

An Analysis of Sports Sciences Students' Attitudes Toward Healthy Eating

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DOI: <https://doi.org/10.38021/asbid.1988375>

ORIGINAL ARTICLE

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Received:
06.07.2026

Accepted:
12.08.2026

Online Publishing:
05.10.2026

CITATION

Öniz, M., Sarıkaya, M., Tunç, M., & Şimşek, E. (2026). An analysis of sports sciences students' attitudes toward healthy eating. *Mediterranean Journal of Sport Science*, 9(1), e021.

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Abstract

This study aimed to examine the attitudes towards healthy eating among students of the Faculty of Sports Sciences at Mardin Artuklu University. The research was conducted using a survey model, a quantitative research method, and included a total of 315 university students (127 women and 188 men) who voluntarily participated. A personal information form and the Healthy Eating Attitude Scale were used as data collection tools. The data obtained were evaluated using independent samples t-test, one-way analysis of variance (ANOVA), and Pearson correlation analysis. According to the research findings, female students' scores were found to be higher than male students only in the "Poor Eating (KB)" sub-dimension. Regarding the age variable, it was determined that students aged 26 and over had lower total scores on the Knowledge About Nutrition (BHB), Positive Eating (OB), KB, and Healthy Eating Attitude Scale (SBITO) scales compared to younger groups. Regarding housing status, students living in dormitories had higher total SBITO scores than those living in family homes. Regarding class level, a significant difference was found only in the "BHB" sub-dimension; however, a significant difference was found in the "Feelings About Nutrition (BYD)" sub-dimension in the smoking variable. It was determined that students who did not engage in physical activity had higher "BYD" scores than those who did. In conclusion, it has been shown that university students' attitudes towards nutrition are influenced by individual and environmental factors such as graduation anxiety, transition to adulthood, economic independence, and housing situation. Based on these findings, it is recommended that healthy eating awareness training be provided, cafeteria menus be diversified and supported with healthy options, and support on stress management and future anxiety be offered, especially for final-year students.

Keywords: Nutrition Knowledge, Nutritional Attitude, Physical Activity, Healthy Nutrition, Eating Behaviors

Üniversite Öğrencilerinin Sağlıklı Beslenmeye İlişkin Tutumlarının İncelenmesi

Öz

Bu araştırmada, Mardin Artuklu Üniversitesi Spor Bilimleri Fakültesinde öğrenim gören öğrencilerinin sağlıklı beslenmeye yönelik tutumlarının değerlendirilmesi amaçlanmıştır. Araştırma, nicel araştırma yaklaşımı doğrultusunda tarama modeli esas alınarak yürütülmüş ve çalışmaya gönüllü olarak katılan toplam 315 üniversite öğrencisi (127 kadın, 188 erkek) dahil edilmiştir. Veri toplama sürecinde kişisel bilgi formu ile birlikte Sağlıklı Beslenmeye İlişkin Tutum Ölçeği kullanılmıştır. Araştırmadan elde edilen veriler tek yönlü varyans analizi (ANOVA), bağımsız örneklem t-testi ve Pearson korelasyon analizi aracılığıyla analiz edilmiştir. Araştırma bulgularına göre, Cinsiyet değişkenine göre kadın öğrencilerin puanlarının yalnızca "Kötü Beslenme (KB)" alt boyutunda erkek öğrencilere göre daha yüksek bulunmuştur. Yaş değişkenine bakıldığında, 26 yaş ve üzeri öğrencilerin Beslenme Hakkında Bilgi (BHB), Olumlu Beslenme (OB), KB ve Sağlıklı Beslenmeye İlişkin Tutum Ölçeği (SBITO) toplam puanlarının genç gruplara kıyasla daha düşük olduğu tespit edilmiştir. Barınma durumuna göre ise yurtta kalan öğrencilerin SBITO toplam puanları, aile evinde yaşayanlara göre daha yüksek çıkmıştır. Sınıf düzeyine göre yalnızca "BHB" alt boyutunda anlamlı fark bulunurken; sigara kullanımı değişkeninde "Beslenmeye Yönelik Duygular (BYD)" alt boyutunda anlamlı farklılık tespit edilmiştir. Fiziksel aktivite yapmayan öğrencilerin, yapanlara göre daha yüksek "BYD" puanına sahip olduğu saptanmıştır. Sonuç olarak, üniversite öğrencilerinin beslenmeye tutumlarının mezuniyet kaygısı, yetişkinliğe geçiş, ekonomik özgürlük ve barınma durumu gibi bireysel ve çevresel faktörlerden etkilendiği ortaya konulmuştur. Elde edilen bulgular doğrultusunda, sağlıklı beslenme farkındalık eğitimleri, yemekhane menülerinin çeşitlendirilmesi ve sağlıklı seçeneklerle desteklenmesinin yanı sıra özellikle son sınıf öğrencilerine stres yönetimi ve gelecek kaygısı konularında destek sağlanması önerilmektedir.

Anahtar kelimeler: Beslenme Bilgisi, Beslenme Tutumu, Fiziksel Aktivite, Sağlıklı Beslenme, Yeme Davranışları.

Introduction

Being healthy is of great importance for an individual to lead a happy and peaceful life, and for the quality of life of society (Patwardhan et al., 2015). According to the World Health Organization (WHO), health is a state of complete physical, mental, and social well-being and not merely the absence of disease or injury (WHO, 1996). As can be understood from this definition, health should not be considered only as a physical phenomenon. It also encompasses the mental dimension, including thought patterns, decision-making processes, problem-solving skills, and situations such as stress, anxiety, and fear; and the social dimension, including self-expression, relationship building, empathy, collaborative work, adaptation to the environment, getting along with family and friends, establishing social bonds, and adhering to social rules. Feeling healthy and happy is considered within the scope of the concept of health (Belek, 1998; Lewis, 2001).

For every living being to survive, nutrition is essential not only for common functions such as growth, movement, respiration, circulation, and excretion, but also for obtaining the energy necessary to maintain these vital functions (Tayar and Korkmaz, 2007). In this context, nutrition is defined as the adequate and balanced intake and utilization of micro and macronutrients by the body to ensure the continuity of vital functions, starting before birth through the mother and continuing until death, and to enable a productive and healthy life (Özenoğlu, 2016; Müftüoğlu, 2003). Thus, the act of nutrition must be carried out at the appropriate time, consciously and willingly (Turkish Public Health Institution, 2014).

There are many ways to maintain a healthy life. One of the major determinants of health is the nutritional habits of individuals and their capacity to ingest adequate and balanced nutrients. The amount of nutrients an individual needs varies depending on factors such as age, gender, genetic makeup, and level of physical activity. Therefore, considering these factors, consuming all types of food in sufficient quantities and regularly to maintain an ideal body weight constitutes healthy eating. Thus, the main goal of healthy eating is to ensure balanced and adequate nutrition (Baysal, 2002; Besler, 2015; Topuzoğlu et al., 2007).

The nutrients that the body needs consist of organic and macro components, such as carbohydrates, fats, and proteins, and micro and inorganic components, such as water, minerals, and vitamins (Ünsal, 2019). According to the recommendation, carbohydrates should cover 45-60 % of the daily energy requirement of adults, fats 24-35 %, and proteins 10-20 % (TÜBER, 2015).

While healthy eating has positive effects on human lifespan and health, unhealthy eating is known to have negative consequences. According to Besler et al. (2015), unhealthy eating is defined as follows: "Individuals who are mentally and physically underdeveloped, tired, listless, and ill due

to inadequate and unbalanced nutrition are not a strength and power for society, but a burden." When necessary nutrients are consumed in insufficient or excessive amounts, disruptions occur in bodily functions, leading to various diseases. In this case, individuals may experience problems such as weight loss, fatigue, weakness, listlessness, and decreased body resistance, and in advanced stages, more serious health problems such as intellectual disability, diabetes, obesity, heart disease, hypertension, and cardiovascular diseases may occur (Besler, 2015; Yılmaz et al., 2018).

In our country, dietary habits can vary significantly due to various reasons. Factors contributing to these differences include the climate of the region, socioeconomic conditions, working life and pace of work, agricultural changes, health awareness, technological development, level of urbanization, and habits acquired from different cultures due to globalization (Uyar, 1997). While a general impression of adequate and balanced nutrition is given in our country, existing economic inequalities mean that a portion of the population cannot find enough food to meet their daily energy requirements, while another portion consumes more food than necessary. This situation creates a breeding ground for the problem of inadequate and unbalanced nutrition in society (Önay and Aktaş, 2002).

Inadequate and unbalanced nutrition constitutes a significant social risk factor in our country (Fişek, 1983). University students are among the most at-risk groups in terms of inadequate and unbalanced nutritional habits. It has been determined that unhealthy eating habits among students are caused by factors such as their lack of physical space, skills, and time for cooking due to their generally distanced education from their families, skipping meals, eating on the go, limited financial resources, inadequate dormitory facilities, lack of nutritional knowledge, and increased consumption of processed foods, resulting in individuals eating only to satisfy their hunger (Garibağaoğlu et al., 2006; Durmaz et al., 2002; Dunn et al., 2007).

The development of a conscious, strong and healthy students is the development of a country in all respects. In this sense, it is important to determine the factors that may have an effect on the healthy eating attitudes of university students so as to understand their nutritional behaviors and develop appropriate awareness and guidance. This issue is especially relevant for students of the Faculty of Sports Sciences, as they are trained in a field closely related to physical activity, health and human performance. However, students' attitudes to healthy eating may vary according to individual characteristics and living conditions. Therefore, looking at attitudes toward healthy eating across various demographic and lifestyle variables may provide useful information for identifying potential nutrition problems and determining areas for improving health and nutrition awareness. The findings could also provide a foundation for the development of appropriate nutritional education and health promotion practices for students.

In this respect, the objective of this study was to examine the healthy eating attitudes of Mardin Artuklu University Faculty of Sports Sciences students according to gender, age, academic year, accommodation status, participation in physical activity, smoking status and monthly income. It was also aimed to contribute to the related literature by presenting information about the healthy eating attitudes of Sports Sciences students and to provide a basis for further studies.

Materials and Methods

Research Model

The current study was designed and conducted based on the principles of quantitative research methodology. In this context, the descriptive survey model has been chosen. This model aims to reveal the current situation as it is and is conducted with data collection tools such as observation or surveys on a sample or samples selected from a specific population (Karasar, 2022).

Study Population and Sample

The study group was composed of 315 students who voluntarily took part in the study at the Faculty of Sports Sciences of Mardin Artuklu University. The sample size was determined based on the number of items in the Healthy Eating Attitude Scale. The scale consists of 21 items, and a ratio of 15 participants per item was adopted, consistent with the 5-15 participants-per-item range reported in psychometric sample size estimations (Lindahl et al., 2021). Accordingly, the target sample size was determined as 315 participants (21 items $\times$ 15 participants). Of the participants, 59.7% ($n = 188$) were male and 40.3% ($n = 127$) were female. The sample was selected by simple random sampling with consideration of diversity in terms of gender, age group, and class level.

Data Collection Tool

The research data were collected through an online questionnaire designed by Google forms consisting of two different sections. The researcher personally visited the classrooms, provided the necessary information to the students, and ensured that they completed the survey form. In addition, the survey link was sent to students who could not be reached via WhatsApp class groups. For students under the age of 18 who participated in the research, the necessary parental permissions were obtained, and participation was on a voluntary basis.

Personal Information Form: This form, created by the researcher, includes questions aimed at determining participants' sociodemographic characteristics such as age, gender, grade level, housing status, weekly physical activity participation, smoking habits, and monthly income level.

Healthy Eating Attitude Scale (SBITO): In the study, the Healthy Eating Attitude Scale developed by Tekkurşun-Demir and Cicioğlu (2019) was used. The sub-dimensions were structured according to the relevant items.

The instrument has a total of 21 items measured on a 5 point Likert scale and has four sub-dimensions.

