

Determining the Exercise Addiction Levels of University Students

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Abstract

This study was conducted to determine the exercise addiction levels of university students in terms of some demographic variables. The study group consisted of 487 (230 female, 257 male) volunteer students studying at Bitlis Eren University and Fırat University. The “Personal Information Form” was used as the data collection tool in the study, and the “Exercise Addiction Scale” was used to determine the exercise addiction levels of the students. SPSS statistical package program was used in the analysis of the data. Significance was accepted as $p < 0.05$. According to the findings obtained from the study; It was seen that there was a significant relationship between the students' gender, weekly exercise status and exercise addiction, and there was no significant difference between nutrition education, height, body weight, regular exercise and income status and exercise addiction. In addition, it was determined that the average exercise addiction score of the male students in the study group was higher than the female students, and that the students who did not receive nutrition education were higher than the students who received nutrition education. In addition, it was determined that the participants' average exercise addiction score increased as their body weight and weekly exercise frequency increased. As a result, it was seen that the students' exercise addiction was at a moderate level and they were in the dependent group. In line with this information, it is thought that providing information that will express the impact of exercise addiction on the lives of individuals is important for the creation of healthy societies.

Keywords: Exercise, Addiction, Student

Introduction

Exercise consists of regular, planned and repetitive physical activities performed to develop or maintain cardiovascular endurance, flexibility and muscle strength, which are the basic components of physical fitness (Özer, 2016). Today, many people have made exercise an indispensable part of their daily lives with the desire to adopt a healthy lifestyle. The number of individuals who exercise regularly is increasing due to both its physical and psychological benefits (J. C. Basso et al., 2022).

This behavior, which has positive effects on health, contributes to the prevention of diseases and the improvement of general health. Although it is known that exercise has many benefits, excessive physical activity can create various negative effects on individuals and reach the level of addiction (Krisztina Berczik et al., 2012). Addiction is defined as an uncontrolled desire for a substance, behavior or activity and the repetitive behaviors it exhibits (Sussman and Sussman, 2011). Addictions can often be at a level that can negatively affect a person's daily life, relationships and health (Karakuş et al., 2021). In addition to more common examples such as substance addiction, behavioral addictions are also frequently seen (Aksoy and Kul, 2021). Such addictions are characterized by the person's inability to stop doing a certain activity and the inability to maintain normal functioning while doing this activity.

Exercise addiction is a psychological condition characterized by uncontrolled and excessive physical activity (Cicioğlu et al., 2019). This type of addiction occurs when exercises that are done to support a healthy lifestyle reach a level that can negatively affect the individual's social, psychological and physical health. People with exercise addiction experience feelings such as restlessness, guilt or anxiety when they do not exercise and devote a large part of their daily lives to planning and implementing exercises (Hausenblas and Downs, 2002). This situation can lead to both physical injuries and damage to social relationships. Although exercise addiction is more common among athletes and amateur sportsmen, it can also be observed in the general population and may require treatment. In this context, the aim of the study is to examine the exercise addiction levels of university students.

Method

The research group consisted of 487 volunteer students (230 female, 257 male) studying at Bitlis Eren University and Fırat University. While the scale was preferred for data collection, the descriptive scanning model was used to determine

the levels of “Exercise Addiction”. The scale used in the study consisted of two parts; in the first part, the “Personal Information Form” was used to determine the demographic information of the students, and in the second part, the “Exercise Addiction Scale” developed by Tekkurşun Demir et al. (2018) was applied to the participants to determine the exercise levels of the students (Tekkurşun Demir, et al. 2018)

Exercise Addiction Scale (EAS)

The scale consists of 17 five-point Likert-type items and three sub-dimensions (“excessive focus and emotional change: 1-7”, “delay of individual-social needs and conflict: 8-13”, “development of tolerance and passion: 14-17) and the scale form’s grading and score limits are as follows:

Rating:

Strongly Disagree: 1.00–1.79,
Partially Disagree: 1.80–2.59,
Moderately Disagree: 2.60–3.39,
Agree: 3.40–4.19,
Strongly Agree: 4.20–5.00

Point limits:

1-17 Regular Group
18-34 Low Risk Group
35-51 Risk Group
52-69 Dependent Group
70-85 was evaluated as “Highly Dependent Group”.

