



Examining the Relationship Between Exercise Dependence and Loneliness in Fitness Individuals

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Abstract

The aim of this study was to examine the relationship between exercise dependence and loneliness levels of fitness individuals. For this purpose, 300 individuals, 104 women and 196 men (Mean Age = 27.13 ± 9.866) who were fitness participants, were included in the study. The Exercise Dependence Scale-21, whose Turkish validity and reliability was provided by Yeltepe and Can İkizler (2007), and the UCLA Loneliness Scale-III, whose Turkish validity and reliability study was conducted by Durak and Durak (2010), were used as measurement tools in the study. Descriptive statistics, Pearson Correlation test and simple linear regression analyzes were used to analyze the data, using the SPSS 25 package program. When the results were examined, a negative relationship was found between exercise dependence sub-dimensions and total score and loneliness. Additionally, the loneliness variable was found to be a significant predictor of exercise dependence. As a result, it was concluded that the exercise dependence of the participating individuals was related to their loneliness levels and that their loneliness levels affected exercise dependence. It is possible to say that the loneliness levels of individuals participating in fitness interact with their exercise dependence.

Keywords: Exercise dependence, loneliness, fitness participants.

Fitness Yapan Bireylerin Egzersiz Bağımlılığı ve Yalnızlık İlişkisinin İncelenmesi

Özet

Bu çalışma fitness yapan bireylerin egzersiz bağımlılığı ve yalnızlık düzeylerinin incelenmesi amacıyla gerçekleştirilmiştir. Çalışmanın amacı doğrultusunda fitness katılımcısı 104 kadın ve 196 erkek (YaşOrt.=27,13 ± 9,866) 300 birey araştırmaya dâhil edilmiştir. Çalışmada ölçüm araçları olarak Yeltepe ve Can İkizler (2007) tarafından Türkçe geçerlilik ve güvenilirliği sağlanan Egzersiz Bağımlılığı Ölçeği-21 ile Durak ve Durak (2010) tarafından Türkçe geçerlilik ve güvenilirlik çalışması gerçekleştirilen UCLA Yalnızlık Ölçeği-III kullanılmıştır. Verilerin analizinde SPSS 25 paket programından yararlanılarak, tanımlayıcı istatistikler, Pearson Korelasyon testi ve basit doğrusal regresyon analizleri kullanılmıştır. Elde edilen sonuçlar incelendiğinde egzersiz bağımlılığı alt boyutları ve toplam puanı ile yalnızlık arasında

negatif yönlü ilişki tespit edilmiştir. Ayrıca yalnızlık değişkeninin egzersiz bağımlılığının anlamlı bir yordayıcısı olduğu tespit edilmiştir. Sonuç olarak katılımcı bireylerin egzersiz bağımlılığının yalnızlık düzeyleri ile ilişkili olduğu ve yalnızlık düzeylerinin egzersiz bağımlılığını etkilediği sonucuna ulaşılmıştır. Fitness katılımı gösteren bireylerinin yalnızlık düzeylerinin egzersiz bağımlılıkları ile etkileşim içerisinde olduğunu söylemek mümkündür.

Anahtar Kelimeler: Egzersiz bağımlılığı, yalnızlık, fitness katılımcıları.

INTRODUCTION

Over-exercising can have negative effects on a person's mental and physical well-being. This condition is reflected in exercise dependence, which results from consistent engagement in moderate- to high-intensity exercise and manifests as the conversion of exercise into a compulsive habit (Hausenblas and Downs, 2002a). Excessive bodily desire while exercise is one way to describe exercise dependence. Despite the well-known negative effects of exercise, the persistence of activity, particularly in conditions like injury, and the negative emotions experienced if this is avoided, suggest a dependence on exercise (Vardar, 2012). The conceptual approach to exercise dependence includes behavioral factors such as exercise frequency, psychological factors such as pathological dependence, and physiological factors such as tolerance. For the definition of exercise dependence, Veal introduced a criterion based on the DSM-IV diagnostic criteria for substance dependence. It is stated that the presence of 3 or more of these criteria causes clinical impairment and distress. These criteria are as follows:

- ✓ Tolerance: It is defined as the need to perform a significantly increasing amount of exercise to achieve the desired effect, or the effect decreasing with continued use of the same amount of exercise.
- ✓ Withdrawal: It is manifested by symptoms that occur when not exercising, such as anxiety and fatigue, or by performing the same or similar amount of exercise to relieve or prevent these withdrawal symptoms.
- ✓ Intention Effects: Exercise is often performed in larger amounts or for a longer period of time than intended.
- ✓ Lack of Control: There is a persistent desire or unsuccessful effort to reduce or control exercise.
- ✓ Time: A lot of time is spent on activities required to exercise.
- ✓ Reductions in Other Activities: Give up or reduction of social, occupational, or recreational activities due to exercise.
- ✓ Continuance: Continuing to exercise despite the knowledge that there is a permanent or recurring physical or psychological problem that is caused or worsened by exercise (Hausenblas and Downs, 2002b).

