


**THE ROLE OF SOCIAL PHYSIQUE ANXIETY IN THE DEVELOPMENT OF
DISORDERED EATING BEHAVIOURS AMONG UNIVERSITY STUDENTS: A
CROSS-SECTIONAL STUDY**

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ABSTRACT

Amidst the growing prevalence of disordered eating behaviours among young adults, the impact of social physique anxiety on such behaviors has garnered increasing attention. The aim of this study is to determine the prevalence of disordered eating behaviours and to investigate the effect of social physical anxiety on disordered eating behaviours among students of a university located in the Mediterranean Region of Turkey. The population of this cross-sectional study consists of the students of the central campus of a university located in Mediterranean Region of Turkey (N: 33216). The sample size was 768. The Social Physique Anxiety Inventory and Eating Attitude Test-26 questionnaires were used for data collection in the study, with the Chi-square test, Mann-Whitney-U test, and logistic regression analyses used for statistical analysis. The rate of disordered eating behaviours is 15.2 in the study population. Increasing social physique anxiety increases disordered eating behaviours as a predictor ($\beta=1.15$; $p<.001$). The prevalence of disordered eating behaviours determined in this study is relatively lower than in the literature. Study findings highlight the significant role that social physique anxiety plays in the development of disordered eating behaviours and emphasize the importance of exploring prevention strategies to promote healthier eating habits and a positive body image.

Keywords: EAT-26, Disordered Eating Behaviours, Eating Disorders, Anxiety, University Students

ÜNİVERSİTE ÖĞRENCİLERİNDE DÜZENSİZ YEME DAVRANIŞLARININ GELİŞİMİNDE SOSYAL FİZİK KAYGISININ ROLÜ: KESİTSEL BİR ÇALIŞMA

ÖZET

Genç yetişkinler arasında düzensiz yeme davranışı artan yaygınlığı ve sosyal fiziksel kaygının bu tür davranışlar üzerindeki etkisi artan bir ilgi toplamıştır. Bu çalışmanın amacı, Türkiye'nin Akdeniz Bölgesinde bulunan bir üniversitenin öğrencilerinde düzensiz yeme davranışının prevalansını belirlemek ve sosyal fiziksel kaygının düzensiz yeme davranışı üzerindeki etkisini incelemektir. Kesitsel tipteki bu araştırmanın evrenini üniversitenin merkez yerleşkesindeki öğrenciler oluşturmaktadır (N: 33216). Hesaplanan örneklem büyüklüğü 768'dir. Araştırmada veri toplama aracı olarak Sosyal Fizik Kaygı Envanteri ve Yeme Tutumu Testi-26 anketi, istatistiksel analiz için Ki-kare testi, Mann-Whitney-U testi ve lojistik regresyon analizleri kullanılmıştır. Çalışma popülasyonunda düzensiz yeme davranışının prevalansı %15.2'dir. Artan sosyal fizik kaygı, yeme tutum bozukluğunun yordayıcısıdır ve yeme tutum bozukluğunu artırıcı etki göstermektedir ($\beta=1.15$; $p<0.001$). Bu çalışmada belirlenen düzensiz yeme davranışının yaygınlığı literatüre göre görece daha düşüktür. Çalışma bulguları, sosyal fiziksel kaygının düzensiz yeme tutumunun gelişiminde oynadığı önemli rolü vurgulamaktadır ve daha sağlıklı beslenme alışkanlıklarını ve olumlu bir vücut imajını teşvik etmek için önleme stratejilerini keşfetmenin önemini ortaya çıkarmıştır.

Anahtar Kelimeler: EAT-26, Düzensiz Yeme Davranışı, Yeme Bozuklukları, Anksiyete, Üniversite Öğrencileri

1. INTRODUCTION

Eating disorders are conditions that show themselves as a disturbance in a person's thinking about their own body weight and physical appearance as well as in their eating habits as a result of medical and psychological reasons (1). Eating disorders can be strong enough to affect the general health of individuals, and it has been observed that eating disorders are associated with problems such as over-nutrition, nutritional deficiencies, body image disorders, depression and anxiety (2). According to the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) (3), nutrition and eating disorders are characterized by persistent impairment in eating and other eating-related behaviors that result in altered consumption. There are many different kinds of food and eating disorders, and each one has its own special diagnostic requirements and descriptive characteristics. Among the eating disorders recognized by the Diagnostic and Statistical Manual of Mental Disorders are binge eating disorder (BED), bulimia nervosa (BN), anorexia nervosa (AN), other specified feeding and eating disorder (OSFED), avoidance/restrictive food intake disorder (ARFID), orthorexia nervosa, and other eating disorders (night eating syndrome, pica, purging disorder, and

rumination disorder) (3). Considering that AN, an eating disorder, has the highest mortality rate among all psychiatric illnesses, the remarkable feature of eating disorders is better understood (4).

Many scales have been developed and adapted into Turkish to detect eating disorders. The most commonly used ones are the Eating Attitude Test (EAT-40) (5) and the Eating Attitude Test Short Form (EAT-26) (5,6,7,8).

The state of anxiety that people experience when others judge their physical appearance is known as social physique anxiety (9). It matters how people view their own bodies, but it also matters how others see them. People are curious about how others perceive their physical appearance and want to make a positive impression on others. Based on this goal, they try to improve their physical appearance. However, if the desired effect cannot be achieved, people may suffer from this condition (10). There is a significant correlation between social physical anxiety symptoms and a number of eating disorder indicators, according to the literature (11). Social concerns about appearance are common in individuals with eating disorders (12). Such studies in the literature help us better understand the effect of SPA on eating behavior.

University students are classified as young adults. Young adulthood is characterized by increased social pressures, low self-confidence, ideal body measurements, and unrealistic perceptions. These perceptions and concerns can create dissatisfaction with their bodies and change individuals' eating behaviours, affecting young adults, especially those who are overweight and obese (13). During this period, many young people exaggerate their dietary restrictions and begin to experience eating disorders (14). The incidence of eating disorders has been reported to be increasing worldwide in young people (4, 15, 16, 17, 18, 19). Deterioration of eating behaviours in young adults can cause anxiety and problems not only in themselves but also in their families (20).

In a study examining the relationship between eating behaviours, SPA and sports in adolescents, it was determined that disordered eating behaviours such as vomiting and cleaning were more common in individuals who do individual sports and less in those who do team sports (21). Another study revealed that SPA is a risk factor for eating behavior disorders. SPA, body dissatisfaction, and Bulimia were all found to be significantly associated. It has also been shown that bulimia may be a factor that may lead to anorexia nervosa and other eating behavior disorders (22). The aim of this study is to determine the prevalence of disordered eating attitude and the effect of social physical anxiety on disordered

eating behaviours among students of a university located in the Mediterranean Region of Turkey.

The hypotheses of this study are as follows:

Null Hypothesis (H0): Social physique anxiety is not a predictor that increases disordered eating behaviours in young adults.

Alternative Hypothesis (H1): Social physique anxiety is a predictor that increases disordered eating behaviours in young adults.

2. METHODS

Participants

The population of this cross-sectional study consists of the students of the central campus of a university located in the Mediterranean Region of Turkey (N: 33216). 52.3% of the population is male (N: 17378); 47.7% (N: 15838) is female. The sample size was calculated using by the software of the Open Source Epidemiologic Statistics for Public Health (Open-Epi) (23). The sample size was 768 since the design effect (for cluster surveys-DEFF) was set at 2, the confidence boundaries (absolute +/-%) were set at 5%, and the default frequency of the outcome component in the population was assumed as 50%. Stratified and cluster sampling methods were used by gender (female n: 366; male n: 402), and the complete sample was obtained. 60.7% of the participants were over the age of 22 (n:466), 98.4% were single (n:756), and 67.6% were within normal limits according to BMI (n:519) (Table 1).

Measures

The data were collected online, using a questionnaire prepared by the researchers, including a personal information form, Social Physique Anxiety Inventory (SPAII), and Eating Attitude Test-26 (EAT-26).

Age, sex, marital status, BMI (kg/m^2), using any method for weight loss in the past year, attempting any diet in the last year, diet type, weight perception, consistency of participants' BMI with weight perception, desire for weight, consistency of participants' BMI with desire for their weight, doing regular exercise and SPAII are the independent variables of the research. The disordered eating behaviour is the dependent variable of the study and it is determined by the students' EAT-26 cut-off score.

