## **RESEARCH ARTICLE**



# Sociocultural predictors of body shape and weight concerns in Turkiye: Differences between healthy women and patients with eating disorders

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#### ABSTRACT

**Objective:** Sociocultural factors are believed to play significant roles in predisposing individuals to eating disorders. Accordingly, this study aimed to investigate various sociocultural predictors of body shape and weight concerns among healthy women and those with eating disorders within the Turkish population.

**Method:** Data from 79 patients (41 diagnosed with anorexia nervosa, 31 with bulimia nervosa, and 7 with binge eating disorder) were analyzed alongside 72 healthy controls matched for age and education. Participants provided demographic information and completed several questionnaires, including the Sociocultural Attitudes Towards Appearance Questionnaire - 4 Revised, the Social Comparison through Physical Appearance Scale and the Eating Disorder Examination Questionnaire.

**Results:** Key findings include: 1) Patients exhibited higher scores related to sociocultural factors impacting appearance and engaged in more negative social comparisons than controls; 2) Among both groups, internalization of a thin ideal was a predictor of concerns about shape and weight; 3) In controls, but not in patients, family pressures influenced shape concerns; 4) Parental dieting status influenced weight concerns in both groups. Surprisingly, in controls, paternal dieting was linked to a higher shape and weight concerns, a finding not observed in patients.

**Conclusion:** These findings indicate that sociocultural influences on body image may affect Turkish women with eating disorders (ED) differently from healthy women. The impact of paternal dieting on shape and weight concerns among control women has not been previously reported. This finding suggests that the influence of paternal dieting on daughters' shape and weight concerns may be more pronounced in Turkiye than in Western countries.

Keywords: Eating disorders, etiology, shape concern, social comparison, weight concern

## INTRODUCTION

Eating disorders (ED) are characterized by an intense preoccupation with body shape, weight, and eating behaviors. Body image, which includes concerns about body shape and weight, reflects our thoughts, feelings, and behaviors towards our physical appearance (1). Body image distortion, linked to reduced psychosocial functioning, is considered to be a critical factor in the development of EDs (2) and is

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a diagnostic criterion for both anorexia nervosa (AN) and bulimia nervosa (BN) (3). Although body image distortion is not a diagnostic criterion for binge eating disorder (BED), research has shown that concerns about body weight in individuals with BED are similar to those in patients with AN and BN, regardless of body mass index (BMI) (4, 5).

Sociocultural factors are believed to play a significant role in the development of body image disturbances that lead to EDs. These factors may include social comparisons of physical appearance and influences from parents and peers (6, 7). Social comparisons related to physical appearance appear to be strong contributors to vulnerability to eating disorders (8, 9). When women compare themselves to the idealized, thin, and beautiful images prevalent in the media, they often view themselves as lacking, resulting in negative mood and body dissatisfaction (10). Research also suggests that appearance comparisons mediate the relationship between social media usage and body image concerns (11–13). Among women experiencing body dissatisfaction, peer comparisons are linked to reduced appearance esteem and increased dieting thoughts. Notably, women with body dissatisfaction tend to engage in more appearance comparisons compared to those who are satisfied with their bodies (14). In other words, the relationship between body dissatisfaction and appearance comparison may be bidirectional. Additionally, negative comments about appearance are directly associated with appearance comparisons among female youth (15).

Restrained eating may result from the adverse effects of social pressure to maintain a thin body, which is mediated by the internalization of an ideal thinness and body dissatisfaction (16). In one study, patients with BN reported more pressure to be thin from family, peers, partners, and the media compared to controls (17). In another study, girls with BN and subclinical BN reported feeling more pressure from their mothers to diet, restrain their eating, and exercise compared to girls without EDs (18).

Cross-cultural issues significantly influence the relationship between sociocultural influences and body image. Numerous studies have tested the validity of the tripartite influence model across different cultural contexts. This model has been re-evaluated several times in Western societies, including the United States (19), Hungary (20), Australia, and France (7). Studies in non-Western societies like Iran (21) and Malaysia (22) have also tested slightly modified versions of the model, identifying some unique cultural specificities. A recent study has been pivotal in understanding the cultural similarities and differences between Western and non-Western societies with respect to the variables of the tripartite influence model (23). This study revealed that the primary sources of appearance-related pressures and their direct impact on appearance satisfaction vary according to cultural origin.

