



Comparative Analyses across different BMI groups of Turkish Women: Disordered Eating, Body Appreciation, and Physical Appearance Comparison

Türk Kadınlarında Farklı Beden Kitle İndeksi (BKİ) Grupları Arasında Karşılaştırmalı Analizler: Düzensiz Yeme, Beden Memnuniyeti ve Fiziksel Görünüm Karşılaştırması

Abstract

Aim: This study compared disordered eating, body appreciation, and physical appearance comparison across four BMI groups (underweight, normal weight, overweight, and obese) among Turkish women.

Method: A total of 385 women aged 18 to 65 completed the Eating Disorders Examination Questionnaire (EDE-Q), Body Appreciation Scale (BAS), and Physical Appearance Comparison Scale-Revised (PACS-R).

Data Analyses: One-way ANOVA was used to compare scores among BMI groups, followed by Bonferroni post-hoc tests for significant results ($p < .05$).

Results: The One-Way ANOVA showed significant differences in EDE-Q scores ($F(3, 381) = 22.41, p < .001$), with overweight and obese groups reporting higher symptoms than underweight and normal weight groups. BAS scores also differed significantly ($F(3, 381) = 8.76, p < .001$), with lower body appreciation in the overweight and obese groups. No significant differences were found for PACS-R scores ($F(3, 381) = 2.86, p = .037$).

Conclusion: A higher BMI is linked to increased disordered eating and reduced body appreciation, but physical appearance comparisons do not vary significantly. These findings emphasize the need for interventions addressing weight stigma and promoting body positivity among Turkish women.

Keywords: Body Mass Index, Disordered eating, Body appreciation, Appearance comparison, Group comparisons

Özet

Amaç: Bu çalışma, düzensiz yeme, beden memnuniyeti ve fiziksel görünüm karşılaştırmasını dört BMI grubu (zayıf, normal kilolu, fazla kilolu ve obez) arasındaki Türk kadınları üzerinde karşılaştırmayı amaçlamıştır.

Yöntem: Yaşları 18 ile 65 arasında değişen toplam 385 kadın, Yeme Bozuklukları Değerlendirme Anketi (EDE-Q), Beden Memnuniyeti Ölçeği (BAS) ve Fiziksel Görünüm Karşılaştırma Ölçeği-Revize edilmiş (PACS-R) anketlerini doldurmuştur.

Veri Analizi: BMI grupları arasındaki puanları karşılaştırmak amacıyla Tek Yönlü Varyans Analizi (One-Way ANOVA) kullanılmış ve anlamlı farklar için Bonferroni post-hoc testleri uygulanmıştır ($p < .05$).

Sonuçlar: Tek Yönlü ANOVA, EDE-Q puanlarında anlamlı farklar göstermiştir ($F(3, 381) = 22.41, p < .001$). Şöyle ki, fazla kilolu ve obez grupları, zayıf ve normal kilolu gruplardan daha yüksek semptomlar bildirmişler. BAS puanlarında da anlamlı farklar bulunmuştur ($F(3, 381) = 8.76, p < .001$); fazla kilolu ve obez gruplarda beden memnuniyeti daha düşüktür. PACS-R puanlarında ise anlamlı bir fark bulunmamıştır ($F(3, 381) = 2.86, p = .037$).

Sonuç: Yüksek BMI, daha fazla düzensiz yeme ve daha düşük beden memnuniyeti ile ilişkilidir, ancak fiziksel görünüm karşılaştırması gruplar arasında anlamlı farklılık göstermemektedir. Bu bulgular, Türk kadınları arasında kilo damgalamasını azaltmaya ve beden pozitifliği teşvik etmeye yönelik müdahalelere ihtiyaç olduğunu vurgulamaktadır.

Anahtar kelimeler: Vücut Kitle İndeksi, Düzensiz yeme, Beden memnuniyeti, Görünüm karşılaştırma, Grup karşılaştırmaları

INTRODUCTION

Body Mass Index (BMI) has been a key measure for examining the connections between physical health, psychological well-being, and body image (World Health Organization [WHO], 2000). Recent studies have emphasized the significant influence of BMI on body appreciation, appearance-related behaviors, and the likelihood of developing eating disorders (Neumark-Sztainer et al., 2006; Mond et al., 2004). Higher BMI is

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frequently linked to greater body dissatisfaction, which is aligned with adverse psychological consequences such as low self-esteem, anxiety, and depression (Cash & Smolak, 2011). Conversely, individuals classified as underweight may encounter increased societal reinforcement of thinness but remain vulnerable to body dissatisfaction and disordered eating, particularly when psychological factors like perfectionism are present (Fairburn & Beglin, 1994).