Table 1. Participants' descriptive characteristics, weight characteristics and dietary habits

| Variables | n | % |
|--|----------|----------|
| Total | 768 | 100.0 |
| Age | | |
| ≤22 | 302 | 39.3 |
| >22 | 466 | 60.7 |
| Sex | | |
| Male | 402 | 52.3 |
| Female | 366 | 47.7 |
| Marital status | | |
| Married | 12 | 1.6 |
| Single | 756 | 98.4 |
| BMI (kg/m²) | | |
| Weak | 63 | 8.2 |
| Normal | 519 | 67.6 |
| Overweight or obese | 186 | 24.2 |
| Using a method for weight loss in the past year | | |
| Yes | 238 | 30.9 |
| No | 530 | 69.1 |
| Attempting any diet in the last year | | |
| Yes | 402 | 52.4 |
| No | 366 | 47.6 |
| Diet type | | |
| Professional support | 68 | 8.9 |
| Popular diet | 98 | 12.8 |
| Self-determined / monotype diet | 236 | 30.7 |
| Not dieting | 366 | 47.6 |
| Weight perception | | |
| Underweight | 103 | 13.4 |
| Normal | 562 | 73.2 |
| Overweight or Obese | 103 | 13.4 |
| Consistency of participants' BMI with weight perception | | |
| Consistent | 563 | 73.3 |
| Not Consistent | 205 | 26.7 |
| Desire for weight | | |
| Gain weight | 126 | 16.4 |
| Stay same | 301 | 39.2 |
| Lose weight | 341 | 44.4 |
| Consistency of participants' BMI with desire for their weight | | |
| Consistent | 435 | 56.6 |
| Not Consistent | 333 | 43.4 |
| Doing regular exercise | | |
| Yes | 292 | 38.0 |
| No | 476 | 62.0 |

Personal Information Form

This form was created by the researchers, based on the participants' descriptive characteristics (age, gender, marital status, BMI (kg/m²)), weight characteristics, and dietary habits (using any method [diet, exercise, surgery, acupuncture etc.] for weight loss in the past year,

attempting any diet in the last year, diet type, weight perception, desire for weight, doing regular exercise [at least 30 minutes, 3 days a week]) questions are included.

Body mass index (BMI) was calculated by dividing the weight in kilogram (kg) by the square of the height in meters (m). Those with a BMI below 18.5 were classified as underweight, those between 18.5-24.9 as normal, those between 25.0-29.9 as overweight, and those over 30.0 as obese (24) (Table 1).

Consistency of participants' BMI with weight perception variable; by evaluating whether the perception of the individual is compatible with BMI; The consistency of the participants' BMI with the variable of desire for their weight was determined by evaluating whether the individual's desire was compatible with BMI (Table 2).

Table 2. Consistency of participants' BMI and weight perception and desire of weight

| | | BMI (kg/m ²) | | | | | | | |
|--------------------------|-------------------------|--------------------------|-------------------|--------|-------------------|--------------------|-------------------|-------|----------------|
| | | Underweight | | Normal | | Overweight / Obese | | Total | |
| | | n | % ^a | n | % ^a | n | % ^a | n | % ^a |
| Weight perception | Underweight | 43 | 68.3 ^b | 60 | 11.6 | 0 | 0.0 | 103 | 13.4 |
| | Normal | 20 | 31.7 | 438 | 84.4 ^b | 104 | 55.9 | 562 | 73.2 |
| | Overweight/Obese | 0 | 0.0 | 21 | 4.0 | 82 | 44.1 ^b | 103 | 13.4 |
| Desire for weight | Gain weight | 33 | 52.4 ^b | 89 | 17.1 | 4 | 2.2 | 126 | 16.4 |
| | Stay the same | 29 | 46.0 | 246 | 47.4 ^b | 26 | 14.0 | 301 | 39.2 |
| | Lose weight | 1 | 1.6 | 184 | 35.5 | 156 | 83.9 ^b | 341 | 44.4 |
| Total | | 63 | 100.0 | 519 | 100.0 | 186 | 100.0 | 768 | 100.0 |

Note. ^a Column percentage is used in this table. ^b The gray areas represent instances in which body image and BMI are consistent. BMI: Body Mass Index.

