# Turkish Journal of Sport and Exercise / Türk Spor ve Egzersiz Dergisi

http://dergipark.gov.tr/tsed Year: 2024 - Volume: 26 – Issue 1 - Pages: 29-37 10.15314/tsed.1340928



# Investigation of Eating Behaviors and Life Satisfaction in Terms of Different Variables in Individuals Who Exercise Regularly

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Conflicts of Interest: The author(s) has no conflict of interest to declare.

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Ethical Statement: It is declared that scientific and ethical principles have been followed while carrying out and writing this study and that all the sources used have been properly cited.

(Date Of Received): 10.08.2023 (Date of Acceptance): 18.04.2024 (Date of Publication): 30.04.2024

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### Abstract

In this study, it was aimed to examine the eating behaviors and life satisfaction of individuals who regularly exercise in sports centers in terms of different variables. For this purpose, a total of 161 people, 70 female and 91 male, with an average age of 30.30± 10.02, were surveyed. According to the results of the independent sample ttest, it was determined that the difference between the eating behavior levels of the participants according to the gender variable was not statistically significant (p>0.05). Considering the marital status variable, it was determined that there was a significant difference between married and single individuals in terms of external eating behavior levels (p<0.05). According to One Way Anova test results, there was a significant difference in emotional eating behavior levels between slightly overweight, normal and obese participants according to body mass indexes (p<0.05). There was no significant difference in terms of external eating and restrained eating behavior (p>0.05). It is seen that there is a significant difference in terms of restrained eating behavior levels between graduate and undergraduate level participants according to education levels, and there is a significant difference in external eating behaviors between undergraduate and graduate school participants (p<0.05). According to the perceived weight, there is a significant difference between those who want to gain weight, those who do not have weight problems and those who want to lose weight (p<0.05). According to the duration of exercise, the difference between the appears to be statistically significant. those who have been exercising for a month and those who have been exercising for six months or more in terms of restrictive eating behavior levels (p<0.05). With the participants for a month; it is seen that there is a significant difference in terms of restrained eating behavior levels between the participants for more than six months and more than one year (p<0.05). Accordingly, as the duration of doing sports increases, the restrained eating behavior also increases. According to the results obtained from Pearson correlation analysis, according to eating behavior, BMI, education level and time to attend the sports center, there is a moderate positive correlation between the time to attend the sports center and the restrained eating behavior (p<0.01). It has also been determined that there are moderate negative relationship between education level and BMI (p<0.05).

Keywords: Exercise, Eating behavior, Life satisfaction.