Currently, there is no comprehensive research in Turkiye exploring sociocultural factors related to EDs. Considering Turkiye's unique cultural position, which blends strong European influences within a predominantly Muslim country, investigating these sociocultural factors in this country could enhance our cross-cultural understanding of the body image. If EDs are seen as culture-bound syndromes, studying a Turkish population may provide insights into how these conditions manifest in this distinctive cultural setting. Furthermore, since much of our knowledge about the sociocultural determinants of EDs comes from studies involving individuals without EDs, comparing healthy controls and an ED sample in the same study could serve as a starting point to deepen or revise our understanding of the sociocultural etiological and maintenance theories related to EDs. The objective of this study is to explore and compare predictors of body shape and weight concerns among Turkish individuals diagnosed with ED who are not in remission versus a control group of healthy individuals without major psychiatric disorders. We hypothesize that, compared to controls, individuals with EDs will report higher levels of sociocultural pressure for thinness and more negative social comparisons. Additionally, we anticipate that the sociocultural predictors of body shape and weight concerns will vary between the two groups.

#### METHODS

### Participants

A total of 87 women receiving treatment at the Istanbul Faculty of Medicine, Eating Disorders Program, were contacted via telephone to participate in the study. Of these, 79 patients consented to participate, met the inclusion criteria, and did not fall under any exclusion criteria. This group was enrolled in the study from September 2017 to April 2019. The patients included 41 diagnosed with AN, 31 with BN, and 7 with BED. The control group consisted of 72 healthy women who were age and education-matched and met our inclusion/exclusion criteria. Controls were recruited using convenience sampling through faculty clinicians or researchers' acquaintances.

Inclusion criteria for patients included Turkish citizenship, proficiency in Turkish, age between 15-60 years, female gender, at least a primary school education, a diagnosis of AN, BN, or BED, and consent to participate in the study. The exclusion criteria for patients were a diagnosis of intellectual disability, psychotic disorders, or autism spectrum disorder.

For controls, the inclusion criteria were similar to those for patients, except for the absence of an eating disorder diagnosis. These criteria included Turkish citizenship, proficiency in Turkish, age between 15-60 years, female gender, at least a primary school education, and consent to participate in the study. The exclusion criteria for controls included major physical malformations, routine use of substances (other than alcohol or tobacco), current dieting for weight loss, a history of any major psychiatric disorder, and metabolic problems such as diabetes mellitus, polycystic ovary syndrome, or metabolic syndrome.

#### Procedure

The study design received approval from the Ethics Committee of the faculty under number 1098 on October 4, 2017. All participants were provided with informed consent forms containing detailed information about the study, and both verbal and written consent were obtained. Major psychiatric disorders were ruled out in controls through a brief interview by the first author. The presence of substance use, metabolic problems, and dieting behaviors were assessed through a selfreport control inclusion form designed by the authors. Upon inclusion, participants completed the forms and questionnaires as outlined below.

#### Instruments

#### Demographic Data Form

This form collected demographic information through self-reporting, assessing weight, height, target weight, minimum and maximum weights, and habits. It also included Likert-type questions to evaluate perceptions of parental influence (such as dieting status of both parents and their opinions on their appearances) and participants' usage of social media.

### Sociocultural Attitudes Towards Appearance Questionnaire-4 Revised

The Sociocultural Attitudes Towards Appearance Questionnaire-4 Revised (SATAQ-4R) (24) is a 31-item self-report questionnaire utilizing a 5-point Likerttype ranging from "absolutely agree" to "absolutely disagree." It comprises seven subscales that reflect an individual's perceptions and feelings about herself in various domains, as well as the pressures she experiences from different sources: Internalization: Thin/LowFat, Internalization: Muscular, Internalization: General Attractiveness, Pressure: Family, Pressure: Peers, Pressure: Important Others, and Pressure: Media. In Turkish validity and reliability studies of the scale, factor analysis confirmed the presence of the same three subscales within the internalization dimension. The pressure dimension showed three subscales instead of four, with "Family" and "Media" remaining separate, while "Peers" and "Important Others" combined into a single factor, subsequently named the "Pressure: Peers/Important Others" subscale (25).

## Social Comparison Through Physical Appearance Scale

The Social Comparison through Physical Appearance Scale (SCPAS) (9) evaluates how individuals view themselves as social entities based on physical appearance. This scale evaluates social comparisons with peers and models, featuring two categories: comparisons with close targets (friends, colleagues, and other acquaintances) and comparisons with far targets (models, actresses, and other celebrities). Comparisons with close targets are divided into two sub-dimensions: "Attractiveness/Rank" and "Group Fit." Lower scores in either sub-dimension indicate more negative social comparisons. In Turkish validity and reliability studies of the scale, the Attractiveness/Rank sub-dimension included five items, and the Group Fit sub-dimension included three items. The Far Targets dimension comprised 12 items. Cronbach's alpha coefficients were 0.89 for Attractiveness/Rank, 0.87 for Group Fit, and 0.96 for Far Targets (26).