Social Physique Anxiety Inventory (SPAI)

Social Physique Anxiety Inventory is a scale developed by Hart et al. to measure the anxiety individuals feel when their physical appearance is evaluated by others (9). Mulazimoglu Balli and Asci tested its validity and reliability for the Turkish population (25). The inventory contains 12 items, each with a five-point Likert scale (totally wrong, usually wrong, sometimes wrong, sometimes right, usually right, completely right). The inventory items 1, 2, 5, 8, and 11 are reverse scored. Five items (items 1, 5, 7, 8, and 11) from the original SPAI were removed during the second adaptation to Turkish, and it was demonstrated that the seven-item version was more valid and reliable (26). For the Turkish sample group, the scale's reliability was found to be 0.83. The scale has no sub-dimensions or cut-off points. The lowest possible score on the 7-item Turkish version of the scale is 7, and the highest possible score is 35. As the score obtained from the SPAI increases, the level of anxiety about the

person's appearance increases, too. The Cronbach Alpha internal consistency coefficient is 0.83. In our study, we used the final version of the scale, which had seven items. This scale's Cronbach Alpha internal consistency coefficient was 0.80 in our study.

Eating Attitude Test (EAT-26)

The Eating Attitude Test-40 was developed by Garner and Garfinkel (5). Garner et al. revised the test and created the EAT-26 short form (6). Erguney-Okumus and Sertel-Berk adapted the short form into Turkish (8). The EAT-26 form consists of three sections (A-B-C). In the A section of the scale, there are seven questions pertaining to height, weight, and lowest and highest weight information. In addition to the demographic information of the person, there are 26 questions, including the scale items in the B section, and in the C section, there are five questions about eating behaviors. (C Section aims to control the deterioration in eating behavior and eating pathology, if any, in the past six months). A 5-point Likert-type rating ranges from 1 (never) to 5 (always). The cut-off value of the scale is 20. Scores of 20 or higher indicate deterioration in eating behaviour. The only reverse item is Question 26. Items from 1 to 25 were scored as "3 = always, 2 = very often, 1 = often, 0 = other answers (sometimes, rarely, never)". Question 26 is scored as "1 = sometimes, 2 = rarely, 3 = never," and the other options are scored again as 0. The Cronbach Alpha internal consistency coefficient of the scale is 0.84. The Cronbach Alpha internal consistency coefficient was 0.85 in our study.

In this study, the prevalence of disordered eating behaviours was evaluated according to the cut-off point of the EAT-26 total score.

Statistical analyses

The Statistical Package Programme for Social Science (IBM SPSS Statistics for Windows Version 22.0, 2013) was used to analyse the data, which included descriptive statistics (mean, standard deviation (SD), number and percentage distributions), and hypothesis testing (27).

The fitness of the SPAI score to the normal distribution was evaluated. The p value of the Kolmogorov Smirnov test was $p < .001$. The skewness (0.316) and kurtosis (-0.391) values were more than twice as much as their standard errors (0.088 and 0.176). The co-efficiency of variation, calculated by dividing the standard deviation by the mean, was 33% and was greater than 30%. As a result of all these evaluations, it was accepted that the SPAI score was not suitable for normal distribution.

The difference between the two nominal variables was analysed with the chi-square test. In addition to the Phi value in 2x2 comparisons for effect size in the chi-square test, Cramer's V effect values in tables larger than 2x2 are presented. If the Phi and Cramer's V values are between 0.10 and <0.30, the effect size is mild; between 0.30 and <0.50, moderate; and ≥ 0.50 large effect size (28). Since the values presented in Table 3 are less than 0.30, the determined effect sizes are mild.

Whether the SPAI scores differed according to the eating behaviour was analysed with the Mann-Whitney-U test since the parametric conditions could not be met (the SPAI score did not conform to the normal distribution). In this analysis, the r effect value for the effect size was calculated and presented (28). R value of 0.1 is considered as a small effect, 0.3 is considered as a medium, and 0.5 is considered as a large effect (29). In the comparison in this study, the r value was found to be 0.32, and the detected effect had a medium effect size.

Variables that were found to be significantly related in univariate analysis were included in the logistic regression model, and multiple analysis was performed. Variance inflation factor (VIF) and tolerance values were examined in order to control the multi-collinearity among the variables included in the model. If the tolerance value is greater than 0.1 and close to 1 and the VIF values are less than 2.5, it is considered that there is no multi-collinearity (30). It was observed that the VIF values of the variables included in the model were between 1.06 and 1.85, and the tolerance values were between 0.54 and 0.95, and it was accepted that there was no multi-collinearity problem between the variables.