# Özet

# Düzenli Egzersiz Yapan Bireylerde Yeme Davranışlarının ve Yaşam Doyumlarının Farklı Değişkenler Açısından İncelenmesi

Bu çalışmada spor merkezlerinde düzenli egzersiz yapan bireylerde yeme davranışları ve yaşam doyumlarının farklı değişkenler açısından incelenmesi amaçlanmıştır. Bu amaçla yaşları ortalama 30.30± 10.02 olan ve 70'i kadın, 91'i erkek olmak üzere toplam 161 kişiye anket uygulanmıştır. Bağımsız örneklem T testi sonuçlarına göre, katılımcıların cinsiyet değişkenine göre yeme davranış düzeyleri arasında istatistiksel olarak farkın anlamlı olmadığı tespit edilmiştir (p>0.05). Medeni durum değişkenine göre evli ve bekârlar arasındadışsal yeme davranış düzeyleri açısından anlamlı farklılık olduğu görülmektedir (p<0.05). One Way Anova testinden elede edilen sonuçlarına göre, Vücut kitle indekslerine göre, hafif şişman, normal ve obez katılımcılar arasında duygusal yeme davranış düzeyleri açısından anlamlı farklılık olduğu (p<0.05). Dışsal yeme ve kısıtlayıcı yeme davranışı açısından ise anlamlı farklılık olmadığı bulunmuştur (p>0.05). Eğitim düzeylerine göre, lisansüstü ve lisans düzeyindeki katılımcılar arasında kısıtlayıcı yeme davranış düzeyleri açısından anlamlı farklılık olduğu, lisans ve ortaokul düzeyindeki katılımcılar arasında ise, dışsal yeme davranışlarında farklılık anlamlı düzeyde olduğu görülmektedir (p<0.05). Algılanan kiloya göre ise, kilo almak isteyenlerle, kilo sorunu olmayanlar ve kilo vermek isteyenler arasında anlamlı farklılık vardır (p<0.05). Buna göre kilo almak isteyenler, diğerlerine göre daha az kısıtlayıcı yeme davranışı göstermektedirler. Egzersiz yapma sürelerinegöre,Bir aydıregzersiz yapanlar ile Altı ay ve bir yıldan daha fazla süredir egzersiz yapanlar arasında kısıtlayıcıyeme davranış düzeyleri bakımından farklılığın anlamlı düzeyde olduğu görülmektedir (p<0.05). Bir aydır katılanlarla; altı ay ve bir yıldan daha fazla süredir katılanlar arasında kısıtlayıcı yeme davranış düzeyleri bakımından farkın anlamlı seviyede görülmektedir (p<0.05). Buna göreegzersiz yapma süresi arttıkça kısıtlayıcı yeme davranışı da artmaktadır. Yeme davranışı, VKİ, eğitim düzeyi ve spor merkezine katılma sürelerine göre, Pearson korelasyon analizi sonuçlarına göre, spor merkezine katılma süreleri ile kısıtlayıcı yeme davranışı arasında pozitif yönde orta seviyede korelasyon vardır (p<0.01). Yine eğitim düzeyi ile VKİ arasında ise orta seviyede negatif yönde bir ilişki olduğu belirlenmiştir (p<0.05).

Anahtar Kelimeler: Egzersiz, Yeme davranışı, Yaşam doyumu.

#### **INTRODUCTION**

Eating disorders; it refers to certain complex problems with excessive emotions, attitudes and behaviors that develop with irregular eating consumption. Eating disorders are seen in both genders, although women are predominant (3).

The changes in the standards of aesthetic appearance in the society were followed by the differences in normal eating behaviors. Normal eating habits; Recently, it has begun to be perceived as a long-term diet. The desire to reach the "ideal body dimensions" in the society can be considered as the reason for the increase in the number of people who diet and the prevalence of eating disorders (6-11). Shillak and Crago (1995) identified 8 risk factors for developing an eating disorder. These; weight anxiety, overweight, dissatisfaction with physical appearance and dietary restriction were determined as important factors for eating disorder, while early maturation, low self-esteem, depression and negative emotionality were determined as additional factors (10).

Generally, it is a matter of curiosity how the eating behaviors of those who are thought to go to sports centers to get rid of weight problems are affected by different variables. Therefore, in this study, it will be tried to determine the eating behaviors of individuals who exercise.

In our present study, we aimed to reveal eating behaviors of individuals. individuals who regularly attend sports centers.

For this purpose, answers to the following sub-problems were sought.

- 1. Are there any difference between the eating behaviors of individuals who exercise in terms of gender?
- 2. Are there any relationship between the eating behaviors of individuals who exercise in terms of body mass indexes?
- 3. Are there any difference in the eating behaviors of the individuals who exercise in terms of their marital status?
- 4. Are there any relationship between the eating behaviors of the individuals who exercise, according to their education level, perceived weight and duration of doing sports?

#### **METHOD**

In this study, the general screening model, which is one of the many research models, was used. This model is a scan made on the whole universe or on a sample to be taken from the universe in order to reach a general conclusion about the universe in a universe with a large numerical coverage. The study was carried out with the approval of the ethics committee with the decision of Kahramanmaraş Sütçü İmam University Medical Research Ethics Committee (TAREK) dated 14.06.2022 and numbered 04.

## Universe and Sample

The population of the research consists of 3750 participants who regularly attend 21 private sports centers in the city center of Kahramanmaraş. The pattern is as follows a total of 161 participants, 70 women and 91 men, with an average age of (X age;  $30.30 \pm 2$ ), who agreed to participate in our study voluntarily.

#### **Data Collection Tools**

In the study, a personal information form and the Dutch Eating Behavior Questionnaire (DEBQ) originally developed by Van Stree et al. (14) were applied.