#### Eating Disorder Examination Questionnaire

The concurrent validity of the Eating Disorder Examination Questionnaire (EDE-Q) has been investigated in both general and clinical populations (27). The scale includes subscales that reflect different aspects of ED psychopathology: 1. Restraint (questions 1, 2, 3, 4, and 5), 2. Eating Concerns (questions 7, 9, 19, 20, and 21), 3. Shape Concerns (questions 6, 8, 10, 11, 23, 26, 27, and 28), and 4. Weight Concerns (questions 8, 12, 22, 24, and 25). A total score can be computed with the option to score each subscale separately. Turkish validity and reliability studies of the scale have shown that the test-retest reliability coefficient for the EDE-Q overall is r=0.91, and the internal consistency Cronbach's alpha coefficient is r=0.93 (28).

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Variables	Patient group (n=79) Mean±SD	Control group (n=72) Mean±SD	р
Age	23.32±6.27	23.26±5.37	0.956
Years of education	14.27±2.93	14.89±2.78	0.184
BMI	20.24±5.48	21.47±4.14	0.124
SATAQ-4R - Internalization: Thin/low fat	15.16±4.07	8.33±2.98	<0.001**
SATAQ-4R - Internalization: Muscular	13.30±5.65	10.64±3.84	0.006*
SATAQ-4R - Internalization: General attractiveness	26.36±3.86	21.97±3.48	<0.001**
SATAQ-4R - Pressure: Family	10.01±5.05	6.97±3.37	<0.001**
SATAQ-4R - Pressure: Peers/important others	14.78±6.26	9.63±4.25	<0.001**
SATAQ-4R - Pressure: Media	13.21±5.27	9.71±4.87	<0.001**
SCPAS - Attractiveness/Rank	24.42±10.12	29.13±7.89	0.002*
SCPAS - Group fit	14.90±7.52	19.17±6.49	<0.001**
SCPAS - Model	37.07±17.13	48.32±15.34	<0.001**
EDE-Q - Shape concerns	4.19±1.54	1.02±0.89	<0.001**
EDE-Q - Weight concerns	3.57±1.70	0.77±0.80	<0.001**

Table 1: Comparison of characteristics and subscale scores between patient and control groups

SD: Standard Deviation; BMI: Body Mass Index; SATAQ-4R: Sociocultural Attitudes Towards Appearance Questionnaire-4 Revised; EDE-Q: Eating Disorder Examination Questionnaire; SCPAS: Social Comparison through Physical Appearance Scale; Mann-Whitney U test; \*: p<0.01; \*\*: p<0.001.

#### **Statistical Analysis**

All statistical analyses were conducted using IBM's Statistical Package for the Social Sciences (SPSS) version 25.0 (SPSS Inc., Chicago, Illinois, USA). An a priori power analysis was performed with G\*Power software (version 3.1.9.7), specifying an effect size of 0.15, an alpha value of 0.05, and aiming for a power of 0.8. The results indicated that 44 participants were required for each group. Continuous variables were presented as mean±standard deviation (SD) in the tables, while nominal variables were shown as number (N) and percentage (%). Comparisons between groups were conducted using Mann-Whitney U and Kruskall-Wallis tests for continuous variables. Associations between continuous variables were assessed using Pearson Correlation Test. Linear regression analyses employing the enter method were used to identify significant predictors of outcome variables. Statistical significance was established at p<0.05.

#### RESULTS

#### **Sample Characteristics**

No significant differences were observed between the patient and control groups regarding age, years of education, or BMI (Table 1). Of the 79 patients, 41 (51.9%) were diagnosed with AN, 31 (39.2%) with BN, and 7 (8.9%) with BED. The majority of the patients (83%) came from middle to upper-middle-income backgrounds (57% and 26%, respectively).

## Comparisons of Mean Subscale Scores Between the Groups

Patients scored higher than controls on several subscales of the SATAQ-4R. Patients recorded higher scores on the Internalization: Thin/Low Fat (p<0.001), Internalization: Muscular (p=0.006), and Internalization: General Attractiveness (p<0.001) subscales, reflecting more frequent and intense internalized attitudes towards these aspects. Similarly, patients reported higher scores on the Pressure: Family (p<0.001), Pressure: Peers/Important Others (p<0.001), and Pressure: Media (p<0.001) subscales, indicating that they perceived greater pressure from family, peers, important others, and media compared to controls.

In the SCPAS, patients scored significantly lower than controls on Attractiveness/Rank (p=0.002), Group Fit (p<0.001), and in comparisons with Far Targets (p<0.001).