Studies reveal a significant connection between Body Mass Index (BMI) and appearance comparison. Research conducted on 434 college students demonstrated that individuals with higher BMI experienced greater appearance-related stress and dietary restrictions, suggesting that those with elevated BMI are more inclined to engage in appearance comparisons, which can result in adverse psychological effects (Nawaz et al., 2023). Further studies have examined the link between appearance comparison and body appreciation. A research study focusing on adolescents found that appearance comparison negatively affects body appreciation, with the impact being more significant in girls than boys (Zheng et al., 2024). Similar to data revealing a significant relationship between appearance comparison and BMI, a meta-analysis study by He et al., (2020), showed a small and negative association between body appreciation and BMI in males, and a larger negative association in females, indicating that people with higher BMI, are more likely to show lower body appreciation. Additionally, research studies reveal a significant relationship between body appreciation and eating disorder symptoms. A study examining individuals seeking psychological services found that higher levels of body appreciation were associated with lower tendencies toward disordered eating (El Basiouny et al., 2024). Similarly, a study with adolescent girls revealed that higher levels of body appreciation were associated with fewer disordered eating attitudes and behaviors, suggesting that fostering a positive body image may mitigate the risk of developing eating disorders (Marta-Simoes, Tylka & Ferreira, 2021). On the other hand, Symptoms of eating disorders vary across different BMI categories (Mond et al., 2004). Individuals with higher BMI frequently report behaviors such as binge eating and dietary restraint. In contrast, those with lower BMI are more likely to exhibit patterns of restrictive eating and excessive exercise (Fairburn & Beglin, 1994). A study by Boutte, Burnette & Mazzeo, (2022), evidences this finding and reveals how it is connected to body appreciation. In their research with 191 American black women, they found that Body appreciation partially mediates the relationship between BMI and disordered eating behaviors and attitudes. Women who had higher BMIs tended to report lower levels of body appreciation, which, in turn, was linked to increased symptoms of disordered eating.

Integrating these findings, it becomes evident that higher BMI levels are linked to increased appearance comparisons, which in turn negatively affect body appreciation and increase disordered eating behaviors, particularly in women. While evidence shows a significant link between BMI groups and these variables, findings of studies conducted with Turkish women are inconsistent. In a study with 430 Turkish women, the researchers revealed a significant positive relationship between different BMI groups and the Dutch Eating Behaviors Questionnaire scores, suggesting the higher one's BMI is, the more emotional and external eating she exhibits (Tatli & Beyaz, 2022). However, the findings of a study with 531 dieting and nondieting adolescents, revealed that BMI and body image dissatisfaction were not the predictors of frequent dieting (Canpolat et al., 2005). While numerous studies have explored these issues in Western countries, there is a notable gap in the literature regarding how BMI categories- underweight, normal weight, overweight, and obese- relate to disordered eating, body appreciation, and physical appearance comparisons among Turkish women. This study addresses this gap by examining the relationships between BMI and three psychological constructs: disordered eating, body appreciation, and physical appearance comparison.

METHOD

Participants

Participants were 385 Turkish women between the ages of 18-65 years old. All participants were Turkish and were living in different cities in Turkey. The mean age of participants was 26.31 (SD= 10.09). Most of them (44.4%) had bachelor's degrees, were single (75.8%), not employed (70.6%), and had no psychiatric disorder (78.1%). The mean BMI of participants was 23.98 (SD=14.8), which is labeled normal for women.

Measures

Sociodemographic information form

This form consisted of 10 questions aiming to determine the participants' sociodemographic characteristics. The questions evaluated the following areas: age, gender, educational level, relationship status, occupation, income level, city of residence, any psychiatry disorders diagnosis, weight, and height.

Eating Disorders Examination Questionnaire (EDE-Q)

This self-report questionnaire, created by Fairburn and Beglin (1994), assesses the severity and frequency of symptoms of eating disorders. It is divided into four subscales: Restriction, Body Shape Concerns, Eating Concerns, and Weight Concerns, which together contribute to the global score. The global Score serves as a comprehensive indicator of eating disorder psychopathology, offering a single summary score that reflects the severity of symptoms. Responses are scored on a scale from 0 to 6, where 0 represents 'no days' and 6 represents 'every day.' The Turkish adaptation for adults was validated and tested for reliability by Baktiroğlu (2019) using a sample of 716 adults. The scale includes 28 items and has a Cronbach's alpha of 0.74.

Body Appreciation Scale (BAS)

The Body Appreciation Scale (BAS), created by Avalos, Tylka, and Wood-Barcalow (2005), measures positive body image. It comprises 13 items, each rated on a scale from 1 to 5, where 1 means 'never' and 5 means 'always.'. The scale includes one gender-specific item. For women, Item 12 reads: "I do not allow unrealistically thin images of women presented in the media to affect my attitudes toward my body." For men, the equivalent item states: "I do not allow unrealistically masculine images of men presented in the media to affect my attitudes toward my body." The Turkish reliability and validity of the scale were studied by Bakalım and Taşdelen-Karaçay (2016) on a sample of 741 female and male students. Four items were eliminated from the scale, resulting in a final version containing 9 items. The internal consistency coefficient was determined to be .92.

Physical Appearance Comparison Scale-Revