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Egzersiz Bağımlılığı ve Sosyal Karşılaştırma: İşitme Engelli ve İşitme Engelli Olmayan Bireyler Üzerine Bir Araştırma

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Öz

Bu çalışmada, işitme engelli ve işitme engelli olmayan bireylerin egzersiz bağımlılık düzeylerin sosyal karşılaştırmaya etkisini farklı değişkenlere göre karşılaştırılması amacıyla yapılmıştır. Çalışmamızda, katılımcıların egzersiz bağımlılığı düzeylerini ölçmek amacıyla Tekkurşun-Demir vd. (2018) tarafından Türkçeye uyarlanan "Egzersiz Bağımlılığı Ölçeği", Allan ve Gilbert (1995), tarafından geliştirilen "Sosyal Karşılaştırma Ölçeği" en son Türkçeye uyarlanmış haliyle kullanılmıştır. Çalışmamıza, Kayseri bölgesinde yaşayan ve okuyan toplam 172 gönüllü katılım göstermiştir. Elde edilen bulgular ışığında işitme engeli olmayan ve işitme engelli bireyler için sosyal karşılaştırma düzeyi ile aşırı odaklanma/duygu değişimi ve tolerans/tutku alt boyutlarında sağlıklı bireyler için anlamlı bir fark varken ($P < 0.05$), işitme engelli bireyler için anlamlı bir fark bulunamamıştır ($P > 0.05$). Karşılaştırılan her iki grup için sosyal karşılaştırma düzeyi ve bireysel ve sosyal ihtiyaçların ertelenmesi/çatışma değişkenleri arasında istatistiksel olarak anlamlı bir fark gözlenmemiştir ($P > 0.05$). Sağlıklı bireyler için yapılan korelasyon analizine ilişkin sonuçların ANOVA analizinde elde edilen sonuçları desteklediği görülmüştür ($P > 0.05$). İşitme engelli bireyler için yapılan korelasyon analizinde, egzersiz bağımlılığı ölçeğinin alt boyutlarından biri olan aşırı odaklanma ve duygu değişimi ile sosyal karşılaştırma arasında pozitif ve istatistiksel olarak anlamlı bir ilişki gözlenmiştir ($P < 0.05$). Ancak, bu sonuçlar işitme engelliler için yapılan ANOVA sonuçları ile uyumsuz olduğu gözlenmiştir. İşitme engelli bireyler için, diğer alt boyutlar ile sosyal karşılaştırma arasında ki korelasyon sonuçlarının, ANOVA sonuçları ile tutarlı olduğu görülmüştür. Sonuç olarak, egzersiz bağımlılığının bazı alt boyutlarının işitme engelli olmayan (sağlıklı) bireylerde sosyal karşılaştırma düzeyini pozitif ve istatistiksel olarak anlamlı bir biçimde etkilediği sonucuna ulaşılmıştır.

Anahtar kelimeler: Bağımlılık, Egzersiz, Egzersiz Bağımlılığı, Sosyal Karşılaştırma, İşitme Engelliler

Exercise Addiction and Social Comparison: A Research on Hearing-Impaired and Non-Hearing-Impaired Individuals

Abstract

This study was conducted with the aim of comparing the effect of exercise addiction levels of hearing impaired and non-hearing-impaired individuals on social comparison according to different variables. In our study, the "exercise addiction scale" adapted into Turkish by Tekkurşun-Demir et al., (2018) was used in order to measure the exercise addiction levels of the participants and the "social comparison scale" developed by Allan and Gilbert (1995), was used in its latest adaptation to Turkish. A total of 172 volunteers living and studying in the Kayseri region of Turkey participated in our study. While there was a significant difference ($P < 0.05$) for non-hearing impaired individuals in social comparison level and excessive focus/emotion change and tolerance/passion sub-dimensions, no significant difference was found for hearing impaired individuals ($P > 0.05$). There was no statistically significant difference between the social comparison level and the postponing of individual and social needs / conflict variables for both groups compared ($P > 0.05$).It was determined that the results of the correlation analysis for non-hearing impaired individuals supported the results obtained in the ANOVA analysis ($P > 0.05$). In the correlation analysis for hearing impaired individuals, between excessive focus and emotional change, which is one of the sub-dimensions of the exercise addiction scale, and social comparison, positive and statistically significant relationship was determined ($P < 0.05$). However, these results were observed to be inconsistent with the ANOVA results for the hearing impaired. For hearing-impaired individuals, correlation results between other sub-dimensions and social comparison were found to be consistent with the ANOVA results. As a result, it was determined that some sub-dimensions of exercise dependence positively and statistically affect the level of social comparison in non-hearing-impaired individuals significantly.

