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Examination of nutritional attitudes, self-efficacy and behavior patterns according to gender and age in child athletes

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Abstract
The aim of this study was to examine the nutritional attitudes, self-efficacy and behavior patterns of young and child athletes according to gender and age. Seventy-six children and young fencing athletes aged 9-17 years (girls: 30 and boys: 46), who attended a camp in Canakkale Onsekiz Mart University campus in Dardanos, participated in the research. The research measurements and tests were carried out by the Sports Sciences and Sports Medicine Research and Application Center. The height, weight, and body mass index (BMI) of the athletes were calculated and Nutritional Self-efficacy Scale, Nutritional Attitude Scale and Nutritional Behavior Scale were used for nutritional behavior and opinions. The t test and the Mann Whitney U test were used to determine the differences between age groups and genders. Pearson correlation analysis was used for correlation between BMI index and age. There was no significant difference between nutritional attitude score, self-efficacy score and nutrition behavior scores of boy and girl athletes ($p>0.05$). There was a significant difference between nutrition attitude scores between 9-11 and 12-17 year olds ($p<0.05$). There was no significant difference between self-efficacy and nutritional behavior scores ($p>0.05$). The relationship between BMI and attitude score was found to be significant (p=0.023, $p<0.05$). There was a significant relationship between age and nutrition attitude score (r=-0.366, p=0.001) and age and nutrition behavior score (r=-0.268, p=0.019).

Keywords: Nutrition, fencing, sport, attitudes

Introduction
Currently, one of the greatest problems is the frequent occurrence of eating disorders in children and young people. The factor leading to eating disorders appears to be that eating attitudes are affected by many factors especially in this period [6]. The result of eating disorders is unhealthy nutritional status. Unhealthy eating habits begin in the childhood period and continue throughout life [3, 4, 8, 9]. Variations in living habits such as the increase in high-energy food consumption, increase in popularity of eating out and increase in popularity of an environment of reduced physical activity in the last 20 years have lowered the chance of children developing and maintaining balanced nutrition and a healthy life style [1].
Healthy life awareness begins in the childhood and young adult period. Children and young people in the process of growth and development may become more healthy adults with healthy nutrition [7]. It is important to consume basic nutritional elements and water in a balanced manner to ensure physical growth and development in athletic children, for them to comply with training and maximize training effects. Additionally, the importance of nutrition in sport, the association between work efficiency and nutrition was determined in research [11]. The daily energy requirements of active athletes according to age, gender, form and duration of training was revealed to be between 3000 to 7000 calories, with 55-60% of daily energy from carbohydrates, 25-30% from fat and 10-15% from proteins [10]. Young athletes expend more energy compared to adults. Iron, calcium and phosphorus minerals and vitamin D requirements are 50-80% more compared to adults [5]. Care should be taken for regular and balanced nutrition to meet these requirements. This research aimed to investigate the nutritional attitudes and behavior of athletic children and young people according to gender and age.

Material and Methods

The research included a total of 76 children and young fencing athletes, 30 girls and 46 boys, aged from 9-17 years attending a training camp in Dardanos campus of Çanakkale Onsekiz Mart University who volunteered to participate. The measurements and tests in the research were completed by the Sports Sciences and Sports Medicine Health Research and Application Center.

The research measured the height and weight of children and young people, calculated BMI and used the following scales.

Pediatric Nutritional Self-Efficacy Scale: The "Pediatric Nutrition Self-Efficacy Scale (PNSES)" with language-scope validity completed by Öztürk (2010) was used to determine information and thoughts about food selection among children. The scale comprises 15 items. High total points mean high self-efficacy [15, 16].

Nutritional Attitude Scale: The nutritional subscale of the "Pediatric Attitude to Developing Heart Health Scale" was used to measure the affective response of children [13]. The scale comprises four subscales. The nutritional subscale comprises 4 items. High total points obtained from the scale show high positive attitudes.

Nutritional Behavior Scale: The Turkish form prepared by Öztürk (2010) was used to determine children's nutritional consumption. This form comprises 14 items with pictures with nutritional choices of low fat/salty and high fat/salty. Children are shown comparative foods and asked which of the two choices they eat more (often). High total points obtained on the scale show healthy nutritional habits [15, 16].

The t test and Mann Whitney U test were used to determine differences between age groups and gender. The correlation between BMI and ages was examined with Pearson correlation analysis. Significance level was taken as 0.05.

Results

The data obtained related to nutritional habits and behavior of 76 fencing athletes participating in the research are presented in the following tables.

