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Drive for Muscularity, Disordered Eating Behaviors, and Social Physique Anxiety in Individuals Engaged in Fitness[1]

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ORIGINAL ARTICLE

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Abstract

Nowadays, the idealization of muscular appearance causes differences in individuals' body perception and eating behaviors and increases social pressures.The objective of this study was to examine the relationships and mutual effects between the drive to be muscular, eating behaviour disorders and social physique anxiety levels in individuals engaged in fitness activities. The study included 304 participants with an average age of 23.33 ± 5.50 years who had been engaged in regular fitness activities for a minimum of one year. The participants were requested to complete the Muscularity-Oriented Eating Scale (MOES), the ORTO-15 test, the Drive for Muscularity Scale (DMS), and the Social Physique Anxiety Inventory (SPAI). The data were analysed using descriptive statistics, skewness and kurtosis values, Pearson correlation analysis, and Multiple linear regression analysis. The study findings revealed a statistically significant positive and moderate correlation between the participants' MOES, DMS and SPAI scores ($p<0.05$). No relationship was identified between the ORTO-15 test score and the scores of the other scales ($p>0.05$). It was established that the desire for muscularity and muscularity-oriented eating were robust predictors of one another, and that social physique anxiety also exhibited a predictive relationship with these two variables. This suggests that the drive for muscularity, eating habits, and concerns about physical appearance among those participating in fitness activities influenced each other. Conversely, the absence of a notable correlation between the ORTO-15 test and the other scales suggests that orthorectic tendencies are not directly associated with the variables examined in this study.

Key Words: Fitness, Drive for Muscularity, Muscularity-Oriented Eating, Orthorexic Eating, Social Physique Anxiety

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Fitness Yapan Bireylerde Kaslı Olma Dürtüsü, Yeme Davranış Bozuklukları ve Sosyal Fiziki Kaygı

Öz

Günümüzde kaslı görünümün ideal hale gelmesi, bireylerin beden algıları ve yeme davranışlarında farklılıklara yol açmakta ve sosyal baskıları artırmaktadır. Bu çalışmanın amacı, fitness yapan bireylerde kaslı olma dürtüsü, yeme davranış bozuklukları ve sosyal fiziki kaygı düzeyleri arasındaki ilişkilerin ve karşılıklı etkilerin incelenmesidir. Çalışma kapsamında yaş ortalaması 23,33±5,50 olan düzenli olarak en az bir yıldır fitness yapmayı sürdüren 304 katılımcı ele alınmıştır. Katılımcılara katılımcılara Kaslılık Odaklı Yeme Ölçeği (KOYÖ), ORTO-15 testi, Kaslı Olma Dürtüsü Ölçeği (KODÖ), Sosyal Fizik Kaygı Ölçeği (SFKÖ) doldurtulmuştur. Verilerin analizinde tanımlayıcı istatistikler, çarpıklık, basıklık değerleri, Pearson Korelasyon Analizi kullanılmıştır. Çalışma bulguları kapsamında katılımcıların KOYÖ, KODÖ ve SFKÖ puanları arasında istatistiksel olarak anlamlı düzeyde pozitif ve orta düzeyde bir ilişkiye rastlanmıştır ($p<0,05$). ORTO-15 test puanı ile diğer ölçek puanları arasında bir ilişki bulunamamıştır ($p>0,05$). Kaslı olma dürtüsü ile kaslılık odaklı yemenin birbirinin güçlü yordayıcıları olduğu, sosyal fiziki kaygının da bu iki değişkenle yordayıcılık ilişki bulunduğu belirlenmiştir. Sonuç olarak katılımcıların kaslılık odaklı yeme, kaslı olma dürtüsü ve sosyal fiziki kaygı düzeylerinin birbiri etkiledikleri belirlenmiştir. Bu durum, fitness yapan bireylerde kaslılık arzusunun hem yeme davranışlarının ve fiziksel görünümleriyle ilgili kaygı düzeylerini birbirini etkileyebileceğini göstermektedir. Buna karşın, ORTO-15 testi ile diğer ölçekler arasında anlamlı bir ilişki bulunmaması ortorektik eğilimlerin bu çalışmada incelenen diğer değişkenlerle doğrudan ilişkisi olmadığını göstermektedir.