Keywords: Addiction, Exercise, Exercise Addiction, Social Comparison, Hearing Impaired

Introduction

Sport plays an active role in ensuring the harmony between social differentiation and social integration, which is the most distinctive feature of modern societies. In the world we live in, we witness or hear the ways in which humanity expresses itself, sometimes in different expectations and new searches. The concept of society is broad and has many dimensions. Aspects such as socialization or interaction, aspects related to work or leisure time, and even the social comparison situation, which requires the individual who is completely concerned with society to think about the self about other people by comparing themselves to others, is with us at every moment of life. One of the environments where individuals' multidimensional development and different needs and motives regarding life try to meet in the best way is physical activity, exercise and sports fields (Granberg, 2015).

Through physical activities and exercise, individuals can experience physical fitness development, disableds can improve their learning capacity and it helps to become a healtier individual (Yılmaz et al., 2017). In fact, there are studies in the literature that indicate that even one-day physical activities have a positive effect on the psycho-social behavior of individuals (Yıldız et al., 2016). Also people gain the ability to work together and a competitive structure, work discipline, courage and determination to fight. The individual learns to accept winning and losing, to share, to cooperate, to respect the opinions and thoughts of others. As a result of working together, a sense of social responsibility develops in the individual. As a result of the sense of social responsibility and social comparisons, the development process of awareness and awareness about the "self" is provided (Erdemli, 2002).

It is stated that measured and regular physical exercise has pedagogical benefits that improve physiological, cognitive, bio-psycho-social health and behaviors and regulate motor characteristics to a certain level. Indulgence in sports or leisure activities has been associated with three factors that influence the amount of desire to participate in such activities. These are hope, faith and trust (Basson, 2001). Currently, many researchers point out that this non-hearing impaired behavior can become a risky behavior under certain conditions, under the name of addiction for development (Basson, 2001; Klein et al., 2017).

Exercise Addiction

Behavioral addictions are the basis of repetitive behaviors. The pleasurable aspect of these repetitive behaviors can constantly turn into habits (Grant et al., 2010).

The term exercise addiction was firstly used by Baekeland (1970). Today, exercise addiction is accepted as addictive behavior as it presents typical symptoms like other (sex, gambling, video

game, internet and smart phone etc.) addictive behaviors. Exercise addiction has negative consequences and these consequences can be devastating (Terry et al., 2004; Marques et al., 2019). Like other addictive behaviors, excessive exercise is often described as challenging by theorists (Freimuth et al., 2011). Although exercise behavior is universally accepted as a non-hearing impaired habit, there are also typical bio-psycho-social risks of form applied excessively and compellingly of regular physical activity (Szabo, 2000; Szabo and Griffiths, 2007). Therefore, it is known that excessive exercise can become obsessive and cause addiction, has the potential to adversely affect physical and psychological health, and even show pathological symptoms (Bamber et al., 2000; Berczik et al., 2012; Jee, 2016).

People with exercise addiction may also experience the following symptoms: The routine gets out of the individual's control, continuously increasing the duration, frequency and intensity of exercise in order to achieve the desired effect of the exercise, exercise and obsessive mood by postponing individual and social needs, negative differentiation in psycho-social aspects, perfectionism, narcissism, obsessive-compulsive disorder, sleep disorders, restlessness and sexual tension etc. (Adams and Kirkby, 2002; Zmijewski and Howard, 2003; Berczik et al., 2012; Egorov and Szabo, 2013; Landolfi, 2013; Szabo et al., 2015; Jee, 2016; Bircher et al., 2017; Walter and Heinen, 2019; Kula et al., 2020; Çakın et al., 2021).