Regarding the EDE-Q, patients exhibited significantly higher scores in Shape Concerns (p<0.001) and Weight Concerns (p<0.001) compared to controls.

#### **Correlation Analyses**

Correlations between scores on the SATAQ-4R and EDE-Q subscales for both patient and control groups are detailed in Table 2.

Spearman correlation coefficients were calculated to assess the relationships between

Predicting variables	EDE-Q - Shape Concerns patient group/control group	EDE-Q - Weight Concerns patient group/control group
Dieting status of mother	0.095/0.094	0.148/0.030
Dieting status of father	0.137/0.017	0.224/0.064
SATAQ-4R - Internalization: Thin/low fat	0.549***/0.289*	0.490***/0.342**
SATAQ-4R - Internalization: Muscular	0.014/0.042	0.079/-0.110
SATAQ-4R - Internalization: General attractiveness	0.394***/0.419***	0.339**/0.346**
SATAQ-4R - Pressure: Family	0.171/ <b>0.241</b> *	0.245*/0.394***
SATAQ-4R - Pressure: Peers/important others	0.096/0.206	0.160/ <b>0.275</b> *
SATAQ-4R - Pressure: Media	0.261*/0.282*	0.158/0.192
SCPAS - Attractiveness	-0.168/-0.055	-0.252/-0.178
SCPAS - Group fit	-0.189/0.026	-0.208/-0.018
SCPAS - Far targets	-0.217/-0.194	<b>-0.253</b> */-0.212

## Table 2: Correlations of predicting variables with EDE-Q - Shape Concerns and EDE-Q - Weight Concerns in patient and control groups

EDE-Q: Eating Disorder Examination Questionnaire; SATAQ-4R: Sociocultural Attitudes Towards Appearance Questionnaire-4 Revised; SCPAS: Social Comparison through Physical Appearance Scale; Spearman correlation coefficients; \*: p<0.05; \*\*: p<0.01; \*\*\*: p<0.001.

Table 3: Significant predictors of EDE-Q - Shape Concerns in patient and control groups according to linear regression	
analyses	

	В	Std. error	Beta	t	р	95% CI	
					-	Lower	Upper
Significant predictors in the patient group							
SATAQ-4R - Internalization: Thin/low fat	0.219	0.042	0.593	5.230	<0.001***	0.135	0.303
R=0.72, R <sup>2</sup> =0. 52, F=3.739, p<0.001							
Significant predictors in the control group							
SATAQ-4R - Internalization: Thin/low fat	0.072	0.034	0.242	2.112	0.039	0.004	0.141
SATAQ-4R - Pressure: Family	0.097	0.032	0.368	3.063	0.003**	0.034	0.161
R=0.69, R <sup>2</sup> =0.48, F=3.127, p=0.001							

EDE-Q: Eating Disorder Examination Questionnaire; SATAQ-4R: Sociocultural Attitudes Towards Appearance Questionnaire-4 Revised. \*: p<0.05; \*\*: p<0.001.

predictors (SATAQ-4R and its subtests; SCPAS and its subdimensions; dieting status of mother; dieting status of father) and outcomes (EDE-Q - Shape Concerns and EDE-Q - Weight Concerns) in both patient and control groups. As detailed in Table 2, correlations for SATAQ-4R - Internalization: Thin/ Low Fat were significant. However, correlations for the dieting statuses of mothers and fathers, SCPAS -Attractiveness, SCPAS - Group Fit, SCPAS - Far Targets (except for p<0.05 with EDE-Q - Weight Concerns) were not significant. The significance levels and/or strengths of the correlations were observed to be higher in the patient group, with the exception of the dieting status of mothers with EDE-Q - Shape Concerns, which showed equivalent significance across both patient and control groups. Conversely, a distinct pattern emerged for the SATAQ-4R - Pressure: Family, and SATAQ-4R - Pressure: Peers/Important

Others subdimensions, where the strengths and/or significances of the coefficient values were greater for the control group. Similar results were observed in other analyses across both groups.

#### **Regression Analyses of Each Group**

To identify significant predictors of shape and weight concerns within the patient and control groups, four separate linear regression analyses using the enter method were conducted. The predictors included age, years of education, dieting status of fathers, dieting status of mothers, concerns of mothers about their appearances, concerns of fathers about their appearances, and all subscales of SATAQ-4R and SCPAS. The outcomes were scores on EDE-Q - Shape Concerns and EDE-Q - Weight Concerns, respectively. Findings related to the significant predictors are summarized in Tables 3 and 4.

	В	Std. error	Beta	t	р	95%	6 CI
						Lower	Upper
Significant predictors in the patient group							
Dieting status of mother	0.676	0.270	0.340	2.506	0.015*	0.135	1.216
SATAQ-4R - Internalization: Thin/low fat	0.231	0.050	0.541	4.604	<0.001***	0.131	0.332
SCPAS - Attractiveness	-0.075	0.031	-0.469	-2.429	0.019*	-0.137	-0.013
Model summary: R=0.70, R <sup>2</sup> =0.49, F=3.255, p=0.001							
Significant predictors in the control group							
Dieting status of father	-0.402	0.178	-0.300	-2.261	0.028*	-0.758	-0.045
SATAQ-4R - Internalization: Thin/low fat	0.059	0.028	0.219	2.084	0.042*	0.002	0.116
SATAQ-4R - Internalization: General attractiveness	0.066	0.029	0.282	2.281	0.026*	0.008	0.124
SATAQ-4R - Pressure: Family	0.093	0.026	0.386	3.549	0.001**	0.041	0.146
Model summary: R=0.75, R <sup>2</sup> =0.56, F=4.334, p<0.001							

Table 4: Significant predictors of EDE-Q - Weight Concerns in patient and control groups according to linear regression analyses

EDE-Q: Eating Disorder Examination Questionnaire; SATAQ-4R: Sociocultural Attitudes Towards Appearance Questionnaire-4 Revised. \*: p<0.05; \*\*: p<0.001.

As detailed in Table 3, the only significant predictor of EDE-Q - Shape Concerns for the patient group was SATAQ-4R-Internalization: Thin/Low Fat scores (p<0.001). For the control group, while SATAQ-4R - Internalization: Thin/Low Fat (p<0.05) was also a significant predictor, shape concerns were further influenced by SATAQ-4R -Pressure: Family subscale scores.

Regarding EDE-Q - Weight Concerns, the significant predictors were the same as those for shape concerns in both groups. However, in the patient group, additional variance in weight concerns was significantly explained by the dieting status of the mother and SCPAS - Attractiveness scores. In the control group, the dieting status of the father, and SATAQ-4R - Internalization: General Attractiveness scores also significantly contributed to explaining additional variance in weight concerns.

## DISCUSSION

This study, which included a sample of women with eating disorders and healthy controls revealed several key findings:

- Patients exhibited higher scores on sociocultural factors related to appearance and more negative scores on measures of appearance-related social comparison.
- In both groups, internalization of a thin ideal was a predictor of both shape and weight concerns.
- 3. Shape concerns were influenced by family pressure in the control group but not in the patient group.
- Weight concerns in both groups were predicted by the dieting status of a parent—fathers in the control group and mothers in the patient group.

5. Social comparisons related to attractiveness were significant predictors of weight concerns in the patient group but not in the control group.

Some variables in our study were explored across various cultural populations. However, there have been controversial findings that do not indicate any culture-specific patterns. Results from a cross-cultural study (23) examining perceived pressures from different sources within cultures showed that media pressure was most prominent in Australia, while appearance pressure from family was the strongest in Iran. Indians experienced the most pressure about appearance from their family and peers, while the Chinese reported similar levels of pressure from family, peers, and media. Direct relationships between sociocultural influences and body satisfaction revealed that family pressure was not significant in the Australian sample, media pressure was directly associated with body satisfaction in both the Chinese and Indian samples, and peer pressure was directly associated with body satisfaction in the Iranian sample (23). In another study involving Australian and French samples, only peer influence was directly associated with body dissatisfaction in both samples (7). In a study from Hungary, no direct relationships were identified between sociocultural influences and body dissatisfaction among girls (20).

Our findings that patients, compared to controls, registered higher scores on sociocultural factors related to appearance and more negative social comparisons align with our initial hypothesis. These results are consistent with studies showing that patients with BN perceived more pressure to be thin from family, peers, partners, and the media than controls (17) and that individuals with EDs reported higher negative social comparisons than healthy controls (29).

Relationships between thin-ideal internalization and body image have been well-studied. A meta-analysis of studies focusing on non-clinical populations confirmed that internalization of a thin ideal is related to body image disturbance (30). Additional meta-analyses and recent studies support the direct relationship between thin-ideal internalization and body dissatisfaction (31, 32), consistent with our results.