- Knowledge About Nutrition (BHB): 1, 2, 3, 4, 5
- Feelings About Nutrition (BYD): 6, 7, 8, 9, 10, 11
- Positive Eating (OB): 12, 13, 14, 15, 16
- Poor Eating (KB): 17, 18, 19, 20, 21. The rating scale for positive items is as follows: “Strongly Disagree”,

The responses of the participants to the items of the scale were grouped into “Disagree”, “Undecided”, “Agree”, and “Strongly Agree”. Positive statements were scored on a 1 to 5 progressive scale. Negative statements were reverse-scored.

- Positive items consist of items 1, 2, 3, 4, 5, 12, 13, 14, 15, and 16.
- Negative items consist of items 6, 7, 8, 9, 10, 11, 17, 18, 19, 20, and 21.

The minimum possible score is 21, and the maximum possible score is 105 for the Healthy Eating Attitude Scale (SBITO). The scores are interpreted according to the scale evaluation criteria as follows: Healthy eating attitude was categorized as very low (21-22 points), low (23-42 points), moderate (43-63 points), high (64-84 points), and ideally high (85-105 points). In the scope of this study, the reliability of the scale was evaluated in terms of Cronbach’s alpha coefficient. The internal consistency coefficient for the overall scale was .72. Reliability coefficients for the sub-dimensions were .90 for Knowledge About Nutrition (BHB), .84 for Feelings About Nutrition (BYD), .75 for Positive Eating (OB), and .83 for Poor Eating (KB). The results indicate that the measurement instrument is reliably acceptable.

Data Analysis

The obtained data were analyzed statistically using the statistical program SPSS 27 (IBM, Armonk, NY, USA). The steps followed in the process of analysis are as follows:

Descriptive statistics such as frequency, percentage, arithmetic mean ($\bar{X}$) and standard deviation (SD) were used to summarize the data. Independent samples t-test was used for testing differences between two independent groups (e.g. gender, physical activity status). Variables with three or more groups (age, grade level, accommodation type, monthly income and smoking status) were analyzed using a one-way ANOVA. If the ANOVA test indicated significant differences, a post

hoc analysis with Tukey HSD was performed to identify the groups responsible for these differences. In addition, Pearson Correlation Analysis was used to examine the relationships between the total scale score and its sub-dimensions.

Research Ethics

During the current study, action was taken within the framework of the 'Higher Education Institutions Scientific Research and Publication Ethics Directive'. Participants were informed about the purpose, process, and rights of the research, and their voluntary participation was obtained through informed consent. The confidentiality and anonymity of personal data were ensured, and no information that could reveal the participants' identities was shared. Ethical approval for this study was granted by the Mardin Artuklu University Scientific Research and Publication Ethics Committee (Decision No: 16, Date: 09.04.2025). The research procedures were conducted in accordance with the principles of the Declaration of Helsinki.

Results

The outcomes of statistical analyses are shown in the following tables.

Table 1

Demographic Characteristics of Participants.

Variable	Category	n	%
Gender	Female	127	40.3
	Male	188	59.7
Age	17-19 years	65	20.6
	20-22 years	147	46.7
	23-25 years	70	22.2
	26 years and older	33	10.5
Year of Study (Class)	1st grade	72	22.9
	2nd grade	69	21.9
	3rd grade	66	21.0
	4th grade	108	34.3
Accommodation	Dormitory	179	56.8
	Family home	83	26.3
	Living alone or with friends	53	16.8
Physical Activity Participation	Yes	193	61.3
	No	122	38.7
Smoking Status	Yes	101	32.1
	No	203	64.4
	Quit	11	3.5
Monthly Income (TL)	0-4000 TL	193	61.3
	4001-8000 TL	63	20.0
	8001-12000 TL	21	6.7
	12001 and above	38	12.1

In the current study 315 participants were included. As shown in table 1, 59.7% (n=188) of participants were male and 40.3% (n=127) were female. The majority of the age distribution was 20-22 years students, which was 46.7% (n=147). At class level, 4th year students were found to have the highest percentage of 34.3% (n=108). Most of the participants (56.8%, n=179) lived in dormitories, 61.3% (n=193) performed physical activity and 64.4% (n=203) did not smoke. In terms of monthly income level, the largest group was in the 0-4000 TL income range, comprising 61.3% (n=193).

Table 2

Descriptive Statistics and Reliability Analysis of the Scale

Scale	Number of items	$\bar{X} \pm SS$	Cronbach's Alpha
BHB	5	2.35±1.15	.90
BYD	6	2.96±.99	.84
OB	5	2.86±1.06	.75
KB	5	2.44±.98	.83
SBITO total score	21	56.01±10.4	.72

Table 2 includes the number of items, mean scores, standard deviation values, and Cronbach's Alpha reliability coefficients of the overall scale and its subdimensions.

Table 2 shows that the BHB sub-dimension consists of 5 items, with a mean score of 2.35 ± 1.15 and a Cronbach's Alpha reliability coefficient of 0.90. The BYD sub-dimension consists of 6 items, with a mean score of 2.96 ± 0.99 and a reliability coefficient of 0.84. The OB sub-dimension consists of 5 items, with a mean score of 2.86 ± 1.06 and a Cronbach's Alpha value of 0.75. The KB sub-dimension consists of 5 items, with a mean score of 2.44 ± 0.98 and a reliability coefficient of 0.83. The SBITO Total score consists of 21 items, with an average score of 56.01 ± 10.4 and a Cronbach's Alpha reliability coefficient of .72. Considering the obtained Cronbach's Alpha, it is seen that all sub-dimensions and the total scale have a sufficient level of reliability (BHB $\alpha = .90$; BYD $\alpha = .84$; OB $\alpha = .75$; KB $\alpha = .83$; SBITO Total $\alpha = .72$).

Table 3

Independent Samples t-Test Results of Participants' SBITO Scores According to Gender and Weekly Physical Activity Status Variables.