In research on exercise addiction, It is stated that it occurs with gradually increasing of daily exercise routine, in a transition from normal to a problematic physical training style, with the increasing need to use physical activity as a coping mechanism. Regarding the possible etiology of excessive physical exercise, it is seen that neurobiological and psychosocial hypotheses are also considered (Freimuth et al., 2011; Manea, et al., 2018; Xu, et al., 2020).

Hearing Impaired and Exercise

Hearing impairment according to the audiological literature is expressed as a health condition that affects the anatomical and physiological parts of the ear and hearing function (Granberg, 2015).

The benefits of regular physical activity on health and quality of life cannot be denied. Without forgetting that sports is a right for everyone, improving the life satisfaction levels of individuals with or without disabilities objectively measurable, the physical activity and exercise are among the important actions in bringing the behaviors that will serve to increase the quality of life as a result of the sum of a series of life conditions experienced by an individual and the behaviors that will affect the self-perception of the individual through social integration, social inclusion, increasing awareness, and social comparison (Granberg, 2015). In addition, Yılmaz et al.,

(2014) stated that the participation of persons with disabilities in sports or any physical activity will provide an opportunity to change the self-perception, increase the team spirit and decrease the awareness of disability, as well as enabling the person to discover different identities and roles.

Social Comparison and Exercise

Social comparison theory was firstly described by Festinger (1954). Social comparison is the foundation of human social psychology and a central feature of human social life. In this theory, which requires people to think about other people in terms of "self" by comparing themselves with others; It is claimed that the person needs to evaluate his / her own opinions and abilities and therefore compares themselves with other people's views and abilities. Self-value is explained as "a holistic evaluation of one's own characteristics. Self-value aims to enable the individual to recognize the positive and negative aspects, to gain awareness of their strengths, and to understand the importance of the people around whom they can receive social support. These comparisons can be objective and subjective. In social comparisons, the self typically sets the target of comparison, and the other that stands out is the standard of comparison. Self-concept and self-esteem are largely determined by the social comparison process and, as other psychological impressions are relative. Exercise is seen as one of the ways to improve self-esteem. Sport and exercise participation is public and can have strong positive or negative effects on self-perception and self-esteem. Therefore, as the awareness about the self increases, it is expected that positive changes will occur in the social comparison situation (Buunk and Gibbons, 2007; Zell and Alicke, 2009; Fox and Lindwall, 2014; Mousavi-Gilani and Dashipour, 2017).

Social comparison as an aspect of social impact has an impact on health behavior (Mylonopoulou, et al., 2018). There are some studies in the literature that compare and investigate the effects of exercise dependence, social comparison, and exercise and/or physical activity in the hearing impaired according to different variables (Bamber et al., 2000; Bardel et al., 2010; Brokane and Zaiceva 2011; Kurkova et al., 2011; Fox and Lindwall., 2014; Ho et al., 2015; Hoffman et al., 2015; Erkmen and Aşçı, 2016; Olmedılla et al., 2016; Thakur and Joshi, 2016; Mousavi-Gilani and Dashipour, 2017; Tekkurşun-Demir and Türkeli, 2019; Abdulrahman et al., 2019; Kula et al., 2020; Çakın et al., 2021). However, there is no study investigating the effect of exercise dependence on social comparison in hearing-impaired and non-hearing individuals.

In this study, a group of hearing-impaired students doing sports in the Kayseri region and a group of non-hearing-impaired students studying at Erciyes University Sports Sciences Faculty were compared according to various variables. As a result of the analyzes made by considering all

sub-dimensions; It is aimed to test whether there is a significant relationship between the level of exercise addiction and social comparison between hearing and non-hearing impaired individuals.

Methods

Participants Forming Voluntary Groups:

Hearing impaired people doing sports in Kayseri region and a group of non-hearing impaired students studying at the faculty of sports sciences in the spring semester of 2021-2022 voluntarily participated in the study. Within the framework of the study, it was aimed to reach a certain part of the participants who exercised, and a questionnaire prepared on Google Forms was sent to the participants electronically to be answered. With this questionnaire applied; A total of 172 volunteers were reached, including 72 (n = 72) hearing impaired, 100 (n = 100) non-hearing impaired, 85 (49.42%) male, 87 (50.58%) female. The demographic characteristics of the participants are included in table 1.

