

# An Examination of Nutritional Approaches and Stress

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**Summary.** For athletes, nutrition is very important not only for sporting success but also with regard to health. The aim of this study is to determine nutritional approaches and stress levels in athletes. A total of 420 athletes aged 17-24, studying at Ondokuz Mayıs University, took part in the study. The participants' BMI was calculated from their age, height and body weight, and a nutritional approach test questionnaire and perceived stress scale were applied. For the statistical evaluation, student t-test, one-way variance analysis and LSD tests were used. The average ages of the students were 22.13 for females and 22.85 for males. BMIs were determined as 22.00 kg/m<sup>2</sup> for females and 24.15 kg/m<sup>2</sup> for males. Nutrition scores were calculated as 16.49 for females and 18.06 for males. In the nutrition questionnaire, according to the gender of the students evaluated, no statistically significant difference was determined among ages ( $p > 0.05$ ), whereas statistically significant differences were determined among heights, body weights and BMI values ( $p < 0.001$ ). While the differences between athletes' nutrition scores were not found to be statistically significant according to gender ( $p > 0.05$ ), the total score distributions in the nutritional approach test were found to be statistically significant according to BMI ( $p < 0.05$ ). 87.7% of the athletes believed that they had the correct body weight for the sport that they played. In the stress category, the nutrition score was 21.4 in the group with stress scores of 20 and below, while the nutrition score decreased to 16.48 in the group with stress scores between 21 and 30. The nutrition score in the group with stress scores over 30 was determined as 13.85. It was established that nutrition scores differed significantly according to stress category ( $p < 0.05$ ). In conclusion, it was found that both male and female athletes' nutritional approaches were at a good level, and that as stress levels decreased, nutrition scores increased. It can be said that the athletes' nutritional knowledge and behaviours were at adequate levels. It is recommended that further information is given with regard to nutrition, health and stress reduction.

**Keywords:** Sport, athletes, nutrition

## Introduction

Nutrition is defined as conscious behaviour with which the correct nutrients are consumed for maintaining a good quality life and for preserving and improving health. Nutrition for athletes, however, means that athletes consume nutrients in an adequate and balanced way in accordance with their gender, age and daily physical activity, by making conscious adjustments during their training and competition periods according to the branch of sport that they play (1).

Proper nutrition is an important part of sport performance for young athletes, 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. To optimize performance, young athletes need to learn what, when and how to eat and drink before, during and after activity (2-3). Research supports that proper nutrient intake corresponds to peak physical performance and that nutrient deficiencies may lead to diminished athletic performance. In the past, only

elite athletes were concerned with the role of nutrition in athletic performance. Today, most athletes understand that proper fuelling through optimal nutrition is an important and integral part of a training program. Nonetheless, most collegiate athletes remain poorly educated about sound nutritional practices and are unskilled in making appropriate daily nutritional choices (4). An athlete will try to meet his/her nutritional needs outside camps with his/her own knowledge and means. Therefore, the information habits that he/she forms with regard to nutrition must be based on healthy foundations (5).

Athletes do not demonstrate a sufficient knowledge of nutrition for their performance needs despite a reported high interest in nutrition. In general, athletes tend to obtain nutrition information from magazines, health food store personnel, coaches, gym owners, teammates, parents, supplement manufacturers and other athletes. Due to the fact that athletes know that they have unique nutritional needs, they often seek guidance or accept prescribed diets. They tend to turn to resources other than health professionals, which may lead to continued lack of good nutrition education. Unfortunately, many of these sources are not suitable, and at times the information imparted is unreliable and only adds to the myths surrounding nutrition that may affect athletes' diet (3, 7). One of the primary strategies for assisting athletes to consume an adequate diet is the provision of nutrition education. The aim of diet education is to address the need for athletes to know what to eat and how to select and prepare a wide variety of foods necessary for a healthy diet (8, 9). For this reason, appropriate information regarding diet should be provided to athletes so they can make healthy food choices (3).

Nutrition knowledge is also influenced by beliefs about food and nutrition, which may not be evidenced based but rather steeped in cultural or present secular thinking (11). Evolving nutrition research, food product advertising, the complexity of behaviours needed to achieve healthy eating and strong media and Internet coverage of nutrition issues make it challenging for clear nutrition messages to translate at a population level (8).