Variables included in the logistic regression model are: being overweight or obese in BMI, using a method for weight loss in the last year, attempting any diet in the last year, dieting with professional support, having a weight perception as overweight or obese, desire to lose weight, consistency of participants' BMI with desire for their weight, doing regular exercise, and SPAI total score. Backward LR method was used, and the result table of the final model is presented in Table 4. The suitability of the model was evaluated with the Hosmer and Lemeshow Test since this value is 0.112, and if $p > 0.05$, the model is considered compatible because it is accepted that the model's predictability is similar to the real situation (31).

Ethics

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964

Helsinki Declaration and its later amendments or comparable ethical standards. Approval was granted by the Suleyman Demirel University Faculty of Medicine Clinical Research Ethics Committee (Date: April 27, 2022; No: 142).

3. RESULTS

In the previous year, 30.9% (n:238) of the research group used a weight-loss method, and 52.4% (n:402) went on a diet. A professional provided dietary advice to 8.9% (n:68) of the participants. While 13.4% (n:103) of the participants think they are overweight or obese, 44.4% (n:341) want to lose weight. 38.0% (n:292) of the participants exercise regularly (Table 1).

According to the body mass index, 68.3% (n:43) of those who were underweight evaluated themselves as thin, and 52.4% (n:33) stated that they wanted to gain weight. Of those in the normal BMI range, 84.4% (n:438) perceived their body weight as normal and 47.4% (n:246) stated that they wanted to stay at the same weight. According to BMI, 44.1% (n:82) of those who were overweight or obese perceived themselves as overweight or obese, and 83.9% (156 people) stated that they wanted to lose weight (Table 2).

According to the EAT-26 cut-off threshold, 15.2% (n:117) of the participants have a disordered eating behaviour. According to BMI, those who are overweight or obese are more likely to have a disordered eating behaviour ($p<0.001$). People who have used any method (diet, exercise, surgical intervention, acupuncture, etc.) for weight loss in the previous year, dieters, people who receive professional diet support, people who perceive themselves as overweight or obese, people who want to lose weight, people whose weight demands are inconsistent with their BMI, and people who exercise regularly are more likely to have disordered eating behaviour than others ($p<.001$, $p<.001$, $p=.015$, $p<.001$, $p<.001$, $p=.022$ and $p<.001$, respectively) (Table 3).

The participants' mean SPAI score (standard deviation) is 18.7 (6.2), and the median value is 18 (min: 7, max: 35). Those with disordered eating behaviour have higher SPAI scores (mean: 23.7, SD:6.5) than those without it (mean: 17.7, SD:5.6), and this difference is statistically significant ($p< 0.001$, effect size [r^2]: 0.32).

Table 3. Disordered eating behaviour distribution according to participant's descriptive characteristics, weight characteristics and dietary habits