Table 1

Socio-Demographical Characteristics of Participants

Gender	Freq.	Percent (%)
Male	85	49.42
Female	87	50.58
Your branch of sports		
Individual sport	111	35.47
Team sport	61	64.53
Non-Hearing Impaired / Hearing Impaired		
Non-Hearing Impaired	100	58.14
Hearing Impaired	72	41.86
Age		
26 years and under	159	92.43
27-33 years	6	3.48
34 years and older	7	4.09
Education Status		
Undergraduate	157	91.28
Postgraduate	2	1.16
High School	13	7.56
Marital Status		
Single	162	94.19
Married	10	5.81
Total	172	100.00

Measurements and Procedures

The form used as a data collection tool in the study consists of three parts. The first section was "Personal Information Form" used to determine demographic information of the participants

and whether there was any hearing impairment and the sports branch engaged in was an individual or team sport.

In the second part, “exercise addiction scale”, developed by Tekkurşun-Demir, et al., (2018), was used to measure the exercise addiction levels of the participants. The scale consists of 17 items and 3 sub-dimensions and has a 5-point Likert type answer key. These sub dimensions are; excessive focus /emotion change, postponement of individual and social needs/development of conflict and tolerance/passion.

In the third part, the "Social Comparison Scale" used in the research was created by Allan and Gilbert (1995) and the semantic differential scale, which was adapted to Turkish by developing the social comparison scale and converted into 18 bipolar items, was evaluated according to the scores obtained on a 7-point dimension. The quality that this scale measures is to determine the perceptions of how a person sees themselves in various dimensions when compared to others. In the scale, high scores indicate a positive self-scheme and low scores indicate a negative self-scheme (Allan and Gilbert, 1995; Savaşır and Şahin, 1997).

Statistical Analysis

In our study, skewness and kurtosis values were checked to determine whether the data showed a normal distribution. These values were controlled between +1.5 and -1.5 and it was concluded that the data were normally distributed (Tabachnick and Fidell, 2013). The One-Way Anova test was preferred to compare the effects of independent variables that have an effect on the dependent variable and also to reveal the effects of various levels of a factor on the dependent variable (Nakip and Yaraş, 2016). One-Way ANOVA analysis was applied in order to determine the effects of the participants exercise dependence on social comparison in hearing-impaired and non-hearing-impaired individuals in various sub-dimensions and to examine the differences between variables. Pearson Correlation analysis was applied to determine whether there was a relationship between exercise dependence and social comparison in hearing impaired and non-hearing impaired individuals in these dimensions. For the interpretation of the analyzes, the significance level of the results, that is, the P value, was accepted as 5% (0.05). STATA 14.1 package program was used in the analysis of the data.

Results

The results of One-Way ANOVA analyzes conducted to determine the effects of exercise addiction levels on social comparison in hearing-impaired and non-hearing-impaired individuals in various sub-dimensions and to examine the differences between variables are given below.

Table 2

Social Comparison (SC)/Postponement Individual and Social Needs and Conflict (PI and SN and C)

Non-Hearing Impaired					
Source	**SS**	**Df**	**MS**	**F**	**Prob> F**
Between groups	27.765	21	1.322	1.63	0.064
Within groups	63.415	78	0.813		
Total	91.181	99	0.921		
			Hearing Impaired		
Between groups	18.451	18	1.025	1.04	0.438
Within groups	52.432	53	0.989		
Total	70.884	71	0.998		

*p < 0.05

Table 3

Social Comparison (SC) / Development of Tolerance and Passion (DT and P)

Non-Hearing Impaired					
Source	**SS**	**Df**	**MS**	**F**	**Prob> F**
Between groups	24.068	15	1.604	2.01	0.023
Within groups	67.112	84	0.798		
Total	91.181	99	0.921023507		
			Hearing Impaired		
Between groups	15.344	14	1.096	1.12	0.357
Within groups	55.540	57	0.974		
Total	70.884	71	0.998		

*p < 0.05

When the results in table 3 were examined, a statistically significant difference was etermined between the social comparison level for non-hearing impaired individuals and the variables in the tolerance development and passion sub-dimension (P <0.05), while no statistically significant difference was found between the hearing impaired individuals (P> 0.05).