Table 1: Distribution of age, height, weight and mean BMI according to gender

Variables	Gender	n	$\bar{X}$	±
Age (year)	Girl	30	13.10	2.13
	Boy	46	11.84	1.82
Height (cm)	Girl	30	158.53	10.11
	Boy	46	157.17	13.56
Weight (kg)	Girl	30	47.82	11.02
	Boy	46	46.84	12.78
BMI (kg/m2)	Girl	30	18.80	2.77
	Boy	46	18.60	2.66

Table 2: Nutritional scale results according to gender

Scale	Gender	n	$\bar{X}$	±	t	p
Nutritional Attitude Scale	Girl	30	10.73	5.07	-.624	0.535
	Boy	46	11.41	4.33		
Nutritional Self-Efficacy Scale	Girl	30	5.83	4.49	1.511	0.135
	Boy	46	4.28	4.29		
Nutritional Behavior Scale	Girl	30	2.93	4.89	0.174	0.863
	Boy	46	2.73	4.68		

There were no significant differences found between the nutritional attitude points, self-efficacy points and nutritional behavior points of female and male athletes participating in the research (p>0.05).

Table 3: Distribution of height, weight and mean BMI according to age group

Variable	Age groups	n	$\bar{X}$	SS
Height (cm)	9-11 years	43	152.81	7.87
	12-17 years	33	167.57	8.87
Weight (kg)	9-11 years	43	42.29	9.81
	12-17 years	33	55.74	8.42
BMI (kg/m^2)	9-11 years	43	17.94	2.75
	12-17 years	33	19.79	2.13

Table 4: Nutritional scale results according to age groups

Scale	Age group	n	$\bar{X}$	±	t	p
Nutritional attitude scale	9-11 years	43	12.63	2.60	z=-2.368	0.018
	12-17 years	33	9.28	5.66		
Nutritional self-efficacy scale	9-11 years	43	5.18	4.34	t=0.005	0.996
	12-17 years	33	5.17	4.46		
Nutritional behavior scale	9-11 years	43	2.84	4.97	t=0.168	0.867
	12-17 years	33	2.64	4.45		

When the children participating in the research are investigated according to age group, there was a difference between the nutritional attitude points between children aged 9-11 years and those aged 12-17 years (p<0.05). There was no significant difference found between self-efficacy and nutritional behavior points (p>0.05). When the correlation between BMI of all children and young people with the scales was investigated, there was a significant correlation between BMI and attitude points (p=0.023, p<0.05), with no significant correlations between BMI with self-efficacy points (p=0.801, p>0.05) and BMI with nutritional behavior points (p=0.686, p>0.05). When the correlation of age of all children and young people with scale points was investigated, there were significant correlations between age and nutritional attitude points (r=-0.366, p=0.001) and age and nutritional behavior points (r=-0.268, p=0.019), with no significant correlation between age and self-efficacy points (r=-0.082, p=0.483).

Discussion

This study with the aim of investigating the nutritional attitudes and behavior according to gender and age of athletic children and young people investigated nutritional attitudes according to gender and the results of our research investigating the nutritional behavior and attitudes according to gender and age factors among athletic children and young people found no significant difference between the nutritional attitude points, self-efficacy points and nutritional behavior points of girl and boy athletes (p>0.05). A study by Süel *et al.* (2006) found no significant difference in nutritional habits between the genders in a study of large age groups. Another study stated that girls had healthier nutritional behavior;

however, all students had insufficient knowledge about the nutritional pyramid and did not eat healthily [2]. Among answers to 4 items on the attitude scale in the form of "I eat a good breakfast every morning", "I like eating vegetables", "I like eating healthy food every day" and "I like eating fruit and things that are good for me when I get hungry after school", the means obtained by girls were higher, but there was no difference between the genders. This shows that the attitudes of girls are slightly more positive, but there was no large difference present. The scale items have points distribution from 1-4 and the total points for the scale vary from 4-16. High total points obtained from the scale shows high positive attitude. According to our research results, when the points obtained by athletes of both genders are examined, attitudes appear to be at high levels.

According to the scale results used to identify self-efficacy related to consumption of salty and fatty foods among girls and boys, girls had higher mean self-efficacy points, but there was no great difference in self-efficacy between the genders. This situation can be said to show athletes of both genders have similar self-efficacy. Scale items are given points from -1 to +1 and total points for the scale are from -15 to +15. High total points obtained from the scale show high self-efficacy values. According to our research results, the self-efficacy of children appears to be slightly poor.

There was no difference between the genders in terms of nutritional behavior points. In other words, points for female and male athletes appear slightly low. The scale has point distribution from -14 to +14 and when the means obtained by children and young people participating in the research are examined, nutritional behavior information can be said to be poor. According to the results of the scale asking children to make choices between healthy and unhealthy foods with questions in visual format, both genders were insufficient in terms of choosing healthy foods.