Although individual physiological and psychological factors, training status, nutrition status, health, environmental factors and sport-specific character-

istics all play a role in the achievement of high-level sporting performance, it is difficult to say which factor is more effective in maximum performance. However, it is an undeniable fact that it is impossible for an athlete who does not have a correct and good-quality diet to expect high performance (12). An appropriate diet for an athlete aims to not only maximize exercise capacity and performance during competition but also promote physiological adaptations to training, assist in recovery and protect immune function and overall health. Modifications to dietary intake can alter body composition which is also required by most athletes to enhance performance (9). At the same time, timely determination of regular physical activities and nutritional habits made during childhood and adolescence, and attempts to adjust those that are negative (13) can be transformed into a healthy and good-quality philosophy of life.

To develop health education and health promotion initiatives targeting students, it is important to have detailed knowledge about the health of students and their health related behaviours, and factors that influence these such as knowledge, attitudes, personal resources, motivation for a healthy lifestyle and social support (14). Correct dietary habits not only add positive value to physical appearance in athletic and sedentary young people, they can also facilitate fulfilment of metabolic needs, acquisition of a healthy frame of mind and coping with sources of stress.

There is widespread scientific acceptance of a relationship between psychological stress and eating behaviours and increased or decreased intake of food (15, 16). In research on eating disorders, stress is considered as a factor that might disturb food intake regulation, and is usually analysed in relation to individual differences in weight or dietary restraint (17).

Stress is a term that is used to define the body's physiological and/or psychological reaction to circumstances that require behavioural adjustment (18). Stress is formed as pressure and anxiety and the situation of trying to protect inner balance. Stress is the cause of mental and physical tension. The perceived levels of stress are determined in relation to how people give meaning to them and how they give explanations for them (19). Overall, perceived stress is linked to reduced life satisfaction (20).

Increased stress levels have negative consequences on both the body and the mind. Some of the psychological problems that can occur secondary to stress include anxiety, depression, and engagement in high-risk behaviour. Furthermore, the physiological health problems that can occur are numerous, as stress, through increased cortisol secretion, promotes increased food intake, especially intake of sweet and nutrient-poor foods. Hence, increased stress may increase the risk of obesity and its comorbidities, which include hypertension, metabolic syndrome, heart disease and diabetes (21).

Especially in athletes who are physically active, in order to compensate for the high energy consumption resulting from exercise, the acquisition of healthy dietary habits is essential not only for sporting success but also in terms of physical, physiological and psychological health. This study was conducted with the aim of examining athletes' dietary habits and stress levels.

## Materials and Methods

A total of 420 athletes aged 17-24, studying at Ondokuz Mayıs University, took part in the study. The participants' BMI was calculated from their age, height and body weight, and a nutritional approach test questionnaire and perceived stress scale were applied. The questionnaires were applied to participants who were actively involved in a branch of sport. Questionnaires that were incompletely or incorrectly filled in were excluded from the evaluation. Voluntary consent forms were obtained from the participants, in which they were informed about the aim and content of the study.

Nutritional habits questionnaire: the questionnaire consists of 12 questions. In preparing the survey questions, questions whose validity had been established in previous studies on the subject were utilised. Scores of 0, 1 and 2 are given according to the answers given to the questions in the scale, and the scores are added up. If the distribution of scores in the nutritional approach test questionnaire is between 0-8 points, then dietary habits definitely need to be improved. A score of 8-15 indicates that small changes in dietary habits need to be made. If the score is between 15-25, then dietary habits are generally good. A score of 24 can be considered as perfect (22).

Perceived stress scale: This scale was adapted to Turkish society by Bilge et al. (2009). Each item in the scale has a score of 1 to 5, which comprises 10 items. Thus, the items are scored from 1-5 points, and these are never (1 point), almost never (2 point), sometimes (3 point), fairly often (4 point), and very often (5 point). The scale consists of 10 items and is easily understandable. Four items, 4,5,7 and 8, are scored as positive, while six items, 1,2,3,6,9 and 10, are scored as negative. It is possible to obtain a total score from 0 to 50. The primary purpose of the scale is to measure levels of stress. A high total score means that the perceived level of stress is high (24). In the present study, the perceived stress scale had internal consistency (Cronbach's alpha) of  $\alpha=0.77$ .