Although some research in the literature (Özçelik et al., 2015; Pels and Kleinert, 2016; Hwang et al., 2019) suggests that engaging in sports, physical activity, or exercise can provide positive experiences that reduce feelings of loneliness, this study investigates the relationship between loneliness and exercise dependence.

Inadequate and unsatisfactory social experiences in social relations can affect individuals' lives to different extents. This situation can cause the individual to withdraw from society and feel lonely. Loneliness, which is known to cause many psychological crises and personality disorders, stands out as an emotion experienced intensely in society (Buluş, 1997). Loneliness refers to a sad and common experience, according to the conclusion obtained from many individual experiences (Perlman and Peplau, 1981). The state of loneliness is a particularly emotionally unpleasant experience. Individuals' perception that their social relationships do not meet their expectations emerges. The experience of loneliness stands out as an important indicator that a person has difficulty in social relationships, indicating the inadequacy of their relationships (Heinrich and Gullone, 2006).

It can be argued that engaging in various forms of exercise promotes mental health by easing the symptoms of stress, anxiety, and depression (Mikkelsen et al., 2017) and increases mental well-being by satisfying people's basic psychological needs (Öner, 2019). However, in addition to these contributions of exercise, individuals may experience loneliness due to the weakness of social life. It is also thought that the

negative emotional state created by the experience of loneliness may cause them to participate in exercise to the extent of dependence.

The idea that the increasing loneliness in individuals' lives, especially in line with the technological developments in recent years, may result in exercise dependence reflects the reason for conducting the research. The idea that the loneliness of individuals in fitness centers, which is one of the most common areas for participation in exercise today, may cause exercise dependence behavior constitutes the necessity and problem statement of this research. In this regard, the aim of the study is to examine the exercise dependence and loneliness levels of fitness individuals.

Problem Statement of the Research: Does the loneliness of fitness individuals have an effect on exercise dependence?

Hypotheses

H1: The loneliness of fitness individuals is related to exercise dependence.

H2: The loneliness of fitness individuals has an effect on exercise dependence.

METHOD

In the study, the relational survey model, one of the quantitative research methods, was used. The relational survey model is used to determine the relationship between two or more variables (Büyüköztürk et al., 2008).

Study Group

A total of 300 individuals, 104 women (34.7%) and 196 men (65.3%), with an average age of 27.13 ± 9.866 years old, participating in fitness activities in gyms in Manisa province, participated in the study. It was determined that 64% of the participants do sports regularly, 69% have a good or very good income, and 50.7% have a sports background.

Table 1. Findings regarding the demographic information of the participants

	\bar{X}	S.s
Age	27.13	9.866
Gender	N	%
Female	104	34.7
Male	196	65.3
Regular Sport Participation	N	%
Yes	192	64.0
No	108	36.0
Income Status	N	%
Bad	93	31.0
Good	162	54.0
Very Good	45	15.0
Sports Background	N	%
Yes	152	50.7
No	148	49.3

Data Collection Tools

Demographic information form, Exercise Dependence-21 Scale and UCLA-III Loneliness Scale were used as data collection tools in the study.

Demographic Information Form: The demographic information form created by the researchers to be used in the study includes variables such as age, gender, regular sports participation, income status and sports background.

Exercise Dependence-21 Scale: Exercise Dependence-21 Scale was developed by Hausenblas and Downs (2002a). The Turkish validity and reliability study of the scale was conducted by Yeltepe and İkişler (2007). The scale consists of 21 items and has a 6-point Likert type structure: (1) never and (6) always. The scale

provides information about average scores regarding exercise dependence symptoms, asymptomatic-symptomatic and exercise dependence. The scale is based on 7 dependence criteria, and it has been stated that individuals who show 3 or more of these criteria can be classified as exercise depend. People with a score of 1-2 on the scale are considered asymptomatic, people with a score of 3–4 are considered symptomatic, and people with a score of 5–6 meet the criteria for addiction. The scale's criteria for dependency include: tolerance, withdrawal, intention effect, lack of control, time, reductions in other activities and continuance. The internal consistency coefficients of the scale in the current study were as follows: tolerance =.86, withdrawal =.79, intention effect=.84, lack of control =.84, time =.84, reductions in other activities =.82, continuance =.85, and α =.96 for the total score.

