

Examination of The Relationship Between Tendencies of Narcissism and Eating Disorders in Elite Athletes

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Research Article

Keywords: Elite athlete, Eating disorders, Narcissism, Sports

Posted Date: March 21st, 2022

DOI: <https://doi.org/10.21203/rs.3.rs-1456714/v1>

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Abstract

Purpose The increase of eating disorders in the athlete population is remarkable. Disorders concerning eating impulse, bodyweight obsession, negative thoughts about body shape, and accompanying affective disorders are psychological disorders in which eating behavior is seriously affected. A narcissistic personality disorder is defined as a continuous pattern that includes superiority complex, inability to empathize, and the need to be approved. Some narcissistic characteristics such as a desire for unlimited power, success, beauty and to be approved may be related to the eating habits of athletes. Therefore, the aim of this study was to examine the relationship between the tendency of narcissism and eating disorders in elite athletes.

Methods Participants of the study were 223 elite athletes (99 men, 124 women) from different sports branches aged between 18-36 years old. The Narcissistic Personality Inventory-16 and the Eating Attitude Test were used as data collection tools. Spearman Correlation Analysis and Mann Whitney U Test were used in the analysis of the data.

Results A very weak positive relationship was found between eating disorder scores and narcissism scores ($p < .05$). A very weak positive correlation was found between the exhibitionism sub-dimension and eating disorders tendency ($p < .05$).

Conclusions There is a very weak positive relationship between narcissism tendency and eating disorder tendency variables and also between exhibitionism and eating disorders tendency. Therefore, athletes should be informed about nutrition for their performance by following interdisciplinary approaches.

Introduction

Eating disorders are a group of mental illnesses including physical and psychosocial functional disorders, deterioration in eating behavior, persistent behaviors to control body weight. The eating behaviors of individuals with this disorder are severely impaired [1, 2, 3]. Eating disorders can be classified as anorexia nervosa, bulimia nervosa, binge eating disorder, defined eating disorder, and unspecified eating disorder [4]. Among the main signs of anorexia nervosa, in addition to the loss of appetite, there are significant weight-loss behaviors, excessive fear of getting fat, impaired body image, and endocrine disorders such as amenorrhea for females, for males decreased sexual power and interest [5, 6]. Bulimia nervosa is a disease that occurs as a result of interest in body weight and shape, such as being thin and afraid of getting fat. People with bulimia nervosa have symptoms such as consuming large amounts of food in a short time by losing control, excessive exercise, very restricted dieting and vomiting these foods [7]. Also in binge eating disorder, individuals lose their eating control. However, behaviors such as excessive exercise and starvation are not observed in individuals with binge eating disorder, unlike bulimia nervosa [6].

The increase in eating disorders in the athlete population over the years is remarkable [3]. Athletes are required to fulfill expectations such as physical perfection, achieving and maintaining standardized body

weight, strict implementation of nutrition programs, and good performance [8]. However, reasons such as beauty standards, media influence, peer pressure, body dissatisfaction, perfectionism, and low self-esteem may lead athletes to behave in ways that cause eating disorders [9]. A regular and good diet is an extremely important factor for good athlete performance. In order to protect and improve the health and performance of the athlete, it is necessary to establish and follow the correct eating habits. Early detection of athletes with eating disorders prevents both possible health problems and the athlete's performance from being adversely affected [10]. There is some evidence in the literature that eating disorders are more common in women and weight, endurance, and aesthetic sports athletes [11, 12, 13, 14].