## Statistical Analysis

SPSS 21 software package was used for the statistical data. The Kolmogorov-Smirnov test was performed to test whether the data were normally distributed or not, and it was determined that the data showed normal distribution. Independent t-test and one-way variance analysis were used, and to determine the groups that were different, the LSD test was used. Significance level was accepted as  $p<0.05$ .

## Results

The data obtained in the study are presented below.

## Discussion

Assessment of nutrition knowledge and its impact on dietary intake is important for the development and evaluation of nutrition education for athletes. The present systematic research examined the relationship between nutrition knowledge, dietary intake and stress in university students. In the study, the findings were discussed in order. However, the link between nutrition knowledge and dietary intake is complex and may be influenced by many other factors including taste and food preference, and cultural, religious, and family

beliefs (25). Nutrition education programmes are designed to improve nutrition knowledge, with the aim of supporting sound dietary intake within the community or a specific target population (26).

In the present study, the aim of which was to reveal the nutritional approaches and stress status of university students who play sports, it was determined that the average age of students in sports science was 22.13 for females and 22.85 for males; that their average heights were 164.22 cm for females and 173.14 cm for males; and that their body weights were 59.18 kg for females and 72.29 kg for males.

Nutrition scores were revealed as 17.06 points for females and 17.49 points for males (Table 1). According to the results of the nutrition questionnaire evaluation, while no statistically significant differences were observed in age or nutrition scores according to gender ( $p>0.05$ ), statistically significant differences were found in height, body weight and Body Mass Index values according to gender ( $p<0.001$ ).

In a study by Vançelik et al. (2007), it was revealed that mean dietary habit scores and mean dietary knowledge scores were higher in male university students than in female university students (27). Ermiş et al. (2015), in a study conducted with students in health-related departments, found that students in these departments were better informed about health and nutritional habits than students in other departments (28). Moreover, in Akil and Gürbüz's (2010) study, it was determined that there were significant differences in dietary knowledge levels of national and non-national athletes ( $p<0.001$ ) (29).

In the study, it was revealed that 35% of athletes had taken nutrition classes, while 65% had not, and that there was a significant difference between those who had received nutrition education and those who had not. In a study by İmamoğlu and colleagues (2010), differences were found between nutrition scores of students studying in the physical education and sport department and those studying in different branches who were actively involved in sport, and this situation was evaluated as the fact that the athletes' food consumption levels were below the required amount and that they had incorrect dietary habits (30). In a study by Yahia and colleagues (2016), the total score for the nutritional knowledge section was 8, and the

**Table 1:** Age, height, body weight, BMI and nutrition scores according to gender

	Gender	n	Mean	sd	t
Age (years)	Female	205	22.13	3.67	0.25
	Male	215	22.85	3.28	
Height (cm)	Female	205	164.22	5.53	-10.21**
	Male	215	173.14	5.88	
Body weight (kg)	Female	205	59.18	7.69	-10.12**
	Male	215	72.29	8.21	
BMI (kg/m <sup>2</sup> )	Female	205	22.00	3.18	-7.69**
	Male	215	24.15	3.29	
Nutrition scores	Female	205	17.06	2.07	0.34
	Male	215	17.49	2.07	

\*\*  $p<0.001$

**Table 2:** Total score distribution for nutritional approach test questionnaire according to Body Mass Index

BMI	n	Mean	sd	F/LSD
20 and under (1)	41	14.01	2.06	3.68*
21-23 (2)	167	20.21	2.07	
24-26 (3)	114	20.22	2.07	1.4<2.3
27 and over (4)	98	14.57	2.04	

$p<0.05$

**Table 3:** Nutrition scores of sedentary women according to stress points

Stress points category	n	Mean	sd	F/LSD
20 points or under (1)	240	21.4	2.16	3.27*
21-30 points (2)	111	16.48	2.14	1>2>3
Over 30 points (3)	69	13.88	2.21	
Total	420	17.25	2.21	

mean score for females was  $5.5 \pm 1.28$  and for males,  $5.1 \pm 1.31$  ( $p=.053$ ) (31). In another study, Koç and Türkçapar (2015) revealed that wrestlers paid attention to their diets and were aware of the importance of nutrition for success in sport (32). In their study, Şener and İmamoğlu (2018) stated that the nutritional level of students receiving sports education was "good" (22).