Table 4

Socal Comparison (SC) / Excessive Focus and Emotion Change (EF and EC)

Non-Hearing Impaired					
Source	**SS**	**Df**	**MS**	**F**	**Prob> F**
Between groups	35.129	21	1.672	2.33	0.003
Within groups	56.051	78	0.718		
Total	91.181	99	0.921		
			Hearing Impaired		
Between groups	21.116	14	1.508	1.73	0.075
Within groups	49.768	57	0.873		
Total	70.884	71	0.998		

*p < 0.05

Similar to the previous analysis results, when the results in table 4 were examined; While there was a significant difference (P <0.05) for non-hearing impaired individuals in the lower height, about the level of social comparison, excessive focus and emotion change, it was not found for the hearing impaired individuals (P> 0.05). As a result of the analysis, variables with a statistically significant difference between the groups in terms of their averages are presented in table 5.

Table 5

Descriptive Statistics of Social Comparison and All Sub-Dimensions of Exercise Dependence (Non-Hearing Impaired Between Hearing Impaired Individuals)

Non-Hearing Impaired					
Variable	**Obs**	**Mean**	**Std. Dev.**	**Min**	**Max**
Excessive Focus and Emotion Change (EF and EC)	100	3.887	0.764	1	5
Postponement Individual and Social Needs and Conflict (PI and SN and C**)**	100	2.675	0.869	1	5
Development of Tolerance and Passion (DT and P)	100	3.232	1.018	1	5
Social Comparison (SC)	100	5.436	0.959	2.722	7
Hearing Impaired					
Variable	**Obs**	**Mean**	**Std. Dev.**	**Min**	**Max**
EF and EC	72	3.902	0.582	2.857	5
PI and SN and C	72	2.692	0.765	1	5
DT and P	72	3.041	0.796	1.25	5
SC	72	5.214	0.999	2.555	7

In non-hearing impaired individuals, the social comparison effect of the excessive focus and emotion change (3.88) sub-dimension was found to be higher than the tolerance development and passion (3.23) sub-dimensions.

Table 6 shows the results of the correlation matrix for the sub-dimensions of the social comparison and exercise addiction scale.

Table 6

Correlation Matrix

Non-Hearing Impaired				
	EF and EC	**PI and SN and C**	**DT and P**	**SC**
EF and EC	1.000			
PI and SN and C	0.376*	1.000		
DT and P	0.512*	0.526*	1.000	
SC	0.369*	0.152	0.250*	1.000
		Hearing Impaired		
EF and EC	1.000			
PI and SN and C	0.316*	1.000		
DT and P	0.478*	0.665*	1.000	
SC	0.333*	0.015	0.040	1.000

* It shows that the related parameter is statistically significant at a rate of the 5% (P <0.05) level

Striking results regarding the correlation analysis can be listed as follows:

For non-hearing impaired individuals, a positive and statistically significant relationship was determined between excessive focus and emotional change, which is one of the sub-dimensions of the exercise dependence scale, and social comparison (P <0.05).

For non-hearing impaired individuals, there was a positive relationship between postponing individual and social needs and conflict and social comparison, but the result was statistically insignificant (P> 0.05).

For non-hearing impaired individuals, a positive and statistically significant correlation was determined between the development of tolerance and passion sub-dimension and social comparison (P <0.05).

These results support the results obtained in the ANOVA analysis for non-hearing impaired individuals.

For individuals with hearing impairment, a positive and statistically significant relationship was determined between excessive focus and emotional change, which is one of the sub-dimensions of the exercise dependence scale, and social comparison (P <0.05). However, these results are inconsistent with the ANOVA results for the hearing impaired.