Narcissistic personality disorder, on the other hand, is defined as a continuous pattern of feelings of superiority, inability to empathize, and the need to be liked [15]. These individuals are characterized by an overly positive view of themselves that is disproportionate to their abilities or achievements. Also, narcissism may manifest itself with feelings of entitlement, arrogance, and preoccupation with oneself [15, 16, 17]. In normal narcissism, people feel that they can get along with their environment and meet expectations [18]. Under appropriate conditions, the narcissistic self enables the person to enjoy their activities, take pride in their achievements, and experience feelings of shame and anger over their mistakes and shortcomings [18, 22]. In harmless narcissism, the object of narcissism is something that emerges as a result of the athlete's own effort. And the excessive interest in an athlete's own work or success is proportional to the athlete's interest in the working time and the materials athlete uses [19, 20]. Pathological narcissism, on the other hand, is like a personality organization designed to protect one's psychological existence from the forces that threaten it. In pathological narcissism, the object of narcissism is not something that the athlete creates or produces, but something that the athlete has [19, 20]. These individuals consider themselves superior and think that they have special and unlimited rights in society [21, 22].

Eating disorders are associated with self and identity [23]. Some narcissistic characteristics such as unlimited power, desire for success and beauty, belief in being unique and desire to be approved may be related to the eating habits in high narcissistic level athletes. As a result of the literature review, to the knowledge of the researchers, there is no study examining the relationship between narcissism and eating disorders in elite athletes. Therefore, the aim of this study is to examine the relationship between the tendency of narcissism and the tendency of eating disorders in elite athletes.

Methods

Research Model

This study was designed as correlational research. In correlational studies, the relationship between two or more variables is examined without intervening in the variables [24]. Since correlational studies aim to define the relationships between variables, these studies are also considered as a type of descriptive

research [24, 25]. Ethical approval was obtained from Bursa Uludag University Social and Human Sciences Ethics Committee.

Participants

The participants of the study consisted of 223 elite athletes, 99 men, and 124 women, aged between 18-36, from different branches (athletics, badminton, basketball, bocce, boxing, fitness, football, handball, kickboxing, volleyball, wushu, and other). Elite athletes' inclusion criteria were to have a sporting background of at least seven years, to have achieved national success at least at the junior level, and to continue the sport. A total of 250 people were reached but the data of 223 people who met the criteria and answered all the questions in the scales were included in the analysis.

Measures

The Narcissistic Personality Inventory-16 was developed by Ames, Rose, and Anderson (2006) [26]. Turkish validity-reliability study was done by Atay (2009) [27]. The Cronbach's Alpha value of Narcissistic Personality Inventory-16 is 0.652. The Narcissistic Personality Inventory-16 consists of six sub-dimensions: exhibitionism, superiority, authority, entitlement, self-sufficiency, and exploitativeness. The highest score that can be obtained from the inventory is 16. As the participant's score increases, the level of the tendency of narcissism also increases [27].

The Eating Attitude Test was developed by Garner, and Garfinkel in 1979 [28]. The Turkish validity and reliability studies of the Eating Attitude Test, which is used to examine the tendency to eating disorders, were conducted by Savaşır and Erol in 1989 [29]. In 2000, Altuğ et al. made a second regulation on the test [30]. The score of 30 and more are accepted significant while the total score level is directly related to the 25 psychopathology levels. The highest score that can be obtained from the test is 120 [29, 30].

Data analysis

SPSS 23.0 (SPSS Inc, Chicago, USA) statistical program was used in the analysis of the data. Kolmogorov-Smirnov test was performed for the normality testing. In addition to descriptive statistics, Spearman Correlation Analysis and Mann Whitney U Test were applied. The significance level was accepted as $p < .05$.

Results

The results obtained from the data are presented in the below tables.

Table 1
Spearman Correlation Analysis table showing the relationship between the tendency of narcissism and the tendency of eating disorders in elite athletes.

	r	p	n
Narcissism	,164	,014	223
Eating Disorder			

According to Table 1, a very weak positive correlation was found between eating disorder scores and narcissism scores in elite athletes ($p < .05$).