The mean nutrition questionnaire scores of the participants were determined as 17.06 for females and 17.49 for males. Examining the questionnaire evaluation scores in the study, it is seen that a score of 15-24 points was assessed as that "dietary habits are generally

good, but not perfect" (22). According to the results obtained in the study, the students' nutritional habits can be regarded as "good". The results of the aforementioned study support our own research findings. It is known that receiving nutrition education has a positive effect on nutritional knowledge. In the study, the fact that the athletes' nutritional habits were good, as well as the fact that no difference was found between their nutrition scores, that the athletes were students in the sports science faculty and that in these departments, they had taken classes related to the field of nutrition and health, may be considered to show that they were sensitive towards and gave importance to the subject. Nevertheless, it can be said that some participants also needed to make small changes to their diets.

In the present study, Body Mass Indexes were determined to be 22.00 kg/m<sup>2</sup> in females and 24.15 kg/m<sup>2</sup> in males. A statistically significant difference was determined in the distribution of total scores in the nutritional approach test according to Body Mass Index values ( $p < 0.05$ ). Al-Rethaiaa and colleagues (2010), in a study conducted on Saudi Arabian university students ( $n=357$ ) with average age of  $20.4 \pm 1.3$ , average height of  $168.8 \pm 6.1$  cm and average body weight of  $69.9 \pm 15.6$  kg, determined that the participants had a mean BMI value of  $168.8 \pm 6.1$ .

In Lebanon, the prevalence of overweight and obesity among male college students was 37.5% and 12.5%, respectively. In Kuwait, the corresponding percentages were 32% and 8.9%, while in the United States and the United Arab Emirates overweight and obesity accounted for about 35% of male college students. In contrast, only 7.9% of Iranian male college students were above the normal body weight. That rate decreased to 2.9% among Chinese college students with a percentage of obesity as low as 0.4% (33). In the study by Türkmen and İmamoğlu (2016), a statistically significant difference was determined in the distribution of scores in the nutritional approach test according to Body Mass Index (34). In Güneş and Ersoy's (1997) study with active athletes, mean Body Mass Indexes were determined to be within the recommended limits, at  $24.65 \pm 0.43$  kg/m<sup>2</sup> in males and  $21.34 \pm 0.71$  kg/m<sup>2</sup> in females (35). According to Body Mass Index, while those over 25 kg/m<sup>2</sup> are not accepted as normal with regard to health, a value of 26 kg/m<sup>2</sup> can be ac-

cepted as normal for athletes due to their high muscle mass (30). The fact that the numbers of participants in the group with mean BMI values of 20 kg/m<sup>2</sup> and under and of 27 kg/m<sup>2</sup> and over were lower than the numbers in the group with values of 21-23 kg/m<sup>2</sup> and 24-26 kg/m<sup>2</sup> can be interpreted as that participants in that group paid less attention to their diets.

In the present study, when nutrition scores according to stress category were examined, it was seen that while the nutrition score in the group with stress scores of less than 20 was 21.4, the nutrition score in the group with stress scores between 21 and 30 fell to 16.48. The nutrition score in the group with stress scores of over 30 was determined as 13.85. It was revealed that nutrition scores differed significantly according to stress category ( $p < 0.05$ ).

