

Investigation of the relationship between eating disorders and the perception of teasing in adolescents

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Abstract. *Study Objectives:* This study aimed to examine the relationship between eating disorder in adolescents and perception of teasing. *Methods:* Four hundred-one (216 female, 185 male) high school students, who were preparing for university entrance exams, voluntarily participated in the study. A personal information form, an Eating Disorder rating scale, and Adolescent-Child Teasing Scale were used to collect the data. SPSS package program was used for data analysis. Skewness and kurtosis values were checked to determine whether the data showed normal distribution. In this context, it was determined that there was no extreme/outlier in the data, and Independent sample t-test, One-way ANOVA and Pearson Correlation analyzes were performed in the analysis of the data. *Results:* Statistically significant differences were found between the variables of gender, age, exercising and body mass index, and the perception of eating disorder and teasing. Moreover, it was observed that there was a statistically positive relationship between the eating disorder variable and the teasing variable. *Conclusion:* It was concluded that female students attach more importance to their physical and healthy lives, students who did not exercise had higher anxiety about being physically and teased. Besides, it was found that as the eating disorder level increased, the perception of teasing also increased.

Key words: Adolescent, eating disorder, perception of being teased

Introduction

Eating disorders are behavioral conditions characterized by severe and persistent discomfort in eating behaviors and related distressing thoughts and feelings. It can be very serious conditions that affect physical, psychological, and social function. Types of eating disorders include anorexia nervosa, bulimia nervosa, binge eating disorder, avoidant restrictive food intake disorder, other specified nutritional and eating disorders, pica, and rumination disorder (1). Eating disorders are mental disorders that significantly impair physical health, disabling, fatal, and impair the psychosocial functioning of the person, and also cost great losses in health (2). Eating disorders usually develop during adolescence and early adulthood but may persist or reappear throughout life (3). Eating

disorders can cause various emotional, physical and behavioral changes. Such behaviors can cause a serious, life-threatening eating disorder when problems such as diets of adolescents and body dissatisfaction are taken together. According to Swanson et al (4), the mean age of onset for eating disorders is between the ages of 12 and 13 and eating disorder specialists have recently reported that diagnoses can reach children between the ages of 5 and 6 (5).

Another important issue that tends to be seen in adolescents today is teasing. We can say that teasing is a deliberate act of provoking while interpreting something related to the target (6). In other words, teasing is a phenomenon that often takes place in human life. People may resort to tease for a variety of reasons. We see that teasing takes place in our lives for reasons such as flirting, socializing, spending fun time, resolving

conflicts, and developing coping mechanisms. In some cases, it is seen that they may have dimensions such as humiliation and insult and reach much more disturbing dimensions. For this reason, although it does not have a precise definition also difficult to measure due to the subjective concept and emerges from instant interactions (7).

Adolescents who are teased may feel inadequate or they may have to avoid some activities both in their school life and in their social life because of the fear of being teased. Teasing is a common problem among adolescents, with a particular focus on body weight and body shape. Some studies have shown that the prevalence of being teased about weight among adolescents with mean weight is approximately 20%, with over 50% of overweight peers reporting being teased about their weight or appearance (8,9). Besides, there are many studies associated with various body image and eating behaviour disorders (10,11).

Adolescence is a period in which physical and psychological changes are observed, and independence and responsibilities increase. Adolescents may tend to risky behaviours as a result of immature cognitive development and a social environment with insufficient insight (12). Especially in this period, adolescents who want to be admired, appreciated and attracted by their schoolmates, on the contrary, when they are exposed to teasing, they may enter into a psychological depression and start to exhibit more unwanted behaviours. "Overweight" is seen as one of the most important factors leading to stigmatization and exclusion in adolescents. When it comes to teasing about weight, it is not necessary to be above normal or obese, and children with normal weight who are at risk of being overweight may also be teased by their peers or family members (13). When the literature is reviewed, there are studies that reveal that psychosocial problems occur in adolescents who are exposed to tease over their weight and there are also decreases in healthy lifestyle attitudes (8,14-17).

In the adolescence period, peer relationships are more important than parent relationships in providing personality integrity. Therefore, eating disorder, which is one of the most important problems of the age in a critical period such as adolescence, and the damage it causes on adolescents can create a certain fear of being teased by their environment in adolescents. In this

context, this study aimed to examine the relationship between the eating disorder in adolescents and the perception of being teased.

Methods

Research Model

In this study general screening model, one of the quantitative research methods, was used. General screening model; in a universe consisting of many elements, it is the screening of the whole universe or a sample obtained from it in order to make a general judgment about the universe (18).