### **Personal Information Form**

In the personal information form, questions were asked including different demographic characteristics such as gender, age, marital status, educational status, satisfaction with his weight, how much he exercised regularly, and height and weight.

Dutch Eating Behavior Questionnaire (DEBQ): The Dutch Eating Behavior Questionnaire (DEBQ) was used in the second part. The Dutch Eating Behavior Questionnaire (DEBQ) consists of 33 items and consists of 3 subdimensions that evaluate emotional eating behaviors, external eating behaviors and restricted eating behaviors. The Turkish validity and reliability of the scale was performed by Bozan (4) The Cronbach alpha internal consistency coefficient of DEBQ was 0.94 for the whole scale.

## **Analysis of Data**

The collected data were processed in the SPSS 21 Package program. Z values of skewness and kurtosis were examined to determine whether the obtained data showed a normal distribution. The Z value was found to be between -1.96 and +1.96 (p<0.05) and the distribution was considered normal Tabachnick & Fidell (12). According to this; Differences between paired groups were used with Independent Samples T-Test, for comparisons of more than two groups, one-way analysis of variance (ANOVA) and pearson correlation analysis were used to determine the relationship between the sub-dimensions of the scale. In statistical comparisons, their significance was interpreted according to p<0.05 values.

### Ethical approval and institutional permission

The study was carried out with the approval of the ethics committee with the decision of Kahramanmaraş Sütçü İmam University Medical Research Ethics Committee (TAREK) dated 14.06.2022 and numbered 04.

#### **FINDINGS**

	Value Label	N	%
Gender	Female	70	43,5
	Male	91	56,5
	Total	161	100
Income	Low	14	8,7
	Middle	128	79,5
	High	19	11,8
	Total	161	100
	Married	81	50,3
Marital status	Single	80	49,7
	Total	161	100
	One month	51	31,7
How long has she been exercising	Three months	25	15,5
	Six month	40	24,8
	Over One Year	45	28,0
	Total	161	100
	<24.99 (Normal)	86	53,4
BMI	25.00-29.99(Overweight)	53	32,9
	> 30.00 (Obese)	22	13,7
	Total	161	100
	Middle school	18	11,2
Educational Status	High school	60	37,3
	Licence	55	34,2
	Graduate	28	17,4
	Total	161	100

Table 1 shows that 43.5% of the individuals participating in the research are female and 56.5% are male. Those expressing low income constitute 8.7%, medium 79.5% and 11.8% expressing their high income. 50.3% of the participants are married and 59.7% are single. The duration of the exercise of the participants; 15.5% for three months, 24.8% for six months and for one year or more make up 28.0%.

Looking at the averages of BMI; 53.4% of them are <24.99 (Normal), 32.9% of them are 25.00-29.99 (Overweight), 13.7% of them are >30.00 (Obese) individuals. Educational status of the participants; 11.2% are secondary school, 37.3% high school, 34.2% undergraduate, 17.4% graduate individuals.

	Gender	N	M	SD	t	df	p
<b>Extrinsic Eating</b>	Female	70	2,8375	,81576	,632	159	,528
	Male	91	2,7527	,86442	_		
<b>Emotional Eating</b>	Female	70	2,6327	1,00091	1,289	159	,199
	Male	91	2,4403	,88725	_		
Restrictive Eating	Female	70	3,4661	,73102	1,113	159	,267
	Male	91	3,3159	,92802	_		

In Table 2., there is no significant difference in terms of eating behavior between male and female participants by gender (p>0.05).

	Marital Status	N	M	SD	t	df	p
Extrinsic Eating	Married	81	2,9336	,83878	2,210	159	,029*
	Single	80	2,6438	,82512	_		
<b>Emotional Eating</b>	Married	81	2,6649	,93655	1,930	159	,055
	Single	80	2,3812	,92798	_		
Restrictive Eating	Married	81	3,4105	,71650	,439	159	,661
	Single	80	3,3516	,96826	_		

In Table 3, it is seen that there is a significant difference between the married and single participants in terms of external eating behavior levels (p>0.05). Accordingly, those who are married show more external eating behavior. The difference does not appear to be statistically significant in terms of restrictive and emotional eating behaviors (p>0.05).