UCLA-III Loneliness Scale: Russell (1996) created the UCLA Loneliness Scale-III, and Durak and Durak (2010) studied the scale's reliability and validity in Turkey. With a 4-point Likert type structure of (1) never (4) always, the scale comprises a total of 20 items, 11 reverse and 9 straight. High scores from the scale indicate the level of loneliness. In the study, the internal consistency coefficient of the scale was determined as .70.

Collection of Data

Ethics committee permission was received for the study from Manisa Celal Bayar University Rectorate Social and Human Sciences Scientific Research and Publication Ethics Committee, dated 02.06.2023, number E–050.01.04-556222. Data collection was carried out face to face after the necessary information was given to the participants.

Analysis of Data

SPSS 26 licensed package program was used to analyze the data. Arithmetic mean, standard deviation, percentage and frequency values regarding the demographic information of the participants were extracted. As a result of the Skewness and Kurtosis tests, it was concluded that the data showed normal distribution. Subscale and total score averages of the Exercise Dependence-21 Scale and Cronbach Alpha reliability coefficients of the UCLA-III Loneliness Scale total score were examined and descriptive statistics were obtained. In the study, Pearson Correlation test was used for the relationship between participants' exercise dependence and loneliness levels, and Simple Linear Regression analysis was used to estimate exercise dependence according to the loneliness variable.

FINDINGS

The total score and subscale reliability coefficients of the Exercise Dependence-21 and UCLA-III Loneliness Scale used in the research are presented in the table. The reliability coefficients of the Exercise Dependence-21 Scale subscales are, respectively, tolerance α =.86, withdrawal α =.79, intention effect α =.84, lack of control α =.84, time α =.84, reductions in other activities α =.82, and continuance α =.85. The reliability coefficient for the Exercise Dependence-21 Scale total score was determined as α =.96, and the reliability coefficient for the UCLA-III Loneliness Scale total score was determined as .70.

When Table 2 is examined, the sub-dimension and total score averages regarding the exercise dependence and loneliness levels of the study group are seen. Respectively, exercise dependence subscale mean scores were tolerance 3.4489; withdrawal 3.4100; intention effect 3.3289; lack of control 3.2856; time 3.4678; reductions in other activities 3.2133 and continuance 3.0333. In the study, the Exercise Dependence-21 Scale total score average was 3.3125 and the UCLA-III Loneliness Scale total score average was 2.7922.

Gruplar	N	%
Asymptomatic	47	15.7
Symptomatic	165	55
Exercise Depend	88	29.3

When the results regarding the exercise dependence levels of the participating individuals in the research group were examined, it was determined that 15.7% (N = 47) were asymptomatic, 55% (N = 165) were symptomatic and 29.3% (N = 88) were in the dependent group.

Table 3. Pearson correlation test for exercise dependence and loneliness level

	EDS-21 Total	Withdrawal	Continuance	Tolerance	Lack of Control	Reductions in Other Activities	Time	Intention Effect
UCLA-III Total	r	-.299**	-.139*	-.325**	-.095	-.326**	-.204**	-.309**
p<.05*								

When Table 3 was examined, it was determined that there was a low negative relationship between the participant individuals' total score regarding their loneliness levels and their exercise dependence total score ($r=-.299$, $p=.000$). In addition, the total score of the participant group regarding loneliness levels and the exercise dependence sub-dimensions continuance ($r=-.325$, $p=.000$), lack of control ($r=-.326$, $p=.000$), reductions of other activities ($r=-.330$, $p=.000$) moderate negative relationship is observed in the sub-dimensions and intention ($r=-.309$, $p=.000$). It was determined that there was a low level of negative correlation between the total score of the participants regarding their loneliness levels and the withdrawal ($r=-.139$, $p=.016$) and time ($r=-.204$, $p=.000$) sub-dimensions of exercise dependence.