It is known that perception of stress can be affected by many personal and environmental factors (23). In the study by Deryahanoğlu and colleagues (2016), it was determined that there were significant differences in perceived stress, depression, and the way a person perceived his/her body, according to whether participants did sport or not (19). In their study, Yamak and colleagues (2016) stated that increasing sporting events during the development of adolescents and participation in these by adolescents contributed to their development (36). In the study conducted by İmamoğlu and colleagues (2018), the stress levels of university students receiving sports education was found to be low (37). In a study made by Ekici (2013), it was determined that students' appetite levels changed in states of joy or unhappiness, and that especially when they were unhappy, their appetite for food was shown as a negative diet preference (38). Excess eating is frequently associated with emotional stress. These people eat a lot of food in a short space of time and while doing this, they lose control (39). In another study, it was stated that with regard to suppressing emotions, individuals can consume an excess amount of the food that they love and that regulating their emotional state has a positive effect on their eating behaviours (40). Van Strien and colleagues (2013) revealed that individuals with a tendency for emotional eating preferred sweet food to salty food (41).

Eating behaviour is observed in the majority of obese patients after distress, unhappiness and irritabil-

ity (42). This type of behaviour can be regarded as people's being easily affected by life events and not forming sufficient defences against these. We can say that as stress scores increase or as people's state of stress increases, nutrition scores decrease. The results of this study support the idea that adolescents' psychological wellbeing is related less to their real or observable excess weight than to their satisfaction with their body image (43).

In the present study, 87.7% of the students stated that they had the correct body weight for the branch of sport that they played, while only 12.3% regarded themselves as fat or thin. In a study carried out in America on adolescents, 61.0% of participants stated that they were not satisfied with their bodies and that they wished to be slimmer (44). Şener and İmamoğlu (2018) reported that 88.9% of students receiving sports education had the correct body weight for the sport that they played (22). In similar studies conducted in Turkey, it was reported that 76.4% of students wished to gain or lose weight and were not happy with their weight, and that those wishing to lose weight were in the majority (63.2%) compared to those that wanted to gain weight (45). In another study, it was revealed that 56.0% of participants were not satisfied with their general appearance and that 89.0% wished to lose weight (46). Over half of the study group (54.0%) regarded themselves as having a normal weight, while the remainder either considered themselves as thin (23.9%) or overweight/fat (22.1%). In a study made with adolescents, it was determined that 43.0% of individuals tried to lose weight, while 19.0% of them tried to preserve their current weight (47). In another study, it was revealed that 29.9% of the study group wanted to be slimmer (48). In a study conducted by Kaneko and colleagues (1999), it was stated that 84% of girls aged 17 described themselves as "fat" or "very fat", that 32% of girls with an approximately 90% standard body weight performed different practices to lose weight, and that Japanese adolescent girls gave increased importance to their body weight, figure and slimming as their adolescence progressed (49). When an athlete with a body weight above normal is compared with an athlete whose weight is within the recommended limits, it is seen that the former needs to spend more energy for the same endeavour and that he/she exerts more spare power. In

other words, a fat person is able to make a specific body movement only by spending more energy (50).

In the present study, the findings revealed that the majority of participants were satisfied with the body weight that they had, and that there were fewer participants who wished to lose weight. Dietary habits are established in early life and can have a considerable effect on the health of individuals in the long-term (51). The fact that our participants had correct body perceptions with the body weights that they had supports the idea that their self-perceptions were increasing and that they wanted to continue this.

54.5% of participants stated that they honestly evaluated the benefits of what they ate and paid attention to what they ate, while 38.1% of them stated that they ate whatever they liked and that they considered that this had very little effect on their performance and health.

Students tend to eat fewer fruits and vegetables on a daily basis and report high intake of high-fat, high-calorie foods (52). Sağlam (1993), in a study made with professional footballers, reported that the athletes consumed meat at a rate of 23.6%, chicken-fish at a rate of 4.1%, legumes at a rate of 21.4% and eggs at a rate of 51.3% daily (50). Numerous studies have shown that college students often have poor eating habits. Otherwise, in a study examining food consumption frequencies of participants who took part in the sport of bodybuilding and who used or did not use nutritional ergogenics, Özyılmaz (2013) reported that among participants who used nutritional ergogenics, 46% consumed chicken 4-5 times a week, 86.7% ate eggs 6-7 times a week, and 86.7% consumed milk and yoghurt once a week, while among those who did not use nutritional ergogenics, 53.3% consumed eggs 2-3 times a week, 66.7% ate chicken 2-3 times a week, and 53.3% consumed milk and yoghurt 2-3 times a week (53).