| Variables | Eating Attitude (EAT-26) | | | | <i>p</i> | <i>X</i> ² | ϕ / Cramer's V |
|--|--------------------------|----------------|------------|----------------|-----------------------------|-----------------------|------------------------|
| | Normal | | Disordered | | | | |
| | <i>n</i> | % ^a | <i>n</i> | % ^a | | | |
| Total | 651 | 84.8 | 117 | 15.2 | | | |
| Age | | | | | .999 | 0.00 | 0.00 |
| ≤22 | 256 | 84.8 | 46 | 15.2 | | | |
| >22 | 395 | 84.8 | 71 | 15.2 | | | |
| Sex | | | | | .394 | 0.73 | 0.03 |
| Male | 345 | 85.8 | 57 | 14.2 | | | |
| Female | 306 | 83.6 | 60 | 16.4 | | | |
| Marital status | | | | | .703 | 0.19 | -0.01 |
| Married | 10 | 83.3 | 2 | 16.7 | | | |
| Single | 641 | 84.8 | 115 | 15.2 | | | |
| BMI (kg/m²) | | | | | .001^b | 11.25 | 0.12 |
| Weak | 59 | 93.7 | 4 | 6.3 | | | |
| Normal | 447 | 86.1 | 72 | 13.9 | | | |
| Overweight or obese | 145 | 78.0 | 41 | 22.0 | | | |
| Using a method for weight loss in the past year | | | | | <.001 | 53.68 | -0.26 |
| Yes | 168 | 70.6 | 70 | 29.4 | | | |
| No | 483 | 91.1 | 47 | 8.9 | | | |
| Attempting any diet in the past year | | | | | <.001 | 33.43 | 0.21 |
| Yes | 312 | 77.6 | 90 | 22.4 | | | |
| No | 339 | 92.6 | 27 | 7.4 | | | |
| Diet type | | | | | .015^c | 8.42 | 0.24 |
| Professional support | 44 | 64.7 | 24 | 35.3 | | | |
| Popular diet | 76 | 77.6 | 22 | 22.4 | | | |
| Self-determined / monotype diet | 192 | 81.4 | 44 | 18.6 | | | |
| Weight perception | | | | | <.001^d | 21.62 | 0.17 |
| Underweight | 97 | 94.2 | 6 | 5.8 | | | |
| Normal | 481 | 85.6 | 81 | 14.4 | | | |
| Overweight or Obese | 73 | 70.9 | 30 | 29.1 | | | |
| Consistency of participants' BMI with weight perception | | | | | .688 | 0.16 | -0.01 |
| Consistent | 479 | 85.1 | 84 | 14.9 | | | |
| Not Consistent | 172 | 83.9 | 33 | 16.1 | | | |
| Desire for weight | | | | | <.001^e | 56.33 | 0.27 |
| Gain weight | 116 | 92.1 | 10 | 7.9 | | | |
| Stay same | 283 | 94.0 | 18 | 6.0 | | | |
| Lose weight | 252 | 73.9 | 89 | 26.1 | | | |
| Consistency of participants' BMI with desire for their weight | | | | | 0.022 | 5.21 | -0.08 |
| Consistent | 380 | 87.4 | 55 | 12.6 | | | |
| Not Consistent | 271 | 81.4 | 62 | 18.6 | | | |
| Doing regular exercise | | | | | <.001 | 23.66 | -0.18 |
| Yes | 224 | 76.7 | 68 | 23.3 | | | |
| No | 427 | 89.7 | 49 | 10.3 | | | |

^a: The % values given above are row percentages, ^b: overweight or obese people are different from others, ^c: Those who take professional dietary support are different from those who follow a self-determined or monotype

diet, ^d: overweight or obese people are different from others, ^e: those who want to lose weight are different from others

Table 4 shows the results of the regression model to predict disordered eating behaviour. Using a method for weight loss in the last year (β :1.77; p :0.021), attempting any diet in the last year (β :1.92; p : 0.014), desire of lose weight (β :2.73; p :<0.001), doing regular exercise (β :2.77; p :<0.001) and increased SPAI total score (β :1.15; p :<0.001) were determined as the predictors of disordered eating behaviour.

Table 4. The results of the regression model to predict disordered eating behaviour

| Models and variables | B | SE | β | 95%CI | | p |
|---|-------|------|---------|-------|------|-----------------|
| | | | | LL | UL | |
| Using a method for weight loss ^a | 0.57 | 0.25 | 1.77 | 1.09 | 2.88 | .021 |
| Attempting any diet in the last year ^a | 0.65 | 0.27 | 1.92 | 1.14 | 3.24 | .014 |
| Desire for weight ^b | 1.00 | 0.26 | 2.73 | 1.63 | 4.56 | <.001 |
| Doing regular exercise ^a | 1.02 | 0.24 | 2.77 | 1.73 | 4.43 | <.001 |
| SPAI total score | 0.14 | 0.02 | 1.15 | 1.11 | 1.20 | <.001 |
| Constant | -4.78 | 0.46 | 0.01 | | | <.001 |

Model Nagelkerke R^2 =0.336, Hosmer-Lemeshow test p =.112, B= Unstandardized regression coefficient, SE= Standard error, β = Standardized regression coefficient, 95%CI= 95% of Confidence interval, LL = lower limit, UL = upper limit, ^a: 0=No, 1= Yes, ^b: 0= Gain weight/stay same, 1= Lose weight