Scale	Gender	n	$\bar{X} \pm SS$	t	p
BHB	Female	127	2.35 $\pm$ 1.13	.017	.987
	Male	188	2.35 $\pm$ 1.18		
BYD	Female	127	3.02 $\pm$.95	.887	.376
	Male	188	2.92 $\pm$ 1.02		
OB	Female	127	2.88 $\pm$ 1.07	.296	.767
	Male	188	2.84 $\pm$ 1.06		
KB	Female	127	2.60 $\pm$.90	2.408	.017*
	Male	188	2.34 $\pm$ 1.02		
SBITO total score	Female	127	2.73 $\pm$.48	1.772	.077
	Male	188	2.63 $\pm$.50		
Scale	Physical activity participation	n	$\bar{X} \pm SS$	t	p
BHB	Yes	193	2.40 $\pm$ 1.23	1.022	.308
	No	122	2.27 $\pm$ 1.04		
BYD	Yes	193	2.87 $\pm$ 1.04	-2.033	.043*
	No	122	3.09 $\pm$.89		
OB	Yes	193	2.87 $\pm$ 1.13	.245	.806
	No	122	2.84 $\pm$.95		
KB	Yes	193	2.36 $\pm$ 1.00	-1.819	.070
	No	122	2.57 $\pm$.94		
SBITO total score	Yes	193	2.64 $\pm$.53	-1.304	.193
	No	122	2.71 $\pm$.44		

*p<0.05 (significant), **p<0.01 (stronger significance), ***p<0.001 (very strong significance)

There were no statistically significant differences between gender ($p > 0.05$) in the total scores of BHB, BYD, OB, and SBITO as seen in Table 3. However, the KB sub-dimension related to gender was found to be significantly different ($p < 0.05$). In this sub-dimension, female participants scored higher than males on average.

Regarding the analysis based on physical activity status, no significant difference was found in the total scores of BHB, OB, KB, and SBITO ($p > 0.05$). However, a significant difference was observed in the BYD sub-dimension according to physical activity status ($p < 0.05$). The mean BYD score of participants who did not engage in physical activity was significantly higher than that of participants who did.

Table 4

One-Way ANOVA Results of SBITO Scores According to Age Variable

Age group	n	BHB $\bar{X} \pm SS$	BYD $\bar{X} \pm SS$	OB $\bar{X} \pm SS$	KB $\bar{X} \pm SS$	SBITO total score $\bar{X} \pm SS$
17-19 years ^a	65	2.49 $\pm$ 1.07	2.92 $\pm$.85	2.79 $\pm$ 1.06	2.52 $\pm$.94	2.69 $\pm$.40
20-22 years ^b	147	2.36 $\pm$ 1.12	3.03 $\pm$.99	2.89 $\pm$ 1.06	2.59 $\pm$.97	2.73 $\pm$.49
23-25 years ^c	70	2.53 $\pm$ 1.33	2.95 $\pm$ 1.09	3.06 $\pm$ 1.09	2.28 $\pm$.99	2.72 $\pm$.45
26 years and older ^d	33	1.68 $\pm$.89	2.71 $\pm$ 1.08	2.41 $\pm$.92	1.99 $\pm$.93	2.22 $\pm$.59
Total	315	2.35 $\pm$ 1.16	2.96 $\pm$.99	2.86 $\pm$ 1.06	2.44 $\pm$.98	2.67 $\pm$.50
ANOVA	F	4.769	.971	2.950	4.355	2.440
	p	.003**	.407	.033*	.005**	.000***
Post Hoc (Tukey HSD)		a, b, c > d		c > d	b > d	a, b, c > d

* $p < 0.05$ (significant), ** $p < 0.01$ (stronger significance), *** $p < 0.001$ (very strong significance)

Table 4 shows that there were no significant differences between age groups on the BYD sub-dimension ($p > 0.05$). However, significant differences were found in the sub-dimensions of BHB, OB, KB, and the overall scores of SBITO.

The results obtained showed that the scores of the 26-year-old and older group in the BHB sub-dimension and SBITO total scores were significantly lower than those of the 17-19, 20-22, and 23-25 age groups. In addition, participants aged 26 years and above had significantly lower OB scores than those aged 23–25 years. Similarly, the KB scores of participants aged 26 and over were significantly lower than those of 20-22 year olds.

Table 5

One-Way ANOVA Results of SBITO Scores According to Class Variable.

Grade	n	BHB $\bar{X} \pm SS$	BYD $\bar{X} \pm SS$	OB $\bar{X} \pm SS$	KB $\bar{X} \pm SS$	SBITO total score $\bar{X} \pm SS$
1st grade ^a	72	2.39 $\pm$.98	2.96 $\pm$.83	2.76 $\pm$ 1.01	2.51 $\pm$.94	2.67 $\pm$.49
2nd grade ^b	69	2.46 $\pm$ 1.25	2.90 $\pm$ 1.03	2.80 $\pm$ 1.08	2.56 $\pm$ 1.04	2.69 $\pm$.47
3rd grade ^c	66	2.64 $\pm$ 1.31	2.98 $\pm$ 1.12	2.99 $\pm$ 1.17	2.37 $\pm$ 1.03	2.76 $\pm$.45
4th grade ^d	108	2.08 $\pm$ 1.06	2.98 $\pm$.99	2.87 $\pm$ 1.02	2.37 $\pm$.94	2.59 $\pm$.53
Total	315	2.35 $\pm$ 1.16	2.96 $\pm$.99	2.86 $\pm$ 1.06	2.44 $\pm$.98	2.67 $\pm$.50
ANOVA	F	3.643	.109	.640	.748	1.591
	p	.013*	.955	.590	.524	.192
Post Hoc (Tukey HSD)		c > d				

* $p < 0.05$ (significant), ** $p < 0.01$ (stronger significance), *** $p < 0.001$ (very strong significance)

There were no statistically significant differences between the classes on BYD, OB, KB, and total SBITO scores ($p > 0.05$) (Table 5). However, a significant difference was found in the BHB sub-dimension.

In the BHB sub-dimension scores, it was determined that the scores of the "4th grade" group were significantly lower than the scores of the "3rd grade" group.

Table 6

One-Way ANOVA Results of SBITO Scores According to Smoking Variable.