Parental attitudes have also been shown to impact body image concerns among adolescents and young adults (33). In our study, we noted that in healthy individuals—but not in those with eating disorders family pressures related to sociocultural norms were predictive of concerns regarding body shape and weight. Clinical observations suggest that parental pressures related to shape or weight are also common among patients with eating disorders. For instance, Fairburn et al. (34, 35) reported that parental teasing more than doubled the risk of AN and increased the risk of BN by more than six times compared to healthy controls. However, the risk assessments in these studies were based on the prevalence of parental teasing or pressures regarding appearance or weight across different groups, and the studies did not aim to analyze the predictive relationship between parental attitudes and concerns about shape and weight. Consequently, their methodology does not allow for comparable findings regarding the role of family pressure as a predictive factor for shape and weight concerns among women with EDs.

Nevertheless, we examined the predictive effects of parental dieting status, among other factors, discovering that its impact varies by group and outcome variable, as well as by parental gender. Specifically, the dieting status of mothers significantly predicted weight concerns in the patient group, whereas fathers' dieting status was predictive in the control group. Fairburn et al. (34, 35) also identified parental dieting as a significant risk factor for both AN and BN compared to healthy controls, although their findings did not specify the effects based on parental gender. The influence of parental behaviors, including dieting, internalizing a thin ideal, and weight control behaviors has been extensively studied, and documented in the literature (36-38). While one study found no effect of maternal dieting on girls' weight control behaviors (38), a one-year follow-up study indicated that mothers attempting to lose weight led to consistent dieting in girls and weight concerns in boys, though not in girls; fathers' weight loss behaviors were not examined in this study (37). These findings contrast with our observations regarding maternal dieting and daughters' weight concerns. However, they align with a 10-year follow-up study where mothers' dieting was associated with an increased drive for thinness in female participants. Additionally, a 20-year follow-up study (39) involving a cohort of 539 late adolescents found that both maternal and paternal dieting were significant risk factors for a drive for thinness. However, these studies did not specifically examine the relationships between parental dieting and weight concerns, were conducted with community samples rather than clinical ones, and included only adolescent participants (36, 39). The discrepancies between these findings and ours can be attributed to methodological differences in the studies, such as cross-sectional versus longitudinal designs, and the inclusion of clinical versus non-clinical populations, as well as adolescent versus adult participants.

In our control group, we observed an unexpected and, to our knowledge, a unique finding: only paternal dieting influenced daughters' weight concerns, which may reflect cultural nuances specific to our Turkish population. Given the patriarchal nature of Turkish family structures, it is plausible that paternal behaviors exert a stronger influence on healthy women in Turkiye compared to those in European cultures. However, the findings in our patient group were the opposite. For women with EDs, maternal dieting behavior was more than paternal dieting. Although it has been theorized that maternal dieting behavior predicts body image distortion in daughters, we observed a paternal dieting effect in the control group. To our knowledge, the specific relationship between parental dieting and daughters' body image has not been extensively studied in any ED sample. Additionally, we noted that parental behavior related to weight predominantly predicted weight concerns rather than shape concerns in these groups. To investigate how paternal and maternal dieting affects daughters' body image concerns, future follow-up studies can be designed to compare the effects of parental gender on girls who develop EDs and those who do not.

Other research suggests that social comparisons related to physical appearance are correlated with body image concerns (11–13). Specifically, the correlation between social comparison and body image distortion has been confirmed, particularly among women with body dissatisfaction (14). We also discovered that appearance-related social comparison predicted weight concerns, but this was

only evident in the patient group, which exhibited significantly higher weight and shape concerns compared to the control group. This finding suggests that appearance-related social comparisons may have a more pronounced predictive effect on women with body image concerns.

Our study has several limitations. The crosssectional design prevents us from drawing causal conclusions. Additionally, heterogeneity in the patient group in terms of diagnosis, severity, and treatment stages may have affected the findings. We also did not control for the presence of co-occurring depression, anxiety, self-esteem issues, personality disorders, and childhood sexual abuse, all of which can influence body image. Moreover, our findings are representative only of the female population. Including a male sample would have allowed us to explore the potential gender differences in the relationship between sociocultural predictors and concerns about body shape and weight.

## CONCLUSION

This study demonstrated differences between healthy women and female patients with active EDs concerning sociocultural predictors of body image. Research on sociocultural predictors of body image is not limited to just healthy individuals or those with body dissatisfaction, but also includes individuals with EDs. However, the number of studies specifically investigating sociocultural predictors of body image dimensions in individuals with ED is limited. Additionally, to our knowledge, this is the first study in Turkiye to explore the differences in sociocultural predictors of body image between healthy individuals and patients with active EDs. Future research should investigate sociocultural predictors about specific eating disorders and body image dimensions, while also considering co-occurring disorders and other clinical and cultural factors. Employing prospective study designs could further elucidate the causal relationships between these factors.