The validity and reliability study of the Exercise Addiction Scale was conducted by researchers, and the KMO (Kaiser-Meyer-Olkin Measure of Sampling Adequacy) value was determined as .891, Bartlett Test as 1085.010 and (Cronbach Alpha) $\alpha = 0.88$.

Analysis of Data

The data were analyzed in the SPSS statistical program. The demographic information, exercise addiction and healthy living skills levels of the research group were determined using percentage, frequency, arithmetic mean and standard deviation techniques as descriptive statistics. The skewness and kurtosis values were checked to determine whether the data showed a normal distribution. If the skewness and kurtosis values are between +1 and -1, the data is considered to be normally distributed (Tabannick, 2015). After determining that the data showed a normal distribution, Independent Samples t and One-Way ANOVA tests were applied in intra-group comparisons. Significance was accepted as $p < 0.05$.

Table 1. Mean, Standard Deviation, Skewness and Kurtosis Values of Exercise Addiction Scale and Its Sub-Dimensions

Variables	\bar{X}	sd	Skewness	Kurtosis
Overfocus and Emotional Change	28,01	5,56	-,472	-,194
Postponement of Individual-Social Needs and Conflict	21,57	5,66	-,015	-,552
Development of Tolerance and Passion	14,82	4,10	-,792	,372
Exercise Addiction Scale	64,41	14,38	-,465	,232

Findings

Table 2. Demographic Information of Students

		Frequency	Percentage (%)
Gender	Male	257	52,8
	Female	230	47,2
Size	150-160 cm	129	26,5
	161-170 cm	117	24,0
	171-180 cm	161	33,1
	181-190 cm	80	16,4
Body Weight	50-60 kg	124	25,5
	61-70 kg	157	32,2
	71-80 kg	100	20,5
	81-90 kg	106	21,8
Regular Exercise Status	Yes	234	48,0

Perceived Situation	Economic	No	122	25,1
		Partially	131	26,9
	Economic	Low	134	27,5
		Medium	231	47,4
		Good	122	25,1
Have You Received Nutrition Education?	Received	Yes	177	36,3
		No	310	63,7
Weekly Exercise Status	Exercise Status	1 day	104	21,4
		2 day	102	20,9
		3 day	281	57,7

When Table 2 is examined, it was determined that of the students in the research group; 52.8% were male, 47.2% were female, 33.1% were 171-180 cm, 26.5% were 150-160 cm, 24% were 161-170 cm, 16.4% were between 181-190 cm in height, 32.2% weighed 61-70 kg, 25.5% weighed 50-60 kg, 21.8% weighed 81-90 kg, 20.5% weighed 71-80 kg, 47.4% had a medium income, 27.5% had low income, and 25.1% had a good income. It was determined that 48% of the students exercised regularly and 63.7% did not receive nutrition education. When the weekly exercise status of the students in the research group was evaluated, it was seen that 57.7% of them exercised for 3 days, 21.4% for 1 day, and 20.9% for 2 days.

Table 3. T-Test Analyses of Students According to Gender Variable

		Gender			
		\bar{X}	sd	t	p
Overfocus and Emotional Change	Male	28,00	5,16	1,439	0,15
	Female	27,27	5,95		
Postponement of Individual-Social Needs and Conflict	Male	21,76	5,35	1,664	0,09
	Female	20,91	5,96		
Development of Tolerance and Passion	Male	15,12	3,83	3,297	0,00*
	Female	13,90	4,30		
Exercise Addiction Scale	Male	64,89	13,52	2,149	0,03*
	Female	62,09	15,18		

*p<0,05

When Table 3 was evaluated, it was determined that there was a statistically significant difference between the gender variable exercise addiction scale and the tolerance development and passion sub-dimensions of the scale mean scores of the research group ($p<0.05$), while there was no statistically significant difference between the total score averages of the over-focus and emotional change and postponement of individual-social needs and conflict sub-dimensions of the exercise addiction scale ($p>0.05$). It was also observed that the male students in the research group had higher exercise addiction score averages than the female students.

Table 4. t-Test Analyses According to the Nutrition Education Status of Students

		Nutrition Education			
		\bar{X}	sd	t	p
Overfocus and Emotional Change	Yes	27,38	5,91	-,830	0,40
	No	27,81	5,35		
Postponement of Individual-Social Needs and Conflict	Yes	21,33	5,75	-,072	0,94
	No	21,37	5,61		
Development of Tolerance and Passion	Yes	14,66	4,37	,466	0,64
	No	14,48	3,94		

Exercise Addiction Scale	Yes	63,38	15,26	-,216	0,82
	No	63,67	13,88		

*p<0,05

When Table 4 was evaluated, it was determined that there was no statistically significant difference between the students' nutrition education status and the exercise addiction scale and scale sub-dimensions score averages (p>0.05).