For individuals with hearing impairment, it was positively close to zero but statistically insignificant between the postponement of individual and social needs / conflict sub-dimension and social comparison (P> 0.05). For the hearing impaired individuals, a positive result close to zero and statistically insignificant was observed between the development of tolerance and passion sub-dimension and social comparison (P> 0.05). These two results are consistent with the ANOVA results for the hearing impaired.

Finally; For non-hearing impaired individuals, while a positive and statistically significant relationship was observed between the development of tolerance and passion sub-dimension and social comparison, This relationship was close to zero but statistically insignificant in hearing impaired individuals.

Discussion

As a result of the literature study, no study was found on exercise addiction and social comparison between hearing-impaired and non-hearing-impaired individuals. However, studies on

different subjects on both exercise dependence and social comparison on hearing-impaired and non-hearing impaired individuals, which are compared with other variable factors, draw attention.

Szabo et al., (1997) in their study examining the relationship between addiction and running, they concluded that there was an inverse proportion between the age of runners and their level of addiction.

Lodovico et al., (2018) stated that excessive exercise is often associated with eating disorders and this may turn into exercise dependence. When weight control is taken into account, studies have also been found emphasizing that females tend to be more addictive than males (Zmijewski and Howard, 2003).

Marques et al., (2019) described the risk of exercise addiction as a worrying problem that should be addressed from a public health perspective.

It is assumed that exercise intensity affects the response made by affective and cognitive ways versus exercise.

For example, when other studies are examined, different variables such as sports age, burden intensity, duration, frequency, age groups, personal exercise training, gender, etc., and excessive focus and emotion change, which are sub-dimensions of exercise addiction, there are studies examining the relationship between postponement of individual and social needs and development of tolerance and passion (Williams, 2008; Başoğlu, 2018). When a comparison is made between all these variables by gender, in the sub-dimension of postponing individual and social needs, it shows that men are more exercise addicted than women (Hausenblas and Downs, 2002; Bavlı et al, 2011; Polat and Şimşek, 2015; Tekkurşun-Demir and Türkeli, 2019; Kula et al., 2020).

However, in our study, no statistically significant difference was observed between the social comparison level and the postponing of individual and social needs / conflict variables for non-hearing impaired and hearing impaired individuals ($P > 0.05$).

Bısgın and Ustun (2013) stated that they could not find a semantic difference between the social comparison levels of the sample group and their age, sports year and their best achievements in the analysis of social comparison levels of elite male wrestlers according to socio-demographic backgrounds. Pila et al., (2014) emphasized the behavioral consequences of sport and exercise.

Studies concluding that social appearance-related anxiety levels will be at lower levels also draws attention in athletes who do fitness and regularly receive sports services with a high level of socialization and self-esteem (Erkmen and Aşçı, 2016; Korkmaz and Uslu, 2020; Duyan and Günel, 2021).

Schneider, and Schupp (2014), in a study they conducted on social comparison and life satisfaction, emphasized that there are individual differences arising from the psychology of the person.

Other studies have also been found that address issues such as body image, appearance concerns, eating disorders, where physical appearance gains importance, with the social comparison dimension (O'Brien et al., 2009; Zell and Alicke, 2009). They stated that positive perceptions about the body, which are becoming increasingly important for both men and women, can affect exercise participants' flow experience and stated that in this case the entertainment gained from exercise may contribute to the maintenance of exercise behavior (Erkmen and Aşçı, 2016).

Schneider et al., (2017), stated that men at risk of muscle dysmorphism are at a higher risk of social withdrawal than men without it. They also stated that this situation is related to the tendency to social comparison.

Backenroth-Ohsako et al., (2003) on the comparison of personal and work lives between individuals with and without hearing impairment; Ho et al., (2015) take on the dimensions of burnout and perfectionism in sports; Brakel (2014), on the effects of social comparison information on the quality of life of cancer survivors; Barboza et al., (2019) the adaptation of hearing-impaired students and physical education and activity reduce the disease risks of both non-hearing impaired and hearing-impaired individuals, such as status, expression of emotion, formation of critical awareness, development of autonomy, motivation for work, etc. They have conducted studies that show that it has other benefits, including social inclusion.