Study Sample

The study sample consisted of 401 (216 females, 185 males) students who prepared for university entrance exams in the district of Efeler in Aydın province in the 2018-2019 academic year and were educated at the senior level of high school, and reached by convenience sampling method.

Data Collection Tools

Personal Information Form: The adolescents participating in the study were asked demographic variables such as age, gender, exercise status, body weight and height. In order to determine the frequency of obesity in the calculation of the body mass index of the participants, it was classified and recorded according to the percentile values of WHO for male and female adolescents.

Eating Disorder Rating Scale

The scale was developed by Fairburn and Beglin (19) and adapted to Turkish by Yücel et al. (20). This scale was accepted as a questionnaire version of the Eating Disorder Examination Interview-EDE, which was introduced in 1993. In this scale, with the help of a total of 28 questions, it was tried to determine the satisfaction status and eating habits of the participants in the last 28 days. The scale was a 7-point Likert type (0; never / 6; every day) and had 5 subscales. The sub-scales

were Binge Eating, Restraint, Eating Concern, Weight Concern and Shape Concern. Cronbach’s alpha reliability coefficient which calculated to test the reliability of the scale was found as 0.67 for Binge Eating, 0.87 for Restraint, 0.74 for Eating Concern, 0.91 for Shape Concern and 0.84 for Weight Concern. In the current study, it was found to be 0.73 for Binge Eating, 0.86 for Restraint, 0.75 for Eating Concern, 0.90 for Shape Concern, and 0.81 for Weight Concern.

Adolescent-Child Teasing Scale

The scale was developed by Thompson et al. (21) and adapted to Turkish by Topaloğlu (13). The scale consisted of 11 items and had 2 sub-dimensions. These sub-dimensions were Weight-related Teasing, and Competency Teasing. The Cronbach’s alpha reliability coefficient, which was calculated to test the reliability of the scale, was 0.86 in the Weight-related Teasing sub-dimension and 0.76 in the Competency Teasing. In the current study, it was found as 0.94 in the Weight-related Teasing, and 0.91 in the Competency Teasing.

Data Analysis

SPSS 24 (Statistical Package for Social Science) package program was used to analyze the data obtained

in the study. Skewness and kurtosis values were checked to determine whether the data showed normal distribution. These values were controlled and evaluated between -2 and +2 (22). As a result of this evaluation, it was seen that the data showed a normal distribution. In this context, Independent sample t-test, One-way ANOVA and Pearson Correlation analysis were used in parametric test methods. When there was a statistically significant difference in multiple comparison results, Tukey HSD test was used to determine the source of the difference. Significance was set at $p < ,05$.

Results

In this section, the results including the relationship between the variables of eating disorder and teasing perception of the students participating in the study and the differences according to various demographic variables were included.

When Table 1 was examined, as a result of the analysis made between the gender variable of the participants and the sub-dimensions of the eating disorder and teasing variable, it was determined that there was a statistically significant difference in the sub-dimensions of eating concern, shape concern, weight concern, Weight-related Teasing, and Competency Teasing ($p < ,05$).

Table 1. Eating Disorder and Perception of Teasing t-Test Results according to Gender Variables

| Variables | Gender | N | Mean | SD | t | p |
|------------------------|--------|-----|-------|-------|--------|-------|
| Binge Eating | Female | 216 | 8,28 | 10,40 | -1,146 | ,246 |
| | Male | 185 | 9,61 | 12,48 | | |
| Restraint | Female | 216 | 6,59 | 7,32 | 1,304 | ,194 |
| | Male | 185 | 5,65 | 7,14 | | |
| Eating Concern | Female | 216 | 4,70 | 5,53 | 2,323 | ,021* |
| | Male | 185 | 3,49 | 4,81 | | |
| Shape Concern | Female | 216 | 14,26 | 12,79 | 3,934 | ,000* |
| | Male | 185 | 9,62 | 10,50 | | |
| Weight Concern | Female | 216 | 7,56 | 7,57 | 2,726 | ,007* |
| | Male | 185 | 5,68 | 6,02 | | |
| Weight-related Teasing | Female | 216 | 19,17 | 9,89 | 2,896 | ,004* |
| | Male | 185 | 16,58 | 7,59 | | |
| Competency Teasing | Female | 216 | 18,62 | 8,92 | 2,194 | ,029* |
| | Male | 185 | 16,75 | 7,94 | | |