Table 4. Simple linear regression analysis for the prediction of exercise dependence according to the loneliness variable

	B	Standart Error	β	t	p
	5.997	.500		12.004	
UCLA- III Total	-.961	.178	-.29	-5.417	.000*
R= .299 R ² = .090 F= 29.342 p=.000					

When Table 4 is examined, according to the results of the simple linear regression analysis regarding the prediction of exercise dependence according to the loneliness variable, it is seen that the loneliness variable is a significant predictor of exercise dependence ($R = .299$, $R^2 = .090$, $F = 29.342$, $p = .000$). It can be stated that 29.9% of the total variance in terms of exercise dependence is explained by the loneliness variable.

DISCUSSION AND CONCLUSION

This research was conducted to examine the exercise dependence and loneliness levels of fitness individuals. When the results are examined, it is seen that while a low level negative relationship is detected between exercise dependence and loneliness, the loneliness variable regarding the prediction of exercise dependence is a negative predictor and explains 29.9% of the exercise dependence of individuals who do fitness.

When the relevant literature is examined, Marques et al. (2018) estimate that the risk of exercise dependence varies according to personal characteristics, but is between 3% and 7% in the population of regular exercisers and university students, and between 6% and 9% in the athlete population. In this study, when the results regarding the exercise dependence levels of the participating individuals were examined, it was determined that 15.7% ($N = 47$) were asymptomatic, 55% ($N = 165$) were symptomatic, and 29.3% ($N = 88$) were in the dependent group. Pels and Kleinert (2016) found that physical activity and Hwang (2019) found that exercise reduced loneliness and directed individuals to socialize. However, Hawkley et al. (2009) found that loneliness reduces physical activity participation and causes inactivity. They stated that loneliness, especially in middle and older aged adults, is a risk factor that causes inactivity by reducing physical activity.

When studies on the relationship between loneliness and exercise dependence were examined, Gündendi and Abanoz (2019) examined the exercise dependence and loneliness situations of sports science faculty students and reported that no relationship was detected between exercise dependence and loneliness. When the results regarding the prediction of exercise dependence according to the loneliness variable were

examined, it was determined that the loneliness variable was a significant predictor of exercise dependence. Lukács et al. (2019) found in their study with amateur athletes that the level of loneliness was an important factor in predicting exercise dependence.

When the literature on exercise dependence was examined, Gadak and Pulur (2021) stated that individuals who exercise in fitness centers are in the exercise dependence group, while they stated that variables such as gender, age, monthly income level, profession, exercise frequency and reason for participating in exercise are not factors on exercise dependence. Kayhan et al. (2021) stated that, contrary to this situation, the group of their study on individuals exercising in fitness centers was not exercise dependent and that variables such as gender, age, income level and training frequency may be factors in exercise dependence. While Tekkurşun Demir and Namlı (2022) conducted a research on tennis players, they stated that age and income level may be factors in terms of exercise dependence, but gender is not a factor. Cicioğlu et al. (2019) stated that regular and intense exercise participation for a long time in groups such as elite athletes increases dependence. Aydın and Soyer (2023) also emphasized that the increasing level of exercise dependence may lead athletes and individuals to undesirable behaviors.

When the literature on loneliness was examined, Uzuner and Karagün (2014), while examining the loneliness levels of individuals who do sports for recreational purposes, emphasized that demographic variables do not affect the loneliness situation and that loneliness occurs in line with the structure of the person's own values. Serdar et al. (2018) concluded in their study that loneliness scores differ in terms of age. Özçelik et al. (2015) stated that sports participation can help reduce the feeling of loneliness. Siyahtaş and Donuk (2021) found a negative significant relationship between leisure satisfaction and loneliness, and stated that as the satisfaction university students get in their leisure increases, their loneliness will decrease. Uğurlu (2021) stated that the level of alienation may increase as the loneliness levels of university students increase. This result can also be interpreted as individuals who become lonely may be less likely to participate in any activity, including exercise.

The study found that there was a negative relationship between exercise dependence and loneliness. It is possible to say that loneliness has a negative effect on exercise dependence in fitness individuals. These results can be interpreted as exercise dependence decreases as the level of loneliness increases in fitness individuals. Nowadays, the increasing loneliness of individuals due to the effects of the social and psychological environment gives rise to different searches. The search for individual satisfaction and the drive for self-actualization can result in intense participation in activities. In this regard, it is thought that people's ability to achieve optimal social and psychological balance can reduce negative experiences such as loneliness and exercise dependence.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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