It was reported that 53.3% of participants consumed beef and lamb, cream, pies (fruit-meat), pastry, milk, cheese and fat, and that 75% of them occasionally consumed desserts and sweets (54). In Sağlam's (1993) study, it was determined that 99.3% of footballers ate bread and 41.7% of them ate bulgur-pasta every day. In Hull and colleagues' (2016) study, it was revealed that 49.2% of participants consumed sweet food 1-2 times within a weekday period. Moreover, in a study by

Coutinho and colleagues (2016), it was revealed that 30% of athletes consumed sugary drinks five or more times per week (55).

It was reported that 52.8% of participants ate fibrous foods, that 45.4% of them preferred vegetables like beans, legumes and peas as part of their diet, that 18.5% of them did not like high-fibre foods such as bread made with unsifted flour, and that 18.2% of participants only rarely used vegetables like beans, legumes and peas as part of their diet. In Hull and colleagues' (2016) study, it was stated that 54.1% of athletes consumed legumes. In Coutinho and colleagues' (2016) study, it was reported that 95% of athletes consumed legumes five or more times per week, whereas 74% of them consumed vegetables once a week or less often.

It was determined that 48.9% of participants in the study stated that they did not believe they needed to take vitamins, strength tablets and minerals and that they believed they could consume these substances with a normal diet, while almost half of them stated that they did not consider their daily nutrition to be sufficient and that they took vitamin and mineral pills.

In a study by Aljaloud and colleagues (2013), it was revealed that 6.6% of participants did not use nutritional ergogenics, while 93.3% used nutritional ergogenics (56). In Öztürk's (2006) study, it was determined that the rate of using products like vitamin-mineral supplements, energy drinks and sports drinks was much lower among amateurs than among professionals (57).

In a study by Braun and colleagues (2009) conducted on young athletes in Germany, it was reported that 80% of the athletes had used or were using dietary supplements, and that among these, the most commonly used were mineral supplements (87%), followed by vitamins (76%), carbohydrates (64%), and protein/amino acid and fatty acid supplements (6%) (58). Dascombe and colleagues (2010) reported in their study that 87.5% of athletes used at least one form of dietary support (43.1% vitamin supplements) (59).

In the present study, 26.4% of participants ate whatever was put in front of them. 20.6% ate what they found without examining the contents. The percentage of participants eating non-fattening foods was found to be 46.7% (Table 4). Adequate and balanced nutrition is one of the most important factors that form the

basis of sporting success. The more an athlete acquires an adequate and balanced diet as a lifestyle and habit, the easier it becomes for that athlete to achieve the desired success (60).

College is a critical period when lifelong lifestyle habits are formed which may have a lasting impact on development of chronic diseases (55). It is reported that athletes do not have adequate dietary knowledge and that they need to be educated and made aware of matters related to basic nutrition and food groups by experts in the field of nutrition such as dieticians (61). In a study by Barr (1987) conducted with a total of 208 university students (79 sportive and 129 sedentary), it was revealed that the athletic group used nutrition sources more consciously and that their nutritional knowledge levels were higher than those of the other group (62). In Yıldırım and colleagues' (2011) study, it was determined that nutrition education and knowledge levels of physical education and sports students were inadequate, that they often skipped meals, that most of the students ate only two meals, and that the rate of students having regular breakfasts was very low (63). In a study carried out on 1,455 athletes, Yüceçag and colleagues determined that athletes had dietary problems and that their knowledge of correct nutrition was insufficient (64). In another study in which 712 male and female university students took part, Orak and colleagues (2006) reported that the majority of students ate only two meals, and that they often skipped their morning meal (65). In Janout and Janoutova's (2004) study, it was reported that while 60.2% of students ate three meals, 33.3% of them skipped meals, and that breakfast was ranked first among the skipped meals at a rate of 62.9% (66). In a study by Güleç and colleagues (2008), it was revealed that a high percentage of the participants skipped meals and that the most frequently skipped meal was breakfast (67). Driskell and colleagues (2005) stated that 57.11% of individuals aged 18-25 had breakfast, that 19.9% of them had morning snacks, that 87.4% had lunch, that 4.4% had elevenses, that 95% had dinner and that 72.82% ate food before going to bed at night (68). Although breakfast is the most often skipped meal in our country, in studies conducted with groups of adolescents in different countries, rates of having breakfast of 87% in Portugal, 88% in Spain, and 78% in Italy