Contribution Categories		Author Initials		
	Concept/Design	C.Y., B.Y., O.S.B.		
Category 1	Data acquisition	C.Y., B.Y.		
	Data analysis/Interpretation	C.Y., B.Y., O.S.B., J.Y.		
Catanama 2	Drafting manuscript	C.Y., B.Y., O.S.B., J.Y.		
Category 2	Critical revision of manuscript	B.Y., J.Y.		
Category 3 Final approval and accountability		C.Y., B.Y., O.S.B., J.Y.		
Other	Technical or material support	O.S.B.		
Other	Supervision	B.Y., J.Y.		

**Ethical Approval:** The Istanbul University, Istanbul Faculty of Medicine Clinical Research Ethics Committee granted approval for this study (date: 04.10.2017, number: 1098).

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### REFERENCES

- Cash TF. Body image: Past, present, and future. Body Image 2004; 1:1-5. [CrossRef]
- Striegel-Moore RH, Bulik CM. Risk factors for eating disorders. Am Psychol 2007; 62:181-198. [CrossRef]
- First M, Ward M, editors. Diagnostic and Statistical Manual of Mental Disorders (DSM-5). Fifth ed., Washington, DC: American Psychiatric Publishing, 2013.
- 4. Hrabosky JI, Masheb RM, White MA, Grilo CM. Overvaluation of shape and weight in binge eating disorder. J Consult Clin Psychol 2007; 75:175-180. [CrossRef]
- Legenbauer T, Martin F, Blaschke A, Schwenzfeier A, Blechert J, Schnicker K. Two sides of the same coin? A new instrument to assess body checking and avoidance behaviors in eating disorders. Body Image 2017; 21:39-46. [CrossRef]
- Yamamiya Y, Shroff H, Thompson JK. The tripartite influence model of body image and eating disturbance: A replication with a Japanese sample. Int J Eat Disord 2008; 41:88-91. [CrossRef]
- Rodgers R, Chabrol H, Paxton SJ. An exploration of the tripartite influence model of body dissatisfaction and disordered eating among Australian and French college women. Body Image 2011; 8:208-215. [CrossRef]
- Herbozo S, Stevens SD, Thurston IB. The mediating role of appearance comparisons on the relationship between negative appearance commentary and binge eating symptoms. Eat Behav 2017; 26:155-158. [CrossRef]
- 9. Ferreira C, Pinto-Gouveia J, Duarte C. Physical appearance as a measure of social ranking: The role of a new scale to understand the relationship between weight and dieting. Clin Psychol Psychother 2013; 20:55-66. [CrossRef]
- Major B, Testa M, Bylsma WH. Responses to upward and downward social comparisons: The impact of esteem-relevance and perceived control. In: Suls J, Wills TA (editors). Social Comparison: Contemporary Theory and Research. Hillsdale: Lawrence Erlbaum Associates Inc., 1991, 237-260. [CrossRef]
- 11. Tiggemann M, Miller J. The internet and adolescent girls' weight satisfaction and drive for thinness. Sex Roles 2010; 63:79-90.

- Tiggemann M, Slater A. NetGirls: The internet, facebook, and body image concern in adolescent girls. Int J Eat Disord 2013; 46:630-633. [CrossRef]
- 13. Tiggemann M, Slater A. NetTweens: The internet and body image concerns in preteenage girls. J Early Adolesc 2014; 34:606-620.
- Leahey TM, Crowther JH. An ecological momentary assessment of comparison target as a moderator of the effects of appearancefocused social comparisons. Body Image 2008; 5:307-311.
- Shroff H, Thompson JK. Peer influences, body-image dissatisfaction, eating dysfunction and self-esteem in adolescent girls. J Health Psychol 2006; 11:533-551. [CrossRef]
- Stice E. Review of the evidence for a sociocultural model of bulimia nervosa and an exploration of the mechanisms of action. Clin Psychol Rev 1994; 14:633-661. [CrossRef]
- Stice E, Ziemba C, Margolis J, Flick P. The dual pathway model differentiates bulimics, subclinical bulimics, and controls: Testing the continuity hypothesis. Behav Ther 1996; 27:531-549. [CrossRef]
- Kanakis DM, Thelen MH. Parental variables associated with bulimia nervosa. Addict Behav 1995; 20:491-500. [CrossRef]
- Keery H, van den Berg P, Thompson JK. An evaluation of the tripartite influence model of body dissatisfaction and eating disturbance with adolescent girls. Body Image 2004; 1:237-251.
- Papp I, Urbán R, Czeglédi E, Babusa B, Túry F. Testing the tripartite influence model of body image and eating disturbance among Hungarian adolescents. Body Image 2013; 10:232-242.
- Shahyad S, Pakdaman S, Shokri O, Saadat SH. The role of individual and social variables in predicting body dissatisfaction and eating disorder symptoms among Iranian adolescent girls: An expanding of the tripartite influence mode. Eur J Transl Myol 2018; 28:99-104. [CrossRef]
- Shagar PS, Donovan CL, Loxton N, Boddy J, Harris N. Is thin in everywhere? A cross-cultural comparison of a subsection of tripartite influence model in Australia and Malaysia. Appetite 2019; 134:59-68. [CrossRef]
- 23. Kakar V, Fardouly J, Rapee RM, Guo M, Arman S, Niazi E. Exploring the tripartite influence model of body image and disordered eating among adolescent girls living in Australia, China, India, and Iran. Body Image 2023; 47:101633. [CrossRef]
- Schaefer LM, Burke NL, Thompson JK, Dedrick RF, Heinberg LJ, Calogero RM, et al. Development and validation of the sociocultural attitudes towards appearance questionnaire-4 (SATAQ-4). Psychol Assess 2015; 27:54-67. [CrossRef]
- Cihan B, Bozo O, Schaefer LM, Thompson JK. Psychometric properties of the Sociocultural Attitudes Towards Appearance Questionnaire-4-Revised (SATAQ-4R) in Turkish women. Eat Behav 2016; 21:168-171. [CrossRef]

