Chi-Square Tests						
	Value		df		Sig. (2-sided)	
Pearson Chi-Square	,046 <sup>a</sup>		1		,831	

Table 11. Distribution of the answers by the students at the department of coaching and teaching for the query regarding if they care about drinking liquid during training.

Do you care about drinking liquid during training?	Coaching		Teaching		Total	P
	N	%	N	%		
Yes	84	84%	70	70%	154	0.12
No	22	22%	24	24%	46	
Total	106		94		200	
Chi-Square Tests						
	Value		df		Sig. (2-sided)	
Pearson Chi-Square	1.807 <sup>a</sup>		1		0.179	

Table 12. Distribution of the answers by the students at the department of coaching and teaching for the query regarding if they begin a day with breakfast.

Do you start the day with breakfast?	Coaching		Teaching		Total	P
	N	%	N	%		
Yes	59	59.00	42	42.00	101	0.79
No	47	47.00	52	52.00	99	
Total	106		94		200	
Chi-Square Tests						
	Value		df		Sig. (2-sided)	
Pearson Chi-Square	2.420 <sup>a</sup>		1		0.120	

Table 13. Distribution of the answers by the students at the department of coaching and teaching for the query regarding if they care about nutrition before and after training.

Do you care about nutrition before and after training?	Coaching		Teaching		Total	P
	N	%	N	%		
Yes	71	71.00	29	29.00	100	
No	35	35.00	65	65.00	100	
Total	106		94		200	0.00*

  

Chi-Square Tests			
	Value	df	Sig. (2-sided)
Pearson Chi-Square	25.920 <sup>a</sup>	1	0.000*

Table 14. Distribution of the answers by the students at coaching department and teaching department for query about the relation between nutrition and success.

Evaluation of Relation Between Nutrition and Success in Sports	Coaching		Teaching		Total	P
	N	%	N	%		
Closely Related	100	100.00	67	67.00	170	
No Relation	6	6.00	27	27.00	30	
Total	106		94		200	0.00*

  

Chi-Square Tests			
	Value	df	Sig. (2-sided)
Pearson Chi-Square	35.294 <sup>a</sup>	1	0.000*

A significant variance up to significance value  $p=0.05$  is the case between the department where the participant students attend and their evaluation of the relation between nutrition and success in sports. It has been observed that the students at coaching

This study has been carried out to investigate awareness of the students at the department of coaching and sports teaching regarding food habits and to detect a difference between two groups. Success both in sports for health and professional sports can be maintained by utilizing the balance of nutrition and energy in a good manner (25).

Orienting the students at coaching department and teaching department for an evaluation of their knowledge of athlete nutrition, 63% of students at coaching department and 55% of students at teaching department have considered as sufficient. This result shows that the students at both departments have a sufficient knowledge of nutrition.

A significant variance is the case between the department where the participant students attend and their answers for the question about food to be consumed prior to matches. While the students at coaching department set out that, prior to matches, carbohydrate-containing food should be consumed by a weight of 70.00%, the students at teaching department vote for protein-containing food by a weight of 40.00%. While the students at coaching department set out that, after matches, protein-containing food should be consumed by a weight of 70.00%, the students at teaching department vote for

department have stated that nutrition and success in sports are closely related by a majority of 100.00% while the students at teaching department have stated no such relation is there by a rate of 27.00%.

## DISCUSSION

carbohydrate-containing food by a weight of 35.00%. Bayraktar et al. stated 50.8% of the athletes, Goral stated 67.2% of the athletes, Bilgic et al. stated 49% of the athletes considered that carbohydrate containing food should be consumed prior to matches (5,7,15). The finding in our study reveals results parallel to other studies in the literature.

A significant variance is the case between the department where the participant students attend and their answers for the question about their daily energy need. It has been observed that while the students at coaching department have stated that their daily energy need is 3000-5000 calories in average by a weight of 55.00%, the students at teaching department have stated that it is 2000-3000 calories in average by a weight of 59.00%. The study carried out by Bozkurt, revealed that 39.6% of the athletes said they had 3000-3500 kcal of daily energy need while 34.8% said that they had 4500 kcal of daily energy need (8).

No significant variance is the case between the department where the participant students attend and use of alcohol. The students attending both departments have stated that they do not use alcohol. This is similar to the study carried out by Ozturk, regarding food habits of athletes, which states that 80.0% of athletes do not use alcohol (23).

No significant variance is the case between the department where the participant students attend and their answers for the question about whether they begin a day with breakfast. It has been observed that the students attending both departments care about beginning a day with breakfast. A similar study carried out by Ozturk, revealed that 90.0% of athletes regularly had breakfast (23). This study does not have similar results to ours with respect to this case.

A significant variance is the case between the department where the students attend and their answers for the question about whether they care about nutrition before and after training. It has been observed that the students at coaching department care about nutrition before and after training by majority of 68.00% while the students at teaching department do not care about the same by a majority of 68.00%. Similar to this finding, a study carried out by Goral revealed that 95.8% of athletes cared about nutrition before and after training (16). Another study carried out by Bayraktar et al. showed that 73.8% of athletes cared about nutrition before and after training while a study by Tekin and Arslan showed that 72.2% of athletes cared the same (5,4). The study by Goral revealed that 4.2% of footballers do not care about it, but this study demonstrates that just 1.1% of footballers do not care (5). This finding supports our study with respect to the students studying at the department of coaching but not with respect to the ones at the department of sports training.

A significant variance is the case between the department where the students attend and their evaluation of the relation between nutrition and success in sports. It has been observed that all the students at coaching department have stated that nutrition and success in sports are closely related by a majority of 100.00% while the students at teaching department have stated no such relation is there by a rate of 30.00%. Similar to results of this study, according to the studies carried out by Goral, Bayraktar et al. and Tekin & Arslan, are respectively 87.2%, 81.2% and 91.1% (16,5,4). These studies' results are in line with ours.

No significant variance is the case between the department where the students attend and their answers for the question about the number of meals an athlete should have daily. It has been stated that the students at both departments have figured out that an athlete should have 2-4 meals daily in

average. A significant difference has been detected between two groups.

In conclusion, no significant difference has been detected between two groups involving students studying at the department of coaching and the department of sports teaching, either of which are affiliated to the Agri Ibrahim Cecen University School of Physical Education and Sports.

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