* $p < ,05$

Table 2. One-Way ANOVA Results of Eating Disorders and Perception of Teasing according to Age Variables

| Variables | Age | N | Mean | SD | F | p | Tukey |
|-------------------------------|-----------------|-----|-------|-------|-------|--------------|-------|
| Binge Eating | 17 ^a | 122 | 9,09 | 10,76 | ,049 | ,952 | - |
| | 18 ^b | 241 | 8,75 | 11,47 | | | |
| | 19 ^c | 38 | 9,18 | 13,26 | | | |
| Restraint | 17 ^a | 122 | 6,43 | 7,66 | ,655 | ,520 | - |
| | 18 ^b | 241 | 5,86 | 7,15 | | | |
| | 19 ^c | 38 | 7,16 | 6,50 | | | |
| Eating Concern | 17 ^a | 122 | 4,45 | 5,57 | 1,310 | ,271 | - |
| | 18 ^b | 241 | 3,83 | 5,00 | | | |
| | 19 ^c | 38 | 5,13 | 5,54 | | | |
| Shape Concern | 17 ^a | 122 | 13,16 | 12,36 | 3,100 | ,046' | b-c |
| | 18 ^b | 241 | 11,04 | 11,54 | | | |
| | 19 ^c | 38 | 15,63 | 13,05 | | | |
| Weight Concern | 17 ^a | 122 | 7,54 | 7,24 | 2,742 | ,066 | - |
| | 18 ^b | 241 | 6,04 | 6,71 | | | |
| | 19 ^c | 38 | 8,08 | 7,25 | | | |
| Weight-related Teasing | 17 ^a | 122 | 18,89 | 9,79 | 1,916 | ,149 | - |
| | 18 ^b | 241 | 17,27 | 8,25 | | | |
| | 19 ^c | 38 | 19,50 | 10,43 | | | |
| Competency Teasing | 17 ^a | 122 | 18,67 | 9,00 | 2,256 | ,106 | - |
| | 18 ^b | 241 | 17,04 | 7,72 | | | |
| | 19 ^c | 38 | 19,37 | 11,17 | | | |

*p< ,05

When Table 2 was examined, no statistically significant difference was found in the sub-dimensions of the teasing perception variable according to the age groups of the participants, while a statistically significant difference was found in the shape concern, which was the eating disorder sub-dimension ($p < ,05$). This difference was observed between the students who were 18 and 19 years old.

When Table 3 was examined, a statistically significant difference was not found in the sub-dimensions of the teasing perception variable according to the participants' exercise status, while a statistically significant difference was found in the eating concern sub-dimensions of eating disorder, shape concern, and weight concern ($p < ,05$).

When table 4 was examined, a statistically significant difference was found in the sub-dimensions of restraint eating, eating concern, shape concern, weight

concern and weight-related teasing according to the body mass index of the participants ($p < ,05$). These differences were found between the underweight and normal weight, overweight and obese individuals in the restraint eating and weight concern sub-dimensions. In the sub-dimension of eating concern and weight-related teasing, it was observed that it was among those who were overweight and those who were underweight and normal weight. Body anxiety observed to be between those who were underweight and those with normal weight and overweight.

When the analysis results were examined, a low-level positive relationship was found between the Weight-Related Teasing sub-dimension and the binge eating sub-dimension, while a moderate positive correlation was found between Restraint eating, eating concern, shape concern, and weight concern sub-dimensions. While a low-level positive relationship

Table 3. Eating Disorder and Perception of Teasing t-Test Results according to Exercise Variables

| Variables | Exercise | N | Mean | SD | t | p |
|------------------------|----------|-----|-------|-------|--------|-------|
| Binge Eating | Yes | 199 | 8,89 | 11,53 | -,001 | ,999 |
| | No | 202 | 8,90 | 11,33 | | |
| Restraint | Yes | 199 | 6,24 | 7,43 | ,217 | ,829 |
| | No | 202 | 6,08 | 7,08 | | |
| Eating Concern | Yes | 199 | 3,50 | 4,80 | -2,453 | ,015* |
| | No | 202 | 4,78 | 5,57 | | |
| Shape Concern | Yes | 199 | 9,81 | 10,38 | -3,884 | ,000* |
| | No | 202 | 14,39 | 13,05 | | |
| Weight Concern | Yes | 199 | 5,63 | 5,98 | -3,053 | ,002* |
| | No | 202 | 7,73 | 7,67 | | |
| Weight-related Teasing | Yes | 199 | 17,72 | 8,98 | -,567 | ,571 |
| | No | 202 | 18,23 | 9,00 | | |
| Competency Teasing | Yes | 199 | 17,03 | 8,35 | -1,708 | ,088 |
| | No | 202 | 18,48 | 8,65 | | |

*p< ,05

was found between the Competency Teasing sub-dimension and binge eating, restrictive eating, eating concern and weight concern sub-dimension, and a moderate positive correlation was found between the shape concern sub-dimensions (Table 5).