Table 5. Variance Analysis According to the Height Variable of Students

		Height		F	Sig	Fark
		\bar{X}	sd			
Overfocus and Emotional Change	150-160 cm (a)	27,24	6,26	1,621	0,18	-
	161-170 cm (b)	27,14	5,17			
	171-180 cm (c)	28,42	4,99			
	181-190 cm (d)	27,55	5,91			
Postponement of Individual-Social Needs and Conflict	150-160 cm (a)	21,27	6,12	1,059	0,36	-
	161-170 cm (b)	20,80	5,06			
	171-180 cm (c)	21,96	5,48			
	181-190 cm (d)	21,11	6,05			
Development of Tolerance and Passion	150-160 cm (a)	14,27	4,45	,978	0,40	-
	161-170 cm (b)	14,73	3,90			
	171-180 cm (c)	14,86	3,86			
	181-190 cm (d)	14,06	4,26			
Exercise Addiction Scale	150-160 cm (a)	62,78	15,74	1,116	0,34	-
	161-170 cm (b)	62,68	13,21			
	171-180 cm (c)	65,26	13,46			
	181-190 cm (d)	62,72	15,44			

*p<0,05

When Table 5 was examined, it was determined that there was no statistically significant difference between the height variable of the research group and the mean scores of the exercise addiction scale and its sub-dimensions (p>0.05).

Table 6. Variance Analysis According to Students' Body Weight Variable

		Body Weight		F	Sig	Fark
		\bar{X}	sd			
Overfocus and Emotional Change	51-60 kg (a)	26,63	6,50	2,064	0,10	-
	61-70 kg (b)	27,92	5,12			
	71-80 kg (c)	28,34	5,20			
	81-90 kg (d)	27,82	5,21			
Postponement of Individual-Social Needs and Conflict	51-60 kg (a)	20,77	6,53	1,260	0,28	-
	61-70 kg (b)	21,19	5,19			
	71-80 kg (c)	22,21	5,36			
	81-90 kg (d)	21,50	5,47			
Development of Tolerance and Passion	51-60 kg (a)	13,31	4,71	5,600	0,00*	a-b, a-c, a-d
	61-70 kg (b)	14,77	3,78			
	71-80 kg (c)	15,37	3,64			
	81-90 kg (d)	14,86	3,94			
Exercise Addiction Scale	51-60 kg (a)	60,72	16,81	2,625	0,05	-
	61-70 kg (b)	63,90	13,23			
	71-80 kg (c)	65,92	13,31			

81-90 kg (d)	64,18	13,56
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*p<0,05

When Table 6 was evaluated, it was determined that there was a significant difference between the students' body weight variable and the tolerance development and passion sub-dimensions of the exercise addiction scale ($p<0.05$), while it was determined that there was no statistically significant difference between the exercise addiction scale, overfocus and emotional change and postponement of individual-social needs and conflict scale sub-dimensions ($p>0.05$). It was determined that there was a significant difference between the exercise addiction scale sub-dimension tolerance development and passion and the body weight variable of the research group [$t=5.600$, $p<0.05$]. According to the analysis results conducted to determine which groups these differences originated from, it was determined that there was a statistically significant difference in favor of the students with a body weight of 71.80 kg ($\bar{X}=15.37$), 81-90 kg ($\bar{X}=14.86$), 61-70 kg ($\bar{X}=14.77$), 51-60 kg ($\bar{X}=13.31$) between the mean scores of the students with a body weight of 71.80 kg ($\bar{X}=15.37$), 81-90 kg ($\bar{X}=14.86$), 61-70 kg ($\bar{X}=14.77$), 51-60 kg ($\bar{X}=13.31$) in favor of the students with a body weight of 71-80 kg.