**Table 4:** Percentage distribution of responses given to nutritional approach test questionnaire

	% distribution
<b>1-How would you describe yourself?</b>	
Fat/thin	12.3
At the correct weight for the sport played	87.7
<b>2-How would you describe yourself according to one of the following?</b>	
Eating whatever I like and believing that this has very little effect on performance and health	38.1
Buying healthy food from shops, only eating natural food and sometimes dependent on various eating habits	7.4
Honestly evaluating the benefits of what I eat and paying attention to what I eat	54.5
<b>3-How often do you consume one or more than one of these foods in your normal diet: Beef and lamb, cream, pies (fruit or meat), pastry, milk, cheese, fat?</b>	
Most days	53.5
Never or rarely	7.6
Occasionally or sometimes	38.9
<b>4-Are you fond of desserts at mealtimes, do you use sugar and do you add this to your food?</b>	
Yes- always	13.7
No- never	11.3
Yes- but occasionally	75
<b>5-Do you consider that you eat high-fibre foods in your diet?</b>	
No- I do not like high-fibre foods like bread made from unsifted flour	18.5
Yes- Because products made with flour are found in our breakfast	28.7
Yes- Because we eat a number of high-fibre foods	52.8
<b>6-Do you use foods such as beans, legumes and peas as part of your diet?</b>	
Not really- only light foods and occasionally	18.2
Basically, yes- not heavy foods but light foods	45.4
Yes, often- both main meals and drinks (tea)	36.4
<b>7-Do you regularly use vitamins, strength pills and drugs to meet your needs?</b>	
Yes- I really believe in them and use several different kinds	17.4
Yes- I use only complex vitamin supplements	33.7
No- I believe that we should obtain all our nutrition from our normal diet	48.9
<b>8-How often do you use suitable foods as part of your normal diet?</b>	
Most of the time- I do not use frozen or processed foods	24.3
Not in the slightest- I believe that they are harmful	34.7
Sometimes- Basically frozen vegetables and fish	41
<b>9-Are you aware of the amount and variety of carbohydrates that you take in daily?</b>	
Yes- I pay particular attention to the variety and quantity of all the carbohydrates I eat and am conscious of maintaining the necessary balance	33.1
Yes- I try to eat foods with more complex carbohydrates	28.7
No- I eat whatever is in front of me without looking at the contents	38.2
<b>10-Do you eat a varied and balanced diet?</b>	
Yes- Always varied every week	29.2
Only for lunch; breakfast and evening meal are always the same	39.6
Only sometimes, depending on what is in the cupboard	31.2
<b>11-Do you have anything to say about the food you eat?</b>	
Nothing- Simply, I eat whatever is put in front of me	26.4
Yes- I make do according to my and my family's budget	26.2
Yes- I choose a large part of the food that I eat	47.4
<b>12- How often do you regulate your diet (such as not eating the cream of yoghurt, not eating fatty foods)?</b>	
Never- I eat food without looking at the contents	20.6
Rarely- with adequate but not excess fat content or fattening food	42.7
I always arrange a diet that reduces foods containing fat and increases complex carbohydrate contents	36.7

are reported in the literature (69). Students need to be healthy, physically active, and well-nourished in order to succeed in their academic studies. Nutrition education can have a profound impact on dietary habits and food choices of many college students. Thus, college represents a key opportunity for students to learn new skills and foster healthy lifestyle practices. Students are empowered when they have the necessary knowledge and skills needed to make healthy lifestyle choices (31).

In conclusion, it was determined that the nutritional approaches of both male and female athletes receiving sports education were good, and that as stress levels fell, nutrition scores increased. Although the athletes' nutritional knowledge and behaviours were adequate, it is recommended that easily applicable and practical knowledge about health and stress reduction that will be beneficial for increasing life quality should be provided.

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