Anahtar kelimeler: Fitness, Kaslı Olma Dürtüsü, Kaslılık Odaklı Yeme, Ortoreksik Yeme, Sosyal Fizik Kaygı.

[1] This study was presented as an oral presentation at the 8th International Academic Sports Research Congress.

Introduction

Nowadays, the perception of the body is subject to a multiplicity of influences, including those emanating from the media and the surrounding environment. In particular, the idealized body images disseminated through social media platforms and traditional media can precipitate an increase in body dissatisfaction and the emergence of mental health issues among individuals (Brasil et al., 2024; Merino et al., 2024). At this juncture, individuals transform their body perceptions, giving rise to an idealized body structure perception oriented towards muscularity or thinness (Brasil et al., 2024). In particular, the aspiration of young adults to possess an idealized body structure has been linked to disturbed psychology and adverse eating behaviors (Tiggemann, 2014). Such negative body perceptions are frequently associated with low self-esteem and high social and physical anxiety (Göbel et al., 2023).

Social physique anxiety is defined as the fear of being evaluated negatively in terms of one's physical appearance. This anxiety is primarily caused by the idealized perception of a thin body (Göbel et al., 2023). An increase in social physique anxiety may result in individuals focusing more on their body image, comparing themselves with others, and expending greater effort to gain acceptance of their physical appearance (Sabiston et al., 2010). In particular, the aspiration to attain an idealized muscular physique is closely associated with social physique anxiety among men (Piatkowski et al., 2024). Individuals with high social physique anxiety experience feelings of inadequacy with regard to their body image, which in turn increases their desire to achieve an ideal muscular physique (Piatkowski et al., 2024). The desire to have a perfect physique resulting from social physique anxiety creates a vicious cycle that leads to anxiety and dissatisfaction in individuals (Papapanou et al., 2023). This vicious cycle may negatively affect individuals' eating behaviors.

Body image is a significant aspect for consideration in the context of athletes and individuals engaged in regular physical activity. Impaired body image may result in the desire to develop muscularity (Prnjak et al., 2022). The desire to obtain and maintain a muscular body is what is commonly referred to as the urge to be muscular. This phenomenon is quite prevalent among individuals who engage in sports (Chaba et al., 2019). This may result in the development of eating disorder behaviors in individuals (Rodgers et al., 2018). Muscularity-oriented eating is a disordered eating behavior that individuals engage in to attain a more muscular physique. This type of eating behavior is characterized by excessive protein intake, cessation of consumption of certain foods, and the use of supplements that will provide muscle growth (Griffiths et al., 2013).

Another eating behavior disorder is orthorexia nervosa, which is characterized by an obsession with healthy eating (Barthels et al., 2024; Shank et al., 2024). It has been demonstrated that this

behavioral model is influenced by social physique anxiety (Eriksson et al., 2008). Furthermore, social physique anxiety and muscle dysmorphia have been identified as correlates of orthorexic eating in bodybuilders (Fatima and Sarfraz, 2022). In light of the aforementioned evidence, it was deemed appropriate to categorize orthorexic eating as an eating behavior disorder in the current study, given the perceived link between social physique anxiety and muscularity-oriented eating.