Discussion and Conclusion

As a result of the analysis conducted to determine the relationship between the variables of eating disorder and teasing perception of the students participating in the research and the differences between them with various demographic variables, while a low-level positive relationship was found between the weight-related teasing sub-dimension and the binge eating sub-dimension, a moderate positive correlation was found between restraint eating, eating concern, shape concern, and weight concern sub-dimensions. While a low-level positive relationship was found between the competency teasing sub-dimension and binge eating, and restraint eating, eating concern and weight concern sub-dimension, a moderate positive correlation was found between the body concern sub-dimensions.

It was observed that the situations such as eating, shape and weight concern due to the increase in the

level of eating disorders increased in parallel with the teasing. A statistically significant difference was found between the gender variable and the sub-dimensions of eating concern, shape concern, weight concern, weight-related teasing and competency teasing. In these differences, it was observed that the mean scores of female were higher than male. In this context, it can be said that female had higher physical concern than male and therefore they were more sensitive to being teased.

A statistically significant difference was found between the age variable and shape concern. It was observed that the older students had higher shape concern. The reason for this difference was thought to be the state of concern that occurs in the individual with the thought of inactivity with the advancing age.

It was determined that there was a statistically significant difference between the exercise status variable and eating concern, shape concern and weight concern. It was observed that the mean scores of students who did not exercise were higher. It can be said that this difference was due to the physical concern that occurred in the individual.

A statistically significant difference was found between the body mass index variable and the sub-dimensions of restraint eating, eating concern, shape

Table 4. One-Way ANOVA Results of Eating Disorder and Perception of Teasing according to Body Mass Indexes

| Variables | Body Mass Index | N | Mean | SD | F | p | Tukey |
|------------------------|--------------------------|-----|-------|-------|--------|-------|---------|
| Binge Eating | Underweight ^a | 59 | 6,93 | 9,22 | 1,315 | ,296 | - |
| | Normal ^b | 277 | 8,86 | 11,77 | | | |
| | Overweight ^c | 53 | 11,21 | 11,53 | | | |
| | Obese ^d | 12 | 9,25 | 11,81 | | | |
| Restraint | Underweight ^a | 59 | 2,80 | 4,85 | 9,577 | ,000* | a-b,c,d |
| | Normal ^b | 277 | 6,08 | 7,15 | | | |
| | Overweight ^c | 53 | 9,74 | 7,27 | | | |
| | Obese ^d | 12 | 8,58 | 11,18 | | | |
| Eating Concern | Underweight ^a | 59 | 2,15 | 4,03 | 8,385 | ,000* | c-a,b |
| | Normal ^b | 277 | 3,99 | 4,94 | | | |
| | Overweight ^c | 53 | 6,85 | 6,30 | | | |
| | Obese ^d | 12 | 5,58 | 7,14 | | | |
| Shape Concern | Underweight ^a | 59 | 6,44 | 8,46 | 9,410 | ,000* | a-b,c |
| | Normal ^b | 277 | 12,07 | 11,75 | | | |
| | Overweight ^c | 53 | 17,92 | 13,68 | | | |
| | Obese ^d | 12 | 15,50 | 12,91 | | | |
| Weight Concern | Underweight ^a | 59 | 3,15 | 4,37 | 12,315 | ,000* | a-b,c,d |
| | Normal ^b | 277 | 6,59 | 6,87 | | | |
| | Overweight ^c | 53 | 10,72 | 7,57 | | | |
| | Obese ^d | 12 | 8,67 | 7,40 | | | |
| Weight-related Teasing | Underweight ^a | 59 | 16,17 | 8,55 | 10,829 | ,000* | c-a,b |
| | Normal ^b | 277 | 17,17 | 8,31 | | | |
| | Overweight ^c | 53 | 24,23 | 11,08 | | | |
| | Obese ^d | 12 | 17,75 | 4,07 | | | |
| Competency Teasing | Underweight ^a | 59 | 19,22 | 9,96 | 2,290 | ,078 | - |
| | Normal ^b | 277 | 17,32 | 7,96 | | | |
| | Overweight ^c | 53 | 19,28 | 10,04 | | | |
| | Obese ^d | 12 | 13,75 | 2,86 | | | |

*p<,05

concern, weight concern and weight-related teasing. This difference was found to be in favor of overweight and obese students. It was concluded that overweight and obese students had high weight and body concern and therefore had a high perception of teasing.