Table 7. Variance Analysis According to Students' Regular Exercise Status

		Regular Exercise Status				
		\bar{X}	sd	F	Sig	Fark
Overfocus and Emotional Change	Yes (a)	26,99	5,55	3,372	0,03*	a-b
	No (b)	28,41	5,19			
	Partially (c)	28,15	5,78			
Postponement of Individual-Social Needs and Conflict	Yes (a)	20,49	5,35	5,405	0,00*	a-b, a-c
	No (b)	22,37	5,55			
	Partially (c)	22,09	6,08			
Development of Tolerance and Passion	Yes (a)	14,53	4,26	,094	0,91	-
	No (b)	14,44	3,65			
	Partially (c)	14,66	4,24			
Exercise Addiction Scale	Yes (a)	62,02	14,25	2,635	0,07	-
	No (b)	65,09	13,29			
	Partially (c)	64,91	15,38			

*p<0,05

When Table 7 was examined, it was determined that there was a significant difference between the students' regular exercise status and the mean scores of the exercise addiction scale sub-dimensions of excessive focus and emotional change and postponement of individual-social needs and emotional change ($p<0.05$), while it was observed that there was no statistically significant difference between the exercise addiction scale and the tolerance development and passion sub-dimensions of the scale sub-dimensions ($p>0.05$). It was determined that there was a significant difference between the research group's exercise addiction scale sub-dimension excessive focus and emotional change and the regular exercise status variable [$t=3.372$, $p<0.05$]. According to the analysis results conducted to determine which groups these differences originated from, it was determined that there was a statistically significant difference in favor of the students who did not exercise regularly between the mean scores of the students who did not exercise regularly ($\bar{X}=28.41$), partially ($\bar{X}=28.15$), yes ($\bar{X}=26.99$) and the mean scores of the students who did exercise regularly. It was determined that there was a significant difference between the exercise addiction scale sub-dimension of the research group, postponement of individual-social needs and conflict, and the regular exercise status variable [$t=5.405$, $p<0.05$]. According to the analysis results conducted to determine which groups these differences originated from, it was determined that there was a statistically significant difference in favor of the students who did not exercise regularly between the mean scores of the students who did not exercise regularly ($\bar{X}=22.37$), yes ($\bar{X}=22.09$), partially ($\bar{X}=20.49$), and the mean scores of the students who did exercise regularly.

Table 8. Variance Analysis According to Income Status of Students

		Income Status				
		\bar{X}	sd	F	Sig	Fark

Overfocus and Emotional Change	Low (a)	27,76	5,50	,113	0,89	-
	Medium (b)	27,70	5,64			
	Good (c)	27,45	5,50			
Postponement of Individual-Social Needs and Conflict	Low (a)	21,32	5,65	,013	0,98	-
	Medium (b)	21,34	5,74			
	Good (c)	21,43	5,56			
Development of Tolerance and Passion	Low (a)	14,41	4,10	,244	0,78	-
	Medium (b)	14,50	4,15			
	Good (c)	14,76	4,02			
Exercise Addiction Scale	Low (a)	63,51	14,33	,003	0,99	-
	Medium (b)	63,55	14,62			
	Good (c)	63,65	14,08			

*p<0,05

When Table 8 was evaluated, it was determined that there was no statistically significant difference between the income status of the research group and the mean scores of the exercise addiction scale and scale sub-dimensions ($p>0.05$).

Table 9. Variance Analysis According to Students' Weekly Exercise Status

		Weekly Exercise Status				
		\bar{X}	sd	F	Sig	Fark
Overfocus and Emotional Change	1 day (a)	26,07	4,54	12,090	0,00*	a-c, b-c
	2 day (b)	26,43	5,17			
	3 day (c)	28,69	5,81			
Postponement of Individual-Social Needs and Conflict	1 day (a)	19,93	5,12	4,421	0,01*	a-c
	2 day (b)	21,50	3,89			
	3 day (c)	21,84	6,28			
Development of Tolerance and Passion	1 day (a)	13,44	4,26	13,899	0,00*	a-b, b-c
	2 day (b)	16,27	3,36			
	3 day (c)	14,32	4,11			
Exercise Addiction Scale	1 day (a)	59,45	13,13	5,603	0,00*	a-b, a-c
	2 day (b)	64,20	11,31			
	3 day (c)	64,86	15,53			