The objective of this study was to examine the relationship between the drive for muscularity, eating behavior disorders and social physique anxiety, and their effects on each other in individuals engaged in fitness activities. The extant literature is replete with confusion as to whether these factors can affect each other, but this confusion has the potential to lead to a vicious circle. In particular, the application of multiple linear regression analysis to elucidate the interrelationships between these variables will constitute a significant contribution to the existing literature on the subject. While previous studies have focused on eating disorders related to body image (Rodgers et al., 2018), this study provides a more comprehensive framework by analysing the interaction between the drive for muscularity and social physique anxiety with these behaviors. Furthermore, the findings of this study may provide valuable data that can inform the treatment of individuals with eating disorders and body image issues in clinical practice.

Materials and Methods

Research Model

This research employed the relational screening model to investigate the effects and relationships between the desire for muscularity, disordered eating behaviors, and social physique anxiety levels among individuals engaged in fitness activities. The model is utilized to ascertain the extent and nature of change between two or more variables (Karasar, 2005).

Research Group

The participants in the study were selected using the convenience sampling method from a non-probability sample. The participants were individuals who were actively engaged in fitness activities within the Marmara Region. The study included 304 participants who had been engaged in regular fitness training for a minimum of one year and had an average age of 23.33 ± 5.50 years. The demographic information of the participants is presented in Table 1.

Table 1

Demographic Information on Participants

	n	Min.	Max.	Mean	Sd.
Age (years)	304	18.00	46.00	23.33	5.50
Weight (kg)	304	42.00	110.00	77.40	13.50
Height (cm)	304	157.00	195.00	178.07	7.65
Body Mass Index (kg/m^2)	304	16.00	29.84	24.26	3.18
Duration of doing fitness	304	0.00	25.00	3.03	3.32
Characteristics				**n**	**%**
Gender		Female		48	15.79
		Male		256	84.21
Educational Level		High school		29	9.54
		University		258	84.87
		Master Degree		17	5.59
Weekly fitness training frequency		1-3 days a week		157	51.64
		4-5 days a week		22	7.24
		Every day		13	4.28

Collection of Data

The Informed Consent Form was completed by the participants in accordance with the parameters of the study. The Personal Information Form, Drive for Muscularity Scale (DMS), Muscularity-Oriented Eating Test (MOET), ORTO-15 Test and Social Physique Anxiety Inventory (SPAI) were completed by 304 participants on a voluntary basis. MOET and ORTO-15 Test aimed to measure the eating behavior disorders of the participants. Please refer to the following section for detailed information about the scales.

Personal Information Form

Demographic data such as age, gender, height, weight and duration of participation in fitness activities of the participants were collected with the Personal Information Form.

Drive for Muscularity Scale (DMS)

The Drive for Muscularity Scale (DMS) was developed by McCreary and Sasse (2000). Validity and reliability were established for the Turkish version by Selvi and Bozo (2019) and found the reliability coefficient of the scale to be 0.89. The scale is designed to assess the behaviors and attitudes that individuals adopt in pursuit of muscularity. The Muscular Drive Scale (MMSS) comprises 15 items. The scale, which does not contain reverse items, employs a 6-point Likert structure (1 = never and 6 = always). As the score obtained from the scale increases, so too does the desire of individuals to achieve a muscular physique. The present study yielded a reliability coefficient of 0.89, indicating that the scale is a valid and reliable measurement tool.

Muscularity Oriented Eating Test (MOET)

The Muscularity-Oriented Eating Test (MOET) was developed by Murray et al. (2019), and its Turkish validity and reliability were evaluated by Çalışkan and Alim (2021) and in the adaptation study, the reliability coefficient of the scale was found to be 0.88 (Çalışkan and Alim, 2021). The scale is designed to assess individuals' muscularity-oriented irregular eating patterns and associated malnutrition. The scale comprises 15 items, which are grouped into one dimension, and employ a 5-point Likert structure (0 = "Absolutely Not True" and 4 = "Always True"). There are no reverse items in the scale. As the score obtained from the scale increases, the individual's muscle-oriented eating level also increases. The present study yielded a reliability coefficient of 0.72, indicating that the scale is a valid and reliable measurement tool.