Table 2
Spearman Correlation Analysis table showing the relationships between Narcissistic Personality Inventory's sub-dimensions and the tendency of eating disorders in elite athletes.

	r	p	n
Eating Disorder	,184**	,006	223
Exhibitionism			
Eating Disorder	,042	,536	223
Self-sufficiency			
Eating Disorder	,071	,293	223
Superiority			
Eating Disorder	,105	,117	223
Exploitativeness			
Eating Disorder	,063	,346	223
Entitlement			
Eating Disorder	,090	,180	223
Authority			

According to Table 2, a very weak positive correlation was found between exhibitionism and the tendency of eating disorders in elite athletes ($p < .05$). There is no statistically significant correlation between other sub-dimensions (i.e. superiority, authority, entitlement, self-sufficiency, and exploitativeness) and the tendency of eating disorders in elite athletes ($p > .05$).

Table 3

Mann Whitney U Test table showing analysis of the eating disorder tendency and narcissism tendency scores of elite athletes according to gender variable.

	Gender	N	Mean Rank	Sum of Rank	Mann Whitney U	Z	p
Eating Disorder	Female	124	114,07	14145	5881	-,537	,591
	Male	99	109,4	10831			
Total		223					
Narcissism	Female	124	113,56	14082	5944	-,408	,683
	Male	99	110,04	10894			
Total		223					

According to Table 3, the scores on eating disorder tendency do not differ by gender ($p > .05$). The scores of narcissism tendency do not differ according to genders ($p > .05$).

Table 4

Mann Whitney U Test table showing analysis of the eating disorder tendency and narcissism tendency scores of elite athletes according to sport type variable.

	Type	N	Mean Rank	Sum of Rank	Mann Whitney U	Z	p
Eating Disorder	Individual	76	125,78	9559,5	4538,5	-2,296	,022
	Team	147	104,87	15416,5			
Total		223					
Narcissism	Individual	76	128,35	9754,5	4343,5	-2,737	,006
	Team	147	103,55	15221,5			
Total		223					

According to Table 4, there is a statistically significant difference in the eating disorder scores of elite athletes who do team sports and individual sports ($p < .05$). The eating disorder tendency scores of individual sports athletes are higher than team sports athletes. There is a statistically significant difference between the narcissism scores of athletes who do team sports and individual sports ($p < .05$). The narcissism tendency scores of the athletes who do individual sports are higher than those who do team sports.

Discussion

As a result of the literature review, to the knowledge of the researchers, there is no study examining the relationship between narcissism and eating disorders in elite athletes. According to the results of the study, a very weak positive correlation was found between the tendency of narcissism and the tendency of eating disorders in elite athletes ($p < .05$) (Table 1). It means that the two variables increase together. Waller, Sines, Meyer, and Mountford (2007) reported that people with eating disorders have higher narcissism scores than non-clinical women. The study showed that in addition to narcissism, narcissistic defense is also associated with eating pathology. Moreover, the researchers pointed out that core narcissism may not be the key point in eating pathology but narcissistic defenses [31]. Since the current study has found a very weak strength of the relationship between the tendency of narcissism and the tendency of eating disorders, future studies should examine the role of narcissistic defenses in eating disorders in elite athletes. Campbell and Waller (2010) revealed a relationship between excessive exercise and levels of narcissism in women with eating disorders [16]. Kristjánisdóttir et al. (2019)'s study on Icelandic elite athletes showed that 18.2% of the participants had body image anxiety above the clinical limit [3]. Unlike these studies, Eren (2012) reported that there is no significant relationship between the eating attitudes and narcissistic structuring levels of adults who have a gym membership [32].