Smoking status	n	BHB $\bar{X} \pm SS$	BYD $\bar{X} \pm SS$	OB $\bar{X} \pm SS$	KB $\bar{X} \pm SS$	SBITO total score $\bar{X} \pm SS$
Yes ^a	101	2.33 $\pm$ 1.15	3.04 $\pm$.99	3.02 $\pm$ 1.00	2.53 $\pm$ 1.00	2.74 $\pm$.49
No ^b	203	2.39 $\pm$ 1.16	2.87 $\pm$.97	2.79 $\pm$ 1.09	2.40 $\pm$.97	2.62 $\pm$.50
Quit ^c	11	1.91 $\pm$ 1.19	3.74 $\pm$ 1.09	2.54 $\pm$.93	2.45 $\pm$.94	2.71 $\pm$.37
Total	315	2.35 $\pm$ 1.16	2.96 $\pm$.99	2.86 $\pm$ 1.06	2.44 $\pm$.98	2.67 $\pm$.50
ANOVA	F	.927	2.037	.643	2.018	2.018
	p	.397	.132	.526	.135	.135
Post Hoc (Tukey HSD)		b < c				

* $p < 0.05$ (significant), ** $p < 0.01$ (stronger significance), *** $p < 0.001$ (very strong significance)

Smoking status did not show statistically significant differences in total scores of BHB, OB, KB, and SBITO ($p > 0.05$) (Table 6). On the other hand, there was a statistically significant difference in smoking status only in the BYD sub-dimension.

In the BYD sub-dimension, it was determined that those who answered "no" had significantly lower scores than those who answered "I quit."

Table 7

One-Way ANOVA Results of SBITO Scores According to Housing Variable.

Accommodation	n	BHB $\bar{X} \pm SS$	BYD $\bar{X} \pm SS$	OB $\bar{X} \pm SS$	KB $\bar{X} \pm SS$	SBITO Total Score $\bar{X} \pm SS$
Dormitory ^a	179	2.44 $\pm$ 1.11	2.98 $\pm$.98	2.92 $\pm$ 1.05	2.52 $\pm$.95	2.73 $\pm$.45
Family home ^b	83	2.13 $\pm$ 1.19	2.85 $\pm$ 1.07	2.61 $\pm$ 1.07	2.25 $\pm$ 1.07	2.48 $\pm$.56
Living alone or with friends ^c	53	2.40 $\pm$ 1.24	3.03 $\pm$.93	3.02 $\pm$ 1.04	2.50 $\pm$.90	2.75 $\pm$.48
Total	315	2.35 $\pm$ 1.16	2.96 $\pm$.99	2.86 $\pm$ 1.06	2.44 $\pm$.98	2.67 $\pm$.50
ANOVA	F	2.705	.658	3.718	2.126	1.985
	p	.134	.515	.037*	.110	.000***
Post Hoc (Tukey HSD)						a>b b<c

* $p < 0.05$ (significant), ** $p < 0.01$ (stronger significance), *** $p < 0.001$ (very strong significance)

Table 7 shows that housing status did not have a statistically significant effect on the BHB, BYD, and KB scores ($p > 0.05$). However, statistically significant differences were observed in the OB sub-dimension and total scores of the SBITO. A Tukey post hoc analysis was then conducted to identify the source of these differences, but no pairwise group differences were statistically significant.

We found that the “dormitory” group had a significantly higher SBITO Total score than the “family home” group. Furthermore, the scores of the “family home” group were significantly lower than the scores of the “home alone or with friends” group.

Table 8

One-Way ANOVA Results of SBITO Scores for the Individual's Monthly Income Variable

Monthly Income (TL)	n	BHB $\bar{X} \pm SS$	BYD $\bar{X} \pm SS$	OB $\bar{X} \pm SS$	KB $\bar{X} \pm SS$	SBITO Total Score $\bar{X} \pm SS$
0-4000 TL ^a	193	2.43 $\pm$ 1.15	2.96 $\pm$.96	2.95 $\pm$ 1.04	2.45 $\pm$.98	2.71 $\pm$.47
4001-8000 TL ^b	63	2.48 $\pm$ 1.22	3.02 $\pm$ 1.08	2.97 $\pm$ 1.08	2.47 $\pm$.95	2.75 $\pm$.48
8001-12000 TL ^c	21	2.01 $\pm$ 1.08	3.08 $\pm$.92	2.41 $\pm$ 1.04	2.43 $\pm$.96	2.51 $\pm$.47
12001 TL and above ^d	38	1.93 $\pm$ 1.02	2.76 $\pm$ 1.05	2.42 $\pm$.99	2.39 $\pm$ 1.10	2.39 $\pm$.57
Total	315	2.35 $\pm$ 1.16	2.96 $\pm$.99	2.86 $\pm$ 1.06	2.44 $\pm$.98	2.67 $\pm$.50
ANOVA	F	2.940	.704	4.282	.060	5.945
	p	.033*	.550	.006**	.981	.001**
Post Hoc (Tukey HSD)						a>d a, b>d

* $p < 0.05$ (significant), ** $p < 0.01$ (stronger significance), *** $p < 0.001$ (very strong significance)

The monthly level of income did not have a statistically significant effect on BYD and KB scores in Table 8. Statistically significant differences are observed in BHB, OB, and SBITO Total scores.

Although a significant difference was observed in the BHB sub-dimension scores, the post hoc (Tukey HSD) analysis revealed no statistically significant difference between the groups ($p>0.05$).

In the OB sub-dimension scores, it was determined that those who answered "0-4000 TL" had significantly higher scores than those who answered "12001 TL and above". In the SBITO Total score, it was found that the scores of the "0-4000 TL" group were significantly higher than the scores of the "12001 TL and above" group. Furthermore, it was determined that the scores of the "40001-8000 TL" group were significantly higher than the scores of the "12001 TL and above" group.