ORTO-15 Test

The scale, originally developed by Bratman and Knight (2000), was subsequently adapted by Donini et al. The Turkish version was prepared by Bağcı Bosi et al. in 2006, and Arusoğlu et al. (2008) conducted a validity and reliability study. The Cronbach Alpha coefficient of the scale was found to be 0.62 (Arusoğlu et al., 2008). The 15-item self-report questionnaire is designed to ascertain the prevalence of highly sensitive behaviors related to health and proper nutrition. The scale employs a 4-point Likert scale, with responses indicative of orthorexia assigned a value of '1' and responses reflecting typical dietary patterns assigned a value of '4'. While scores on the scale can range from 15 to 60, a lower score indicates a greater tendency towards orthorexia. In the present study, the reliability coefficient of the scale was found to be 0.56.

Social Physique Anxiety Inventory (SPAI)

The Social Physique Anxiety Inventory (SPAI) was developed by Hart et al. (1989), and its Turkish validity and reliability were evaluated by Ballı and Aşçı (2006). The correlation coefficient of the scale was found to be 0.87 (Ballı and Aşçı, 2006). The correlation coefficient of the scale was found to be 0.88 for women and 0.81 for men. The scale, which assesses the anxiety individuals experience regarding their physical appearance in relation to the surrounding environment, comprises 12 items and employs a 5-point Likert structure (1 = completely wrong, 5 = completely right). A score of at least 12 and a maximum of 60 points can be obtained from the scale. Items 1, 2, 5, 8 and 11 are reverse scored. An increase in the score obtained from the scale indicates an increase in the subject's anxiety about their appearance. In the present study, the reliability coefficient of the scale was found to be 0.82, demonstrating that the scale is a valid and reliable measurement tool.

Analysis of Data

The data were subjected to analysis using the SPSS 25 package programme. The results of the skewness and kurtosis tests were analysed to ascertain the suitability of the scales for normal distribution. It was determined that the study data were suitable for normal distribution. Parametric test techniques were employed for the purpose of testing the variables. Descriptive statistics, Pearson's correlation test and multiple linear regression analysis were employed in the statistical analyses. The variance inflation factor (VIF) was employed to ascertain the presence of multicollinearity issues within the models. A VIF value of 1 indicates the absence of multicollinearity, a VIF value of 1-5 indicates an acceptable level of linear connection between independent variables, but this does not cause multicollinearity problems, a VIF value of 5-10 indicates a high level of multicollinearity, which may affect the reliability of the model, and a VIF value of 10 and above indicates a serious multicollinearity problem. The statistical significance level was set at $p < 0.05$.

Research Ethics

During the current research, the "Higher Education Institutions Scientific Research and Publication Ethics Directive" was followed. Ethics committee approval of the study was received from Yalova University Ethics Committees Coordinatorship on 16.05.2024 with protocol number 2024/133.

Results

In this part of the study; scale score distributions and the relationship between the scores obtained from the scales were examined. In addition, the effects of the drive for muscularity, muscularity-oriented eating and social physique anxiety levels were examined using multiple linear regression analysis.

Table 2

Scores of the Participants from the Scales

Scales	Number of items	$\overline{X}$	SD	Skewness	Kurtosis	Cronbach Alpha
DMS	15	52.21	9.36	0.62	2.15	0.89
MOET	15	30.53	5.26	-1.39	6.07	0.72
ORTO-15	15	38.30	3.34	-0.89	0.42	0.56
SPAI	12	33.64	4.60	-0.10	2.58	0.82

The skewness values of the scales being between (-1.5) and (+1.5) and the kurtosis values being between (-7) and (+7) indicate that the data are suitable for a normal distribution (Tabachnick and Fidell, 2007; Byrne, 2010). The mean score of the participants for the Drive for Muscularity was 52.21 ± 9.36, the mean score for Muscularity-Oriented Eating was 30.53 ± 5.26, the mean ORTO-15 score was 38.30 ± 3.34, and the mean score for Social Physique Anxiety was 33.64 ± 4.60 (Table 2).