4. DISCUSSION

The prevalence of disordered eating behaviours was determined to be 15.2% in this study, which was conducted to determine the frequency of disordered eating behaviour in university students and examine their relationship with social physique anxiety. Different values are striking for both the world and Turkey in the literature. In a global systematic review of the risk of eating disorders among medical students, the prevalence was 10.4% (95% CI 7.8–13.0%) (32). However, in another systematic review and meta-analysis evaluating eating disorders in Brazilian university students, the frequency for the EAT-26 was 14.9% (95% CI 12.8–17.2%) in studies with a cut-off point ≥ 20 and 13.3% in studies with a cut-off point ≥ 21 (95% CI 11.3–15.6%) (33). In the systematic review evaluating the studies on eating disorders in the Middle East, the prevalence of eating disorders was reported between 10.2% and 48.1% in studies using the EAT-26 (15). In a systematic scoping review examining the global prevalence of eating disorders in nutrition and dietetics university students, this group of students was reported to be at high risk of up to 32% eating disorders and the results highlighted the prevalence of eating disorders (19). Looking at the studies in Turkey, in a study of dietitians and dietetics students, the frequency was 33.4% (34); in a study of university students, it was 22.5% (35). In another study conducted with young adults in

Turkey, 19.4% of males and 19.3% of females tended to have impaired eating behaviours (36). The existence of different values in the literature makes it difficult to make inferences. However, it should be noted that our study discovered a lower rate of disordered eating behaviour.

In this study, increased social physique anxiety is a predictor of disordered eating behaviour, and our null hypothesis is rejected while our H1 hypothesis is accepted. Other studies in the literature seem to support this finding (37,38,39). However, another point in the literature is that social desirability is also effective on eating behaviour (40). In this case, it can be thought that social undesirability may increase social physique anxiety and affect the eating attitude. Especially for overweight and obese individuals, studies that show that they are subject to prejudice, discrimination, and ridicule support this idea (41,42).

Other variables associated with disordered eating behaviours in our study also strengthen our hypothesis. In this study, the prevalence of disordered eating behaviours is higher in those who were overweight or obese in univariate analyses. However, being overweight or obese is not identified as a predictor in multivariate analyses. According to BMI, overweight and obese individuals have the highest risk of developing eating disorder symptoms in studies with young adults. It has been reported that underweight people have the lowest risk (43,44,45). In this respect, people with high BMI are mentally preoccupied with the desire to be thinner (46); the fact that overweight people are more likely to engage in food than their normal-weight peers, and obese individuals' tendency to engage in food and the belief that food controls their lives explains this influence on their attitudes (47).

In our study, desire to lose weight, using any method to lose weight in the last year, attempting any diet in the last year, and exercising regularly are associated with a disordered eating behaviour. In other words, in our study, a disordered eating behaviour is more common in those who are trying to do something about it, thus trying to lose weight and making an effort by dieting and/or exercising, rather than those who are considered obese or overweight based on BMI.

The relationship between desire to lose weight, using any method in the last year, or following any diet with disordered eating behaviour is also supported by studies in the literature. It is stated in the literature that preoccupations with the body and food may be predictive of disordered eating and chronic dieting (48,49). Also, reporting that dieters have higher food and diet-related thoughts than non-dieters supports this finding (50). As a matter of fact, it is

possible for an individual who intends to lose weight to have thoughts in this direction and to develop behaviors and attitudes towards it. It has been reported in the literature that individuals with eating disorders are increasingly diagnosed with exercise addiction (51). In our study, regular exercise is associated with a disordered eating behaviour. This situation suggests the necessity of questioning the exercise status of individuals with eating disorders in clinical practice. However, exercise may also be associated with higher levels of depression and anxiety in those with eating disorders. Another condition reported is that sex, as well as the presence or absence of eating pathology, can influence exercise (52). More studies are needed to identify confounding factors in order to make an accurate inference about the causality between exercise and eating disorder.

Limitations and Future Directions

Due to the cross-sectional nature of the study, establishing causal relationships between variables is challenging. Consequently, this methodology alone may not suffice to establish causality. Nevertheless, given that the study sample consists of university students, who are prone to experiencing social physique anxiety, and that the study has illuminated the association between social physique anxiety and eating attitudes, it may stimulate the generation of novel hypotheses and inform future research on eating attitudes, particularly with regards to moderation and mediation analyses.

5. CONCLUSION

In our study, increasing social physique anxiety is a predictor of disordered eating behaviour. Perhaps people's weight loss efforts are triggered by social body anxiety, and a relationship evolves. More research is needed to determine the relationship between social physique anxiety, body image, and eating attitude and to determine which is the primary predictor and which is the mediator.

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Informed Consent

All respondents provided written informed consent prior to the data collection process.

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