Table 9

Correlation Between Sub-Dimensions of the SBITO

		SBITO Total Score	BHB	BYD	OB	KB
SBITO Total Score	Pearson Correlation	1	.496**	.352**	.569**	.497**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	315	315	315	315	315
BHB	Pearson Correlation	.496**	1	-.503**	.662**	-.234**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	315	315	315	315	315
BYD	Pearson Correlation	.352**	-.503**	1	-.338**	.493**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	315	315	315	315	315
OB	Pearson Correlation	.569**	.662**	-.338**	1	-.246**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	315	315	315	315	315
KB	Pearson Correlation	.497**	-.234**	.493**	-.246**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	315	315	315	315	315

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

Note: Significant correlations are shown at the $p<0.01$ level. Correlation coefficients (r) range from -1 to $+1$, with values close to 0 indicating a weak relationship and values close to ± 1 indicating a strong relationship (Büyüköztürk, 2012).

Correlation analysis showed that there were positive and statistically significant correlations between the total score of SBITO and all its sub-dimensions (BHB ($r=0.496$), BYD ($r=0.352$), OB ($r=0.569$), and KB ($r=0.497$)) ($p<0.01$). When Table 9 is examined, the highest relationship is seen between SBITO and the OB sub-dimension ($r=.569$), and the lowest relationship is seen between SBITO and the BYD sub-dimension ($r=.352$). It was determined that the BHB score is positively related to OB ($r=.662$), and negatively related to BYD ($r=-.503$) and KB ($r=-.234$). A positive correlation was found between BYD and KB ($r=.493$), and a negative correlation between OB and KB ($r=-.338$). A negative and weak correlation was found between OB and KB ($r=-.246$).

Discussion and Conclusion

The aim of this study was to evaluate the healthy eating attitudes of students studying at the Faculty of Sports Sciences of Mardin Artuklu University. The study group consisted of 315 students, including 127 women and 188 men.

According to the findings, no statistically significant difference was found between male and female students in total SBITO scores or in the sub-dimensions of Knowledge About Nutrition (BHB), Feelings About Nutrition (BYD), and Positive Eating (OB). However, the scores of the female students were significantly higher in the sub-dimension of the Poor Nutrition (KB) than the male students. This may reflect the fact that unhealthy eating behaviors are more salient or consciously recognized by female participants.

The findings of the present study partially support the previous studies in the literature. Malkoç et al. (2020) conducted a study among the students of the School of Physical Education and Sports (n=216) and found that female students had significantly higher scores than male students in the BHB and OB sub-dimensions. Similarly, in their study of Sports Management students, Uluç and Durukan (2021) found statistically significant differences in favor of female participants in the same sub-dimensions. Similarly, Çar and Bozkuş (2024) found that female students had higher BHB scores than male students in a study conducted with students from the Faculty of Social Sciences (n=442).

In another study, Yaşar et al. (2024) found that female students scored higher than male students in both BHB and BYD sub-dimensions. Özenoğlu et al. (2021) also reported a significant difference in favor of women in the BHB sub-dimension, while men demonstrated higher scores in the BYD sub-dimension.

On the other hand, some studies in the literature have reported contrasting findings. Göral and Yıldırım (2022) found that male students studying at the Faculty of Sports Sciences (n=554) had higher total SBITO scores as well as higher BYD and KB scores compared to female students. Similarly, Sargın and Güleşce (2022) identified statistically significant differences in total SBITO scores and in the BHB, BYD, OB, and KB sub-dimensions in favor of male participants. In parallel with these findings, Akpolat (2023) reported that male young athletes scored significantly higher in total SBITO scores and in the OB sub-dimension.

The analysis conducted according to regular physical activity status revealed no statistically significant differences in the BHB, OB, KB, or total SBITO scores. However, those who were not regularly physically active had significantly higher BYD scores than those who were. This result may imply a gap between nutritional knowledge and actual behavior.

Similar results have been reported in previous studies. Yılmaz et al. (2022), in a study conducted with students from the Faculty of Social Sciences (n=498), found that students who regularly engaged in physical activity had higher total SBITO scores than inactive students. Likewise, Arı and Çakır (2021) and Türkoğlu (2021) reported significant differences in favor of physically active individuals in total SBITO scores. Alamehmet (2021), in a study conducted with university students aged 18–25, found that physically active participants had higher total SBITO and BHB scores, whereas inactive individuals scored higher in the BYD sub-dimension.

The analysis based on age demonstrated that students aged 26 years and older had significantly lower BHB scores compared to the 17–19, 20–22, and 23–25 age groups. In the OB sub-dimension, students aged 26 and above scored lower than those in the 23–25 age group. Similarly, in the KB sub-dimension and total SBITO scores, participants aged 26 and older had significantly lower scores compared to younger age groups. These findings indicate that age may be an important factor influencing healthy eating attitudes. The lower scores observed among participants aged 26 years and older may be associated with increased professional, financial, and family responsibilities during adulthood.

Regarding class level, only the KB sub-dimension differed significantly among participants. No statistically significant differences were found in the BHB, BYD, OB, or total SBITO scores. Specifically, fourth-year students had significantly lower KB scores than third-year students. This decline may be explained by stress related to graduation, concerns about future employment, and the transition into adult life.

Supporting these findings, Yılmaz et al. (2022) found that third-year students scored higher than first-year students in the KB sub-dimension. Similarly, Yaşar et al. (2024) reported that second-year students had more positive attitudes toward healthy eating compared to first-year students, reflected in higher KB scores. In the same study, second-year students also demonstrated more positive attitudes than third-year students in the OB sub-dimension. In contrast, Güleş (2021) reported no significant differences in KB, BHB, or total SBITO scores according to class level.

The analysis according to smoking status showed that only the BYD sub-dimension differed significantly. No statistically significant differences were found in the BHB, OB, KB, or total SBITO scores. Students who had quit smoking scored significantly higher in the BYD sub-dimension compared to non-smokers. This finding may indicate that students who quit smoking tend to develop a stronger emotional orientation toward eating in order to cope with nicotine withdrawal, replace smoking-related habits, or manage stress during the quitting process.