Table 3

Relationship Between Participants' DMS, MOET, ORTO-15 Test and SPAI Scores

		1	2	3	4
1. DMS	r	1			
2. MOET	r	0.465*	1		
3. ORTO-15	r	0.044	-0.007	1	
4. SPAI	r	0.302*	0.310**	-0.047	1

*p < 0.001

Pearson Correlation Analysis was used to examine the relationship between the participants' drive for muscularity, eating behavior disorders and social physique anxiety levels. As seen in Table 3, a moderate positive relationship was found between the participants' DMS, MOET and SPAI scores (p <0.001). However, no relationship was found between the ORTO-15 test scores and other variables (p>0.05). The drive for muscularity, muscularity-focused eating, and social physique anxiety are related to each other, and obsessive eating behavior is not affected by these factors.

Table 4

The Effect of Muscularity-Oriented Eating and Social Physique Anxiety on the Drive for Muscularity

Variables	B	S.E.	β	t	p	VIF
Constant	17.97	3.88		4.63	0.000	
MOET	0.73	0.09	0.41	7.79	0.000	1.11
SPAI	0.35	0.11	0.17	3.30	0.001	1.11

Note: R = 0.494, R^2 = 0.244, Adjusted R^2 = 0.239, *F* (2, 301) = 48.45, p = 0.000. VIF = Variance Inflation Factor.

Table 4 shows that the multiple linear regression model conducted to determine the effect of the variables of Muscularity-Oriented Eating and Social Physique Anxiety on the Drive for Muscularity is significant (R = 0.494, R^2 = 0.244, F (2, 301) = 48.45, p <0.001). This model shows that the independent variables together explain 24.4% of the variance in the Drive for Muscularity score. Muscularity-Oriented Eating is a significant predictor of the Drive for Muscularity (β = 0.411, t = 7.79, p < 0.001). Similarly, Social Physique Anxiety was also found to be a significant predictor of the Drive for Muscularity (β = 0.174, t = 3.30, p = 0.001). It was found that there was no multicollinearity problem in the model, It is seen that the VIF values for both independent variables are 1.107. Based on these results, it can be said that individuals who maintain muscularity-focused eating behavior have a stronger tendency to be muscular. However, having social physique anxiety has less effect on the urge to be muscular.

Table 5

The Effect of Drive for Muscularity and Social Physique Anxiety on Muscularity-Oriented Eating

Variables	B	S.E.	β	t	p	VIF
Constant	11.36	2.15		5.282	0.000	
DMS	0.23	0.03	0.41	7.792	0.000	1.10
SPAI	0.21	0.06	0.19	3.569	0.001	1.10

Note: R = 0.498, R^2 = 0.248, Adjusted R^2 = 0.243, *F* (2, 301) = 49.63, p = 0.000. VIF = Variance Inflation Factor.

As a result of multiple linear regression analysis in Table 5, the effects of the variables of Drive for Muscularity and Social Physique Anxiety on Muscular-Oriented Eating were examined and the model was found to be significant (R = 0.498, R^2 = 0.248, F (2, 301) = 49.63, p <0.001). This model shows that the independent variables together explain 24.8% of the variance in the Muscular-Oriented Eating score. The Drive for Muscularity was found to be a significant predictor (β = 0.408, t = 7.79, p < 0.001). The level of Social Physique Anxiety was also a significant predictor (β = 0.187, t = 3.57, p < 0.001). Since the VIF values for all independent variables are 1.100, there is no multicollinearity problem in the model. In line with this result, it can be said that the drive to be muscular affects muscularity-oriented eating more than social physique anxiety.