	Mean					
	Sum of Squares	Squares	df	f	p	
between groups	,859	,430	2	,603	,548	
within groups	112,591	,713	158			
Total	113,451		160			
between groups	5,442	2,721	2	3,161	,045*	
within groups	135,997	,861	158			
Total	141,438		160			
between groups	1,466	,733	2	1,017	,364	
within groups	113,809	,720	158			
Total	115,275	,430	160			
	within groups Total between groups within groups Total between groups within groups	between groups ,859 within groups 112,591 Total 113,451 between groups 5,442 within groups 135,997 Total 141,438 between groups 1,466 within groups 113,809	between groups ,859 ,430 within groups 112,591 ,713 Total 113,451 between groups 5,442 2,721 within groups 135,997 ,861 Total 141,438 between groups 1,466 ,733 within groups 113,809 ,720	between groups ,859 ,430 2 within groups 112,591 ,713 158  Total 113,451 160 between groups 5,442 2,721 2 within groups 135,997 ,861 158  Total 141,438 160 between groups 1,466 ,733 2 within groups 113,809 ,720 158	between groups ,859 ,430 2 ,603 within groups 112,591 ,713 158  Total 113,451 160 between groups 5,442 2,721 2 3,161 within groups 135,997 ,861 158  Total 141,438 160 between groups 1,466 ,733 2 1,017 within groups 113,809 ,720 158	

Table 4 shows that there is a significant difference in emotional eating behavior levels between normal, slightly overweight and obese participants according to body mass indexes (p<0.05).

Accordingly, those who are slightly obese show more emotional eating behavior than others. It is seen that there is no significant difference in terms of external eating and restrictive eating behavior (p>0.05).

		Sum of Squares	Mean Squares	df	f	р
Extrinsic Eating	between groups	7,120	2,373	3	3,504	,017*
	within groups	106,331	,677	157		
	Total	113,451		160		
Emotional Eating	between groups	,381	,127	3	,141	,935
	within groups	141,057	,898	157		
	Total	141,438		160		
Restrictive Eating	between groups	9,536	3,179	3	4,720	,004*
	within groups	105,739	,673	157		
	Total	115,275	2,373	160		

In Table 5, it was found that there was a similar to difference in terms of restrictive eating behavior levels between graduate and undergraduate participants according to education levels (p<0.05). there was a significant difference external eating behaviors between undergraduate and secondary school participants (p<0.05).

		Sum of Squares	Mean	df	F	P
			Squares			
Extrinsic Eating	between groups	1,291	,646	2	,909	,405
	within groups	112,159	,710	158		
	Total	113,451		160		
Emotional Eating	between groups	1,205	,603	2	,679	,509
	within groups	140,233	,888	158		
	Total	141,438		160		
Restrictive Eating	between groups	11,903	5,951	2	9,096	,000,
	within groups	103,372	,654	158		
	Total	115,275	,646	160	,909	

According to the perceived weight in Table 6, there is a significant difference between those who want to gain weight, those who do not have weight problems and those who want to lose weight (p<0.05). Accordingly, those who want to gain weight show less restrictive eating behavior than others.

Table 7. One Way Anova Test Results for Eating Behavior Levels According to the duration of participation

		Sum of Squares	Mean Squares	df	F	P
Extrinsic Eating	between groups	3,071	1,024	3	1,456	,229
Extrast Lating	within groups	110,380	,703	157	1,100	,22)
	Total	113,451		160		
Emotional Eating	between groups	2,890	,963	3	1,092	,354
	within groups	138,548	,882	157		
	Total	141,438		160		
Restrictive Eating	between groups	14,337	4,779	3	7,434	,000:
	within groups	100,938	,643	157		
	Total	115,275	1,024	160	1,456	

According to the duration of doing sports in Table 7, it is seen that there is a significant difference between those who have been doing sports for one month and those who have been doing sports for six months or more in terms of their restrictive eating behavior levels (p<0.05).

With those who have been participating for a month; the difference appears to be significant in terms of restrictive eating behavior levels between the participants for more than six months and more than one year (p<0.05). Accordingly, as the duration of exercise increases, restrictive eating behavior also increases.