According to housing status, statistically significant differences were identified in the OB sub-dimension and total SBITO scores. However, no significant differences were found in the BHB, BYD, or KB sub-dimensions. Students living in dormitories had higher total SBITO scores than those living with their families. In addition, students living alone or with friends demonstrated more positive attitudes toward healthy eating than those living with family members. This situation may be related to increased personal responsibility and autonomy in food choices among students living independently.

Finally, the analysis based on income level revealed statistically significant differences in the BHB and OB sub-dimensions as well as in total SBITO scores. However, no significant differences were observed in the BYD and KB sub-dimensions. Students in the lower income groups (0–4000 TL and 4001–8000 TL) had significantly higher OB scores compared to students in the highest income group (12001 TL and above). One possible explanation is that students with higher incomes may have easier access to fast food, restaurants, and processed foods, which may negatively affect healthy eating attitudes. Alternatively, students with less financial means may choose to eat more regular and balanced home-cooked or university-supplied meals in cafeterias and dormitories in order to better manage their budgets.

The uniqueness of this study is that it explores the perceptions on healthy eating of students of a Faculty of Sports Sciences, covering a wide range of demographic and lifestyle variables from one sample. Rather than analyzing one characteristic, the study analyzed gender, age, year of study, living arrangement, physical activity, smoking status and monthly income as a whole. The results indicate that positive dietary attitudes are not a singular phenomenon but may depend on many personal and contextual factors. The differences found in terms of age, academic year, housing, smoking and physical activity are a broader knowledge of the factors associated with healthy eating attitudes in Sports Sciences students.

Thus, the present study contributes to the literature by providing an overall assessment of healthy eating attitudes among this specific student population, and identifying characteristics that should be considered in the development of nutrition education and health-promotion programs for students of Sports Sciences.

Recommendations

Based on the findings obtained in the study, several recommendations were proposed.

The female students are more prone to unhealthy eating habits, so it is necessary to increase the content of nutrition education and conduct practical training programs for the female students in universities.

Given the relationship between physical activity level and eating behaviors, holistic health programs that include physical activity and eating behaviors should be established.

This process transforms into psychological eating behavior, as evidenced by the high emotional attitudes towards nutrition of students who quit smoking. It would be helpful to have free counselling services with dieticians and psychologists within the Student Affairs Office of the university. People quitting smoking should be planned programs for the support of healthy lifestyles

The living conditions of students should be considered and environments that enable healthy eating should be created especially in dormitories and student houses.

One of the limitations of the study is that it has been conducted only with the students of the Faculty of Sport Sciences of Mardin Artuklu University. In future studies, the nutritional attitudes of students in different disciplines can be studied comparatively.

Ethics Approval

Ethics review committee: Scientific Research and Publication Ethics Board of Mardin Artuklu University

Date of the ethics review document: April 14, 2025

Reference number of the ethics review document: 192081

Author Contributions

The first, second, and third authors contributed equally to the Introduction and Methods sections. All authors contributed equally to the Results and Discussion sections.

Conflict of Interest

The authors declare no conflicts of interest related to this research.

Funding

This research received no funding.

Kaynakça

- Akpolat, İ., & Çelik, F. (2023). Elit Genç Atletlerin Beslenme Durumunun Değerlendirilmesi. *Dicle Medical Journal*, 50(2), 255-268. <https://doi.org/10.5798/dicletip.1313413>
- Alamehmet, M, N. (2021). 18-25 yaş arası üniversite öğrencilerindeki internet bağımlılığının sağlıklı beslenmeye ilişkin tutum üzerine etkisi. Yayınlanmamış Yüksek Lisans Tezi, Haliç Üniversitesi, Sağlık Bilimleri Enstitüsü, İstanbul.
- Arı, Y., & Çakır, E. (2021). Correlation between participation in physical activity and healthy nutrition: an example of a sports science faculty. *Balt. J. Health Phys. Act*, 13(3), 37-45.
- Baysal, A. (2002). Beslenme. Hatiboğlu Yayınevi, Yenilenmiş 9. Baskı, Ankara
- Belek, İ., E. Nalçacı vd, (1998). *Türkiye için sağlık tezi*. İstanbul: Sorun Yayınları