Individual sports athletes have had higher scores in eating disorders and narcissism measures than team sport athletes ($p < .05$). Narcissistic athletes may tend to show off and take the whole admiration alone which is not a very appropriate attitude in team sports. Furthermore, according to sub-dimensions of the Narcissistic Personality Inventory, a very weak positive relationship was found between the exhibitionism sub-dimension and eating disorders tendency in elite athletes. It means that variables increase together ($p < .05$). Since it is known that narcissistic individuals like to have others' approval, try to attract attention, and have a lack of empathy [33], the results are not surprising. Beyond the importance of body weight in performance, hypersensitivity to criticism from others and concerns about body appearance can cause problematic eating behaviors in narcissistic athletes. For example, Devrim, Bilgic, and Hongu (2018) concluded that eating disorders are positively associated with body dissatisfaction in male bodybuilders. Additionally, it was stated that men with eating disorders want to have a more muscular appearance, especially in sports such as bodybuilding, wrestling, and weightlifting [34]. Waller, Sines, Meyer, and Mountford (2008) showed that narcissism through body checking behavior can lead to the perpetuation of eating disorder behavior [35]. Shafran and Fairburn (2002) pointed out that women with eating disorders tend to have lower levels of body satisfaction [36]. Eren (2012) reported that the level of exhibitionism decreases as the level of physical appearance discomfort increases in adults who have a

gym membership [32]. Uçar (2019) found a relationship between exhibitionism and exercise addiction in men who have a gym membership [22]. There was no statistically significant correlation between other sub-dimensions (superiority, authority, entitlement, self-sufficiency, and exploitativeness) and the tendency of eating disorders ($p > .05$).

According to Table 3, the scores of the tendency of eating disorders in elite athletes do not differ by gender ($p > .05$). Unlike the findings of our study, there are studies in the literature showing that eating disorders are more common in females. For example, Sundgot-Borgen and Torstveit (2004) reported that eating disorders are more common in Norwegian elite female athletes than in men [11]. In a study conducted with elite 224 Australian athletes (118 female and 106 male), eating disorders were observed in 1/10 of the participating men and 1/3 of the women [37]. Giel et al. (2016) stated that being a female athlete is one of the high-risk groups in terms of eating disorders and that elite female athletes have eating disorders at a higher rate than male elite athletes [14]. In addition, the female athlete triad is defined as a disorder that causes menstrual irregularities, amenorrhea, premenopausal osteoporosis, and stress fractures as a result of eating disorders, low energy intake, and low body weight in female athletes [6]. According to Table 3, narcissism tendency scores in elite athletes do not differ according to genders ($p > .05$). A study on 1258 non-athletes, amateur, and elite athletes, showed that men have a higher level of narcissism than women [38]. Similarly, Eren (2012) found that men who go to the gym have higher narcissistic structures [32]. Unlike these, Gezer (2017) stated that the total scores of the Narcissistic Personality Inventory did not differ according to gender in physical education and sports school students [39].

Conclusion

In conclusion, there is a very weak positive relationship between narcissism tendency and eating disorder tendency variables and also between exhibitionism and eating disorders tendency. Therefore, to improve the health and performance of elite athletes, coaches and athletes should be informed and educated about nutrition by following interdisciplinary approaches.

What Is Already Known On This Subject?

Although the importance of nutrition for the performance of athletes is well known, the increase in eating disorders in the athlete population is remarkable. Eating disorders are associated with self and identity. In different populations, some studies examined factors such as narcissism, body dissatisfaction, excessive exercise, body control within the scope of eating disorders and found some relationships. However there is no study examining the relationship between narcissism and eating disorders in elite athletes.

What Your Study Adds?

This study found a very weak positive correlation between tendencies of eating disorders and narcissism in elite athletes. Also there was a very weak positive correlation between tendencies of exhibitionism and

eating disorders. Although the strength of the relationships are weak, the results indicate that it is valuable to conduct more studies on the topic. The study highlights the importance of following interdisciplinary approaches in improving the performance and health of athletes.

Declarations

Conflict of interest

None to declare.

Ethics approval

The study was approved by Bursa Uludag University, Social and Human Sciences Ethics Committee. The procedures used in this study adhere to the tenets of the Declaration of Helsinki.

Consent to participate

Informed consent was obtained from all individual participants included in the study.

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