- Deveci E, Sertel-Berk O, Yucel B. Fiziksel Görünüme Dayalı Sosyal Karşılaştırma Ölçeği (FGDSKÖ): Türkçe geçerlik ve güvenirlik çalışması. 2<sup>nd</sup> Istanbul National Nutrition and Dietetics Congress, Nov. 23-26 2017, 1. [Turkish]
- 27. Fairburn CG, Beglin SJ. Assessment of eating disorders: Interview or self-report questionnaire? Int J Eat Disord 1994; 16:363-370.
- Yucel B, Polat A, Ikiz T, Dusgor BP, Yavuz AE, Berk OS. The Turkish version of the eating disorder examination questionnaire: Reliability and validity in adolescents. Eur Eat Disord Rev 2011; 19:509-511. [CrossRef]
- 29. Troop NA, Allan S, Treasure JL, Katzman M. Social comparison and submissive behaviour in eating disorder patients. Psychol Psychother 2003; 76:237-249. [CrossRef]
- Cafri G, Yamamiya Y, Brannick M, Thompson JK. The influence of sociocultural factors on body image: A meta-analysis. Clin Psychol Sci Pract 2005; 12:421-433. [CrossRef]
- Thompson JK, Stice E. Thin-ideal internalization: Mounting evidence for a new risk factor for body-image disturbance and eating pathology. Curr Dir Psychol Sci 2001; 10:181-183. [CrossRef]
- Vartanian LR, Dey S. Self-concept clarity, thin-ideal internalization, and appearance-related social comparison as predictors of body dissatisfaction. Body Image 2013; 10:495-500. [CrossRef]
- 33. Rodgers R, Chabrol H. Parental attitudes, body image disturbance and disordered eating amongst adolescents and young adults: A review. Eur Eat Disord Rev 2009, 17:137-151. [CrossRef]
- Fairburn CG, Welch SL, Doll HA, Davies BA, O'Connor ME. Risk factors for bulimia nervosa: A community-based case-control study. Arch Gen Psychiatry 1997; 54:509-517. [CrossRef]
- Fairburn CG, Cooper Z, Doll HA, Welch SL. Risk factors for anorexia nervosa: Three integrated case-control comparisons. Arch Gen Psychiatry 1999; 56:468-476. [CrossRef]
- Keel PK, Forney KJ, Brown TA, Heatherton TF. Influence of college peers on disordered eating in women and men at 10-year follow-up. J Abnorm Psychol 2013; 122:105-110. [CrossRef]
- 37. Field AE, Camargo CA, Taylor CB, Berkey CS, Roberts SB, Colditz GA. Peer, parent, and media influences on the development of weight concerns and frequent dieting among preadolescent and adolescent girls and boys. Pediatrics 2001; 107:54-60. [CrossRef]
- Eisenberg ME, Neumark-Sztainer D. Friends' dieting and disordered eating behaviors among adolescents five years later: Findings from project EAT. J Adolesc Heal 2010; 47:67-73.
- Klein KM, Brown TA, Kennedy GA, Keel PK. Examination of parental dieting and comments as risk factors for increased drive for thinness in men and women at 20-year follow-up. Int J Eat Disord 2017; 50:490-497. [CrossRef]