- Besler, H. T., & Rakıcıoğlu, N. (2015). Türkiye'ye özgü besin ve beslenme rehberi. Ankara: Merdiven Reklam Tanıtım. The International Olympic Committee and the International Society for Sports Nutrition. *South African Journal of Clinical Nutrition*, 26(1), 6-16.
- Büyüköztürk, Ş. (2012). *Sosyal bilimler için veri analizi el kitabı* (17. Baskı). Ankara: Pegem Akademi.
- Çar, S. Ö., & Bozkuş, T. (2024). Spor bilimleri fakültesi öğrencilerinin performans artırma ve sağlıklı beslenmeye ilişkin tutumlarının incelenmesi. *Uluslararası Güncel Eğitim Araştırmaları Dergisi*, 10(1), 62-72. <https://izlik.org/JA23MA45LC>
- Dunn, D., Turner, L., & Denny, G. (2007). Nutrition knowledge and attitudes of college athletes. *The Sport Journal*, 10(4), 1-8.
- Fişek, N. (1983). *Halk sağlığına giriş*, Ankara Çağ Matbaası, s.70.-73.
- Garibağaoğlu, M., Budak, N., Öner, N., Sağlam, Ö. & Nişli, K. (2006). Üç farklı üniversitede eğitim gören kız öğrencilerin beslenme durumları ve vücut ağırlıklarının değerlendirilmesi. *Sağlık Bilimleri Dergisi*, 15(3), 173- 180.
- Göral, K., & Yıldırım, D. (2022). Spor bilimleri fakültesi öğrencilerinin sağlıklı beslenmeye ilişkin tutumlarının branş farklılıklarına göre araştırılması. *CBÜ Beden Eğitimi ve Spor Bilimleri Dergisi*, 17(1), 58-69. <https://doi.org/10.33459/cbubesbd.1114833>
- Güleş, B. (2021). *İnönü üniversitesi tıp fakültesi öğrencilerinin sağlıklı beslenme ile ilgili tutumları, etiket okuma alışkanlıkları ve beslenme okuryazarlığının değerlendirilmesi*. Yüksek Lisans Tezi. İnönü Üniversitesi, Sağlık Bilimleri Enstitüsü, Halk Sağlığı Anabilim Dalı, Malatya.
- Lewis, G. (2001). "Health-An Elusive Concept". *Health and Ethnicity*. Helen Macbeth (ed.), London: Sage Publication.
- Lindahl, J., Thulesius, H., Rask, M., Wijk, H., Edvardsson, D., & Elmqvist, C. (2021). Assessing the supportiveness of healthcare environments' light and color: Development and validation of the Light and Color Questionnaire (LCQ). *HERD: Health Environments Research & Design Journal*, 14(2), 130-144. <https://doi.org/10.1177/1937586720975209>
- Malkoç, N., Yasar, O. M., Turgut, M., Kerem, M., Kose, B., Atli, A., & Sunay, H. (2020). Healthy nutrition attitudes of sports science students. *Progress in Nutrition*, 22(3), 1-7.
- Müftüoğlu, O. (2003). *Yaşasın hayat*. Doğan Kitapçılık AŞ.
- Önay, D. Y., & Aktaş, N. T. D. (2002). *Ankara'da farklı sosyo-ekonomik düzeylerdeki 14-15 yaş grup öğrencilerin beslenme durumu ve bunu etkileyen bazı faktörler üzerinde bir araştırma*. Doctoral Dissertation, Fen Bilimleri Enstitüsü, Ankara.
- Özenoğlu, A., (2016). *Sağlıklı beslenme ilkeleri*. Beslenmenin Esasları ve Sağlığın Korunmasında Beslenme (İçinde). Özenoğlu, A. (Ed). Ankara: Hatiboğlu Yayınları, Baskı:1, ss:45-51.
- Özenoğlu, A., Gün, B., Karadeniz, B., Koç, F., Bilgin, V., Bembeyaz, Z., & Saha, B. S. (2021). Yetişkinlerde beslenme okuryazarlığın sağlıklı beslenmeye ilişkin tutumlar ve beden kütle indeksi ile ilişkisi. *Life Sciences*, 16(1), 1-18. <https://izlik.org/JA86NH67MX>
- Patwardhan, B., Mutalik, G., & Tillu, G. (2015). Integrative approaches for health-biomedical research, ayurveda and yoga, 1st edition. London, UK: Academic Press
- Sargın, K., & Güleşce, M. (2022). Öğretmenlerin sağlıklı beslenme ilişkin tutumlarının değerlendirilmesi, *Gaziantep Üniversitesi Spor Bilimleri Dergisi*, 7(1), 1-11.
- Tayar, M., & Korkmaz, N. H. (2007). *Beslenme sağlıklı yaşam*. 2.Baskı, Ankara: Nobel Yayın.
- T. C. Sağlık Bakanlığı Türkiye Beslenme Rehberi -TÜBER- (2015). Sağlık Bakanlığı Yayınları, Ankara.
- Topuzoğlu, A., Hıdıroğlu, S., Ay, P., Önsüz, F., & İkinışık, H. (2007). Tüketicilerin gıda ürünleri ile ilgili bilgi düzeyleri ve sağlık risklerine karşı tutumları. *TSK Koruyucu Hekimlik Bülteni*, 6(4), 253-258.
- Türkiye Halk Sağlık Kurumu (2014). (<http://beslenme.gov.tr/index.php?page=68>).
- Türkoğlu, E. (2021). *Yetişkin bireylerin sağlıklı beslenmeye ilişkin tutumları ile uyku kaliteleri arasındaki ilişkinin incelenmesi; İstanbul, Şişli Örneği*. Yayımlanmamış Yüksek Lisans Tezi, Haliç Üniversitesi, Lisansüstü Eğitim Enstitüsü, İstanbul.
- Uluç, S., & Durukan, E. (2021). Spor yönetimi bölümünde öğrenim gören öğrencilerin sağlıklı beslenmeye ilişkin tutum düzeylerinin incelenmesi. *Akdeniz Spor Bilimleri Dergisi*, 4(3), 438-446. DOI: [10.38021/asbid.1034041](https://doi.org/10.38021/asbid.1034041)

- Uyar, A. (1997). *Konya il merkezi kamu kuruluşlarında çalışan kadınların beslenme alışkanlıkları ve bilgi düzeylerine üzerine bir araştırma*. Ankara Üniversitesi, Fen Bilimleri Enstitüsü, Yüksek Lisans Tezi.
- Ünsal, A. (2019). Beslenmenin önemi ve temel besin öğeleri. *Kırşehir Ahi Evran Üniversitesi Sağlık Bilimleri Dergisi*, 2(3), 1-10.
- Wah, J. N. K. (2025). Decoding structural equation modeling: Insights on data assumptions, normality, and model fit in advancing digital marketing strategies. *Journal of Cases on Information Technology (JCIT)*, 27(1), 1-20.
- World Health Organization (WHO) Mental Health: www.who.int/topics/mental_health/en/. 1996; Erişim tarihi: 20. 01. 2024.
- Yaşar, H. E., Şen, K. G., & Karagöz, Ş. (2024). Spor bilimleri fakültesi öğrencilerinin sağlıklı beslenmeye ilişkin tutumlarının incelenmesi. *Gümüşhane Üniversitesi Sağlık Bilimleri Dergisi*, 13(1), 422-432. <https://doi.org/10.37989/gumussagbil.1366484>
- Yılmaz, B. Ö., Çiçek, B., & Kaner, G. (2018). Kayseri ilindeki liselerde öğrenim gören adölesanlarda obezite düzeyinin ve ilişkili risk faktörlerinin belirlenmesi. *Türk Hijyen ve Deneysel Biyoloji Dergisi*, 75(1), 77-88.
- Yılmaz, G., Şengür, E., & Turaşan, İ. (2022). Spor bilimleri fakültesinde okuyan öğrencilerin sağlıklı beslenme tutum puanlarının incelenmesi. *Türk Spor Bilimleri Dergisi*, 5(2), 64–70. <https://doi.org/10.46385/tsbd.1111714>