When children participating in the research are investigated according to age groups, there was a difference in nutritional attitude points between 9-11 year olds and 12-17 year olds ($p<0.05$). As a result, young people in the older age group appeared to have poorer nutritional attitudes compared to children. It is thought this difference occurred because children in the younger age group eat together with their families and care is taken by families about correct nutrition, while young people in the older age group have more independent behavior related to eating. Additionally, there were no significant differences between self-efficacy and nutritional behavior points ($p>0.05$).

When the correlation of BMI with the scales for all children and young people is investigated, there was a significant correlation between BMI and attitude points (p=0.023, $p<0.05$), with no significant correlations between BMI and self-efficacy points (p=0.801, $p>0.05$) and between BMI and nutritional behavior points (p=0.686, $p>0.05$). When the correlation between age and scale points for all children and young people is investigated, there were significant correlations between age and nutritional attitude points (r=-0.366, p=0.001) and age and nutritional behavior points (r=-0.268, p=0.019) with no significant correlation found for age and self-efficacy points (r=-0.082, p=0.483).

In conclusion, though nutritional attitude points, self-efficacy points and nutritional behavior points were not affected by the gender factor, they were affected by the age factor.

References

1. Ahrens W, Bammann K, de Henauw S, Halford J, Palou A, Pigeot I *et al*. Understanding and preventing childhood obesity and related disorder-IDEFICS:A European multilevel epidemiological approach. *Nutrition*, Metabolism & Cardiovascular Diseases. 2006; 16:302-308.
2. Akman M, Tüzün S, Ünalan PC, Adolesanlarda Sağlıklı Beslenme ve Fiziksel Aktivite Durumu. Nobel Medicus, 2012; 8(1):24-29.
3. Birch LL, ve Fisher JO. Development of eating behaviours among children and adolescents. Pediatrics, 1998; 101(3):539-549.
4. Branen L, ve Fletcher J. Comparison of college students' current eating habits and recollections of their childhood food practices. Journal of Nutrition Education. 1999; 31(6):304-310.
5. Çumralığil B, Nizamlıoğlu M. Spor ve Beslenme, Veteriner fakültesi yayın ünitesi, Konya, 2001.
6. Farahani SJ, Chin YS, Nasir MTM, Amiri P. Disordered Eating and its Association with Overweight and Health-Related Quality of Life Among Adolescents in Selected High Schools of Tehran. Child Psychiatry Hum Dev. 2014; 1:1-8.
7. Favora A, Ferrara S, Santonastaso P. The spectrum of eating disorders in young women: a prevalence study in general population sample. Psychosomatic Medicine. 2003; 65(3):701-708.
8. Manios Y, Dimitriou M, Moschonis G, Kocaoglu B, Sur H, Keskin Y *et al*. Cardiovascular disease risk factors among children of different socioeconomic status in Istanbul, Turkey: directions for public health and nutrition policy. Lipids in Health and Disease. 2004; 4(3):11.
9. Potts N, ve Mandleco B. Pediatric nursing. Caring for children and their families. Delmar Company. New York, 2002.
10. Rogozkın VA. Some aspects of athlete's nutrrition physical fittness and health, University Park Press Baltimore, 1978.
11. Saygın O, Göral K, Gelen E. Amateur and professional football player to investigate of nutritional habits. Journal of Human Sciences. 2009; 6(2):177-196.
12. Süel E, Şahin İ, Karakaya MA, ve Savucu Y. Elit Seviyedeki Basketbolcuların Beslenme Bilgi ve Alışkanlıkları. Fırat Üniversitesi Sağlık Bilimleri Enstitüsü Dergisi. 2006; 20(4):271-275.
13. Öztürk M. Çocukların kalp sağlığını geliştirme tutum ölçeğinin türkiye'deki geçerlik ve güvenirlik çalışması. Dokuz Eylül Üniversitesi Sağlık Bilimleri Enstitüsü Yayınlanmamış Yüksek Lisans Tezi. İzmir, 2002.
14. Öztürk M. Çocukların Beslenme Alışkanlıklarının Sağlık Davranışı Etkileşim Modeline Göre incelenmesi. Doktora Tezi; İstanbul Üniversitesi Sağlık Bilimleri Enstitüsü Halk Sağlığı Hemşireliği Anabilim Dalı, 2010.
15. Parcel GS, Edmundson E, Perry CL, Feldman HA, O"Hara-Tompkins N, Nader PR *et al*. Measurement of self-efficacy for diet-related behaviors among elemantary school children. Journal of School Health. 1995; 65(1):23-27.
16. Edmundson E, Parcel GS, Perry CL, Feldman HA, Smyth M, Johnson CC *et al*. The effect of the Child and Adolescent Trial for Cardiovascular Health intervention on psychosocial determinants of cardiovascular disease risk behavior among third- grade students. American Journal of Health Promotion. 1996a; 10(3):217-225.