Again, Xu stated in et al., (2020) studies that hearing-impaired boys had significantly higher levels of physical activity than hearing-impaired girls, Abdulrahman et al., (2019) reported that individuals who are deaf or have reduced hearing experience lower levels of physical activity than other people.

According to the results of ANOVA analysis conducted in our study; There is a significant difference between variables for non-hearing impaired individuals in social comparison level and excessive focus / emotion change and tolerance development / passion sub-dimensions ($P < 0.05$), but no significant difference was found for hearing impaired individuals ($P > 0.05$).

In other words, when non-hearing impaired individuals are compared to hearing impaired individuals, It has been concluded that social comparison levels, which is one of the main pillars of self-evaluation of the individual, have increased, as addiction levels increase in excessive focus/emotional change and tolerance development/passion sub-dimensions. In fact, as the level of addiction in these two sub-dimensions increases, it can be seen the possibility of comparing oneself

with people who are perceived as superior or inferior or similar in a certain subject. In addition, as a result of the correlation analysis applied; A positive and significant relationship was determined between both sub-dimensions and social comparison in non-hearing impaired individuals (P <0.05). These results obtained in our study; supports the results obtained in the ANOVA analysis for non-hearing impaired individuals. In addition; In non-hearing impaired individuals, the social comparison effect of the excessive focus and emotion change (3.88) sub-dimension was found to be higher than the tolerance development and passion (3.23) sub-dimensions.

As a result of the correlation analysis conducted in this study; For individuals with hearing impairment, the social comparison between postponing individual and social needs/conflict and tolerance development/passion sub-dimensions is close to zero. However, a statistically insignificant result was obtained (P> 0.05). These two results are consistent with the ANOVA results for the hearing impaired.

However, for hearing impaired volunteers; A positive and statistically significant correlation was etermined between the over-focus and emotional change sub-dimension and social comparison (P <0.05). It was considered that the reason for this finding may be due to the following situations: Because the hearing impaired individuals do not have any other obstacles while performing the movements, the disability is only due to hearing, not having difficulty in exercising physically compared to other disability groups, relaxation, desire to discover their identity and roles, of opportunity to change their self-perception, request to experience more excitement and enthusiasm, the desire to reduce the awareness of disability (Yılmaz et al., 2014; Granberg, 2015; Zıpporah, 2016; Konar and Akyol, 2017; Mutlu-Bozkurt et al., 2019) overlapping the psycho-social needs with the characteristics that determine the excessive focus and emotion change sub-dimension of the desire to increase the desire to integrate into life and to reduce the awareness about disability by keeping the levels of subjective well-being high.

Comparing the results obtained in the literature studies with this study; Studies have been found that support the semantic difference between the excessive focus and emotional change sub-dimension of exercise addiction and social comparison. Konar and Akyol stated in (2017) their study that the hearing-impaired wrestler had higher levels of self-esteem and body image perception than the hearing impaired individuals who did not wrestle. Mutlu-Bozkurt et al., (2019) concluded that hearing and visually impaired athletes have a high level of motivation to participate in sports. In addition, Zıpporah (2016), stated in her/his thesis that participation in sports in hearing-impaired students increases self-esteem and minimizes negative emotions.

In the literature review; It is known that self-concept and self-esteem can be largely determined by the social comparison process, and that self-state is typically the target of comparison. (Buunk and Gibbons, 2007). If exercise is a way to improve self-esteem (Mousavi-Gilani and Dashipour, 2017), it can be said that as the level of exercise addiction increases, self-esteem will increase in direct proportion to the social comparison status. It was determined that the findings obtained in this study supported this situation.

Conclusions

As a result, it was concluded that the sub-dimensions of exercise dependence, excessive focus/emotion change and tolerance/passion, positively and statistically significantly affect the level of social comparison in non-hearing impaired individuals. It was thought that more research was needed that will determine the effects of the sub-dimensions of exercise dependence scale between different variables in different groups and social comparison in the relevant literature.

Statement of Researchers' Contribution Rates

The study design, data collection, text preparation and literature review of the research were carried out by one and the second author, while statistical analysis and data analysis were carried out by the first author.

Disclosure Statement

No conflicts of interest have been stated by the authors.

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