Table 6

The Drive for Muscularity and the Effect of Muscularity-Oriented Eating on Social Physique Anxiety

Variables	B	S.E.	β	t	p	VIF
Constant	22.688	1.667	-	13.612	0.000	-
DMS	0.099	0.030	0.201	3.301	0.001	1.276
MOET	0.190	0.053	0.217	3.569	0.000	1.276

Note: R = 0.358, R^2 = 0.128, Adjusted R^2 = 0.122, *F* (2, 301) = 22.07, p = 0.000. VIF = Variance Inflation Factor.

The results of multiple linear regression analysis in Table 6 show that the variables of Drive for Muscularity and Muscular-Oriented Eating have a significant effect on Social Physique Anxiety (R = 0.358 R^2 = 0.128, F (2, 301) = 48.45, p <0.001). This model shows that the independent variables together explain 12.8% of the variance in Social Physique Anxiety score. In the model, the Drive for Muscularity (β = 0.201, p = 0.001) and Muscular-Oriented Eating (β = 0.217, p <0.001) were found to have a significant effect on Social Physique Anxiety. The VIF values of 1.276 indicate that there are no multicollinearity problems among the independent variables. These findings suggest that the Drive for Muscularity and Muscularity-Oriented Eating behaviors have an effect on individuals' body perception and social physique anxiety, but more variables are needed to explain this pattern.

Discussion, Conclusion and Suggestions

The objective of this study is to examine the relationship between the drive for muscularity, eating behavior disorders, and social physique anxiety, and their effects on each other in individuals engaged in fitness activities. In the context of this study, eating behaviors that are oriented towards muscularity and orthorexia were conceptualized as eating behavior disorders.

The current study did not identify a correlation between orthorexic eating and the drive for muscularity or social physique anxiety. In contrast to the aforementioned result, several studies in the

literature have indicated that orthorexic eating may be closely related to muscle dysmorphia and social physique anxiety (Fatima & Sarfraz, 2022; Eriksson et al., 2008). This discrepancy may be attributed to the fact that the current study's participant groups were exclusively comprised of fitness individuals. Additionally, the reliability of the measurement tool utilized may have been insufficient for this specific cohort. For future studies of a similar nature, it is recommended that a measurement tool be developed that can effectively discern obsessive eating behaviors that are unique to the fitness population. Given that orthorexic eating behavior was not found to be associated with muscularity drive and social physique anxiety, only muscularity-oriented eating was considered within the scope of this investigation.

The study revealed that the drive to be muscular and muscularity-oriented eating are the strongest predictors of each other. This demonstrates that the aspiration to achieve a muscular physique directly influences dietary habits and behaviors among those engaged in fitness activities. It is proposed that muscularity-oriented eating is driven by the desire for muscularity (Cunningham et al., 2021). In individuals exhibiting muscularity-oriented eating behavior, the pursuit of a muscular appearance leads to the development of overeating and specialized nutritional states (Pope et al., 1997). A study demonstrates that men develop disorders of muscularity-oriented eating behavior to achieve the ideal of muscularity (Murray et al., 2017). These results demonstrate a close relationship between the drive to be muscular and muscularity-oriented eating, in alignment with the findings of the study. However, the current study also revealed that muscularity-oriented eating behaviors were associated with a desire for muscularity among fitness individuals. This result demonstrates that the muscularity-oriented progress of these individuals results in a vicious cycle. It is therefore crucial to identify ways of interrupting this cycle to improve the nutritional behavior and health-oriented exercise behavior of those engaged in fitness activities. Especially considering that healthy living behaviors have an important place in sports, various trainings can be given to these individuals to develop healthy behaviors (Cengizoğlu et al., 2024). It is therefore incumbent upon fitness coaches and sports dieticians to manage this process.