Nowadays, thinness has considered an important measure of beauty in almost all societies. In this context, individuals generally try to lose weight in order to look beautiful. Considering the opposite of this situation, being overweight is a sign of ugliness, and overweight people seek to get rid of these weights as soon

as possible. Zero body perception in the visual media caused individuals in young adulthood to tend to unhealthy diets and eating disorders in individuals. Eating disorders were clinical mental disorders with a high mortality rate. Detecting eating disorders at an early stage was important to prevent health problems (23).

People's desires to be liked in social relationships and concerns about being excluded or teased, led them to unhealthy diets at an early age (24). In a study, it was stated that the scores of weight concern and physical dissatisfaction in adults who were teased due to

Table 5. Correlation Analysis of Eating Disorder and Perception of Teasing

| Variables | | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|----------------------------|---|--------|--------|--------|--------|--------|--------|-----|
| Binge Eating (1) | r | 1 | | | | | | |
| | p | | | | | | | |
| Restraint (2) | r | ,228** | 1 | | | | | |
| | p | ,000 | | | | | | |
| Eating Concern (3) | r | ,402** | ,678** | 1 | | | | |
| | p | ,000 | ,000 | | | | | |
| Shape Concern (4) | r | ,322** | ,658** | ,814** | 1 | | | |
| | p | ,000 | ,000 | ,000 | | | | |
| Weight Concern (5) | r | ,330** | ,674** | ,796** | ,914** | 1 | | |
| | p | ,000 | ,000 | ,000 | ,000 | | | |
| Weight-related Teasing (6) | r | ,160** | ,348** | ,474** | ,493** | ,485** | 1 | |
| | p | ,001 | ,000 | ,000 | ,000 | ,000 | | |
| Competency Teasing (7) | r | ,148** | ,122* | ,287** | ,317** | ,281** | ,545** | 1 |
| | p | ,003 | ,015 | ,000 | ,000 | ,000 | ,000 | |

N=401; **p<,01; *p<,05

their overweight in childhood were higher than adults who were not physically teased in childhood, and their self-esteem values were lower. Concern about gaining weight in adolescence can cause various depressions. It was observed that the more negative affect adolescents experience in the face of weight-related teasing, they resort to non-functional coping mechanisms (avoidance, etc.). It was reported that the frequency of eating behaviours increased and binge eating attacks increased depending on this situation (13).

In another study, it was stated that overweight young people were exposed to more teasing than their peers with mean weight. It was stated that mockery based on weight causes negative psycho-social factors (larger depressive symptoms, suicidal thinking/attempted suicide, eating disorder behaviours) (25). In fact, teasing was interpersonally risky. Even when teasing was positively intentioned, its ambiguous mix of playfulness and provocation can leave recipients with negative impressions and hurt feelings (26-29). In another study, it was stated that there was a negative relationship between Body Mass Index and body satisfaction in female, body satisfaction perception weakened with increasing weight, and body dissatisfaction had a strong effect on impaired eating behaviours (such as restraint eating, bulimia nervosa) (30).

Although body mass index was seen to be related to the weight-focused mockery factor, it was observed in a study that overweight females were exposed to more teasing about their weight, but the main determinant of body satisfaction was being teased, not weight. It was stated that people who had weight problems at a young age were exposed to more teased than those who gain weight in adulthood (31).

In a study conducted by Thompson et al. on adolescents, it was reported that teasing was associated with obesity and subsequent degrees of depression. Albert et al. (32) reported that obese patients with binge eating disorder were more teased for their appearance and this led them to the development of body dissatisfaction and depression. Among the factors associated with eating disorders in adolescent female were peer pressure, trying to look like women on TV and magazines, and teasing about body weights (33). In general, it has been stated that mental problems such as mock anxiety, stress, anxiety and depression can occur in obese individuals, as well as various eating disorders (34).

As a result, it was concluded that female students participating in the study attach more importance to their physical and healthy lives, students who did not exercise had higher anxiety about being physically

and teasing. Moreover, it was found that as the eating disorder level increased, the perception of being teased also increased. According to these results, it is recommended that students be supported on physical activity by providing awareness training on healthy nutrition and physical activity.

Conflicts of interest: The authors declare that there is no conflict of interest about this manuscript.

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