*p<0,05

When Table 9 was evaluated, it was determined that there was a statistically significant difference between the weekly exercise status of the research group and the exercise addiction scale and scale sub-dimensions mean scores ($p>0.05$). It was determined that there was a significant difference between the exercise addiction scale sub-dimension excessive focus and emotional change of the research group and the weekly exercise status variable [$t=12.090$, $p<0.05$]. According to the results of the analysis conducted to determine which groups these differences originated from, it was determined that there was a statistically significant difference between the mean scores of the students who exercised 3 days a week ($\bar{X}=28.69$), 2 days ($\bar{X}=26.43$), 1 day ($\bar{X}=26.07$) and the mean scores of the students who exercised weekly in favor of the students who exercised 3 days a week. It was determined that there was a significant difference between the exercise addiction scale sub-dimension postponement of individual-social needs and conflict of the research group and the weekly exercise status variable [$t=4.421$, $p<0.05$]. According to the results of the analysis conducted to determine which groups these differences originate from, it was found that there was a statistically significant difference between the mean scores of the students who exercise 3 days a week ($\bar{X}=21.84$), 2 days ($\bar{X}=21.50$), 1 day ($\bar{X}=19.93$) and the mean scores of the students who exercise weekly in favor of the students who exercise 3 days a week. It was determined that there was a significant difference between the tolerance development and passion sub-dimension of the exercise addiction scale sub-dimension of the research group and the weekly exercise status variable [$t=13.899$, $p<0.05$]. According to the results of the analysis conducted to determine which groups these differences originate from, it was found that there was a statistically significant difference between the mean scores of the students who exercise 2 days a week ($\bar{X}=16.27$), 3 days ($\bar{X}=14.32$), 1 day ($\bar{X}=13.44$) and the mean scores of the students who exercise weekly in favor of the students who exercise 2 days a week. It

was determined that there was a significant difference between the exercise addiction scale of the research group and the weekly exercise status variable [$t=5.603$, $p<0.05$]. According to the analysis results conducted to determine which groups these differences originated from, it was determined that there was a statistically significant difference in favor of the students who exercised 3 days a week between the mean scores of the students who exercised 3 days a week ($\bar{X}=64.86$), 2 days ($\bar{X}=64.20$), 1 day ($\bar{X}=59.45$) and the mean scores of the students who exercised weekly.

Discussion and Conclusion

This study was conducted to examine the exercise addiction levels of university students. The research group consisted of 487 (230 female, 257 male) volunteer students studying at Bitlis Eren University and Fırat University. While it was determined that there was a statistically significant difference between the gender variable exercise addiction scale and the tolerance development and passion sub-dimensions of the scale sub-dimensions of the research group, it was determined that there was no statistically significant difference between the total score averages of the exercise addiction scale sub-dimensions of overfocus and emotional change and postponement of individual-social needs and conflict. In addition, it was observed that the exercise addiction score averages of male students in the research group were higher than female students. When the literature studies were examined; In the study conducted by Cicioğlu et al. (2019), it was determined that the exercise addiction levels of elite male athletes were statistically significantly higher compared to elite female athletes. Erdoğan et al. (2023) found that university students' exercise addiction and healthy living skills behaviors were at a good level. Again, in another study, it was determined that exercise addiction was more common in men (A. Szabó et al., 2013). The studies conducted support our research. Bavlı et al. (2011) found that female marathon runners had higher exercise addiction scores than males in their study. The research conducted reveals that there are findings contrary to our study. It was determined that there was no statistically significant difference between the nutritional education status of the research group and the average scores of the exercise addiction scale and scale sub-dimensions. When the literature studies were examined; Erdoğan et al. (2024) stated that the participants in their study were in the dependent group in terms of exercise addiction and that exercise addiction and physical appearance perfectionism would be affected by many factors. Akbuga and Çalçalı (2023) found in their study that the healthy eating attitudes of athletes with high exercise addiction levels were at an ideal level. In another study, a positive relationship was found between exercise addiction and eating attitudes and behaviors (Yıldırım et al., 2017). It was determined that there was no statistically significant difference between the height variable of the research group and the average scores of the exercise addiction scale and scale sub-dimensions. When the studies conducted were examined; In the study conducted by Erdoğan and Mutlu Bozkurt (2022), when the exercise addiction of physical education and sports college (BESYO) and sports high school students was examined, it was determined that there was no relationship between the height variable and exercise addiction.

While it was determined that there was a significant difference between the weekly exercise status and regular exercise status of the research group and the mean scores of the exercise addiction scale sub-dimensions of excessive focus and emotional change and postponement of individual-social needs and emotional change, it was observed that there was no statistically significant difference between the tolerance development and passion sub-dimensions of the exercise addiction scale and the scale sub-dimensions.

It was determined that there was no statistically significant difference between the income status of the research group and the mean scores of the exercise addiction scale and the scale sub-dimensions.

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