The extant literature indicates that body dissatisfaction, as well as the desire to be muscular, affects muscularity-oriented eating (Griffiths et al., 2013; Murray et al., 2019). Disturbances in body image have been linked to a weakening of psychological well-being (Cafri et al., 2000), the adoption of calorie-restrictive diets, and an increase in the use of anabolic steroids (Pope et al., 2000). Indeed, Vartanian et al. (2012) posited that external influences on an individual's physical appearance have a profound impact on their psychological well-being, ultimately leading to alterations in their dietary habits. Similarly, social physique anxiety has been associated with eating disorders in individuals who do sports (Arslan Kabasakal et al., 2024). In this regard, individuals develop muscularity-

oriented eating behaviors because they believe that attaining a muscular body structure will enhance self-esteem and prevent feelings of insecurity (Azevedo et al., 2012). Indeed, scientific studies have demonstrated that social physique anxiety is more prevalent among individuals who engage in sports, which may potentially give rise to eating disorders, body image concerns, and excessive exercise (Lanfranchi et al., 2015; Lichtenstein et al., 2022; Burgon et al., 2024). The current study demonstrated that social physique anxiety and the drive to be muscular both influences muscularity-oriented eating behaviors. However, the effect of social physique anxiety was less pronounced than that of the drive to be muscular. Kutlu et al (2023) found no relationship between social appearance anxiety and exercise addiction in those who exercised for bodybuilding, whereas a relationship was found between social appearance anxiety and exercise addiction in those who exercised for health. From this point of view, it can be assumed that people who doing fitness exercise in the current study exercise for bodybuilding in accordance with their urge to be muscular. Therefore, the effect of social physical anxiety on muscularity-oriented eating and the drive to be muscular may have been smaller. However, this cannot be proven conclusively because the study did not question the purpose of the participants' fitness exercise. It can be posited that individuals with social physique anxiety develop muscularity-oriented eating behaviors as a coping strategy to address social pressures related to physical appearance.

The present study revealed a correlation between social physique anxiety and the aspiration to achieve a muscular physique among individuals engaged in fitness activities. Furthermore, the two factors were identified as mutually predictive. In addition, Frederick et al. (2006) demonstrated that particularly young men experience a pronounced desire to be muscular in response to body image expectations within their social environment, which subsequently gives rise to an increase in social physique anxiety. The finding that social physique anxiety and the urge to be muscular are reciprocally predictive indicates that individuals engaged in fitness activities direct their body perceptions by social and environmental factors. To avert this outcome, it is imperative to bolster the self-esteem and self-confidence of individuals. Therefore, it is possible to conclude that the aforementioned psychological and physical health problems can be prevented.

As a result, it was found that muscularity drive, muscularity-orientated eating, and social physique anxiety were predictors of each other in fitness individuals. In these individuals, muscularity-oriented eating and drive for muscularity affect each other at a high level, while the effect of social physique anxiety is less. In other words, it is very likely that the urge to be muscular and muscularity-oriented eating are seen together and trigger each other in fitness individuals. In addition, the level of social physique anxiety is affected by the drive for muscularity and muscularity-oriented eating at a low level. In addition to these two factors, other factors are also effective in the formation

of social physique anxiety in fitness individuals. Future studies should investigate the effects of the ideal of muscularity on the health of individuals by examining the nutritional factors and psychosocial factors in these relationships in more depth. In particular, how external factors such as media, social norms, and personal perceptions play a role in these processes may be an important focus for future research. In addition, for the nutritional treatment of eating behavior disorders of clinically fit individuals to be successful, individuals' perceptions of physical appearance and their drive to be muscular should also be evaluated, and psychological support should be provided if necessary. Due to the limitation of the study, the small number of female participants led to the inability to examine the variables discussed based on gender. It is suggested that these three factors should be analyzed within the scope of gender in future studies.

Ethics Committee Permission Information

Ethical evaluation board: Yalova University Ethics Committees Coordinatorship

Date of the ethical assessment document: 16.05.2024

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Statement of Researchers' Contribution Rates

The entire research was carried out by the sole author of the study

Conflict Statement

The author has no conflict of interest declaration regarding the research.

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