**Table 8.** Pearson Correlation Analysis Results by Eating Behavior, BMI, Education Level and the duration of participation in the sports center

1 1 1					
	(1)	(2)	(3)	(4)	(5)
Extrinsic Eating (1)	-				
Emotional Eating. (2)	,426**	-			
Restrictive Eating (3)	-,023	,211**	-		
BMI (4)	-,085	,027	-,013	-	
Education level (5)	,118	-,036	,018	-,269**	-
The duration of participation in the sports center (6)	,049	,055	,344**	-,127	,054

Considering the results of Pearson correlation analysis according to eating behavior, BMI, education level and participation in sports center, There is a moderate positive correlation between the duration of participation in the sports center and the restrictive eating behavior (p<0.05). It was also determined that there was a moderate negative relationship between education level and BMI (p<0.05).

#### **DISCUSSION AND CONCLUSION**

In this study, which was carried out with a total of 161 people, 91 female and 70 male, with an average age of  $30.30\pm10.02$ , who were reached from the sports centers within the borders of Kahramanmaraş and accepted to participate in the study, it was aimed to determine the eating behaviors of the individuals who go to regular sports centers.

In the current study, in terms of the gender variable of the participants, it was determined that the difference in eating attitudes was not statistically significant.

According to the marital status variable, it has been revealed that the difference between married and single individuals in terms of eating behavior was statistically significant. Accordingly, those who are married show more external eating behavior. Married people generally consume more regular meals than when they

live alone, however, their motivation to stay fit after marriage decreases. It can be thought that these factors caused the finding in our study.

According to body mass indexes, It is revealed that there is a significant difference between normal, slightly overweight and obese participants in terms of emotional eating behavior levels. Accordingly, those who are slightly obese show more emotional eating behavior than others. Similar to our study, Akdevelioğlu and Yörüsün (1) conducted a study on university students, and it was shown that there was a positive significant difference between the weak group and the normal and obese group in terms of emotional and restricted eating scores.

In the study conducted by Hekimoğlu (7) the study conducted by Kadıoğlu and Ergün (8) on university students, and the study conducted by Değirmenci (5) on obese adults, similar to our current study, it is revealed that there is a positive relationship between body mass indexes and eating attitudes.

Even if individuals exercise regularly, negative tendencies in their eating attitudes cause them to consume food above the calories they spend daily, and it can be thought that this situation leads to the findings in our study, which gives similar results with the literature.

In our study, it is seen that as the education level of the participants increases, their eating attitudes are scored positively. Similar to our research, in the study conducted by Yavuz (15) and in the study conducted by Tepe (13) it has been revealed that the level of eating disorders decreases with the increase in education level. As the education level of individuals increases, their awareness of healthy and regular nutrition also increases. It can be thought that this situation caused the result in our current study.

According to perceived weight, there is a significant difference between those who want to gain weight, those who do not have weight problems and those who want to lose weight. Accordingly, those who want to gain weight show less restrictive eating behavior than others. Compared to other groups, it can be thought that those who want to gain weight will show an attitude towards increasing their food consumption due to the motivation to increase their current weight, and this situation enables us to reach the obtained result.

According to the duration of doing sports, it is seen that there is a similar to difference between those who do sports for one month and those who do sports for six months or more in terms of restrictive eating behavior levels; accordingly, as the time to do it increases, the restrictive eating behavior also increases.

The findings obtained in the study of Ayaz (2) on the investigation of eating attitudes and awareness of individuals between the ages of 18-65, are similar to our study.

In the study conducted by Keyf (9) physical activity levels of individuals were compared according to their attention to nutrition, and similar to our study, physical activity levels were found to be statistically significantly higher in those paying attention to food consumption.

Differently; In the study conducted by Tepe (13) it was shown that there is no statistical difference between the tendency of those who do or do not do regular physical activity to show eating attitude behavior disorder. It can be thought that it causes them to exhibit restrictive eating behaviors in their eating attitudes.

In our current study, it was revealed that there was a moderate positive relationship between the participants' time to go to the sports center and their restrictive eating behaviors. It has been It was determined that there was a statistically moderate negative correlation between education level and BMI. As a result, as the rate of participation in sports centers increases, they may tend to restrictive eating behavior in order to achieve a healthy physical appearance. it can be thought that this situation causes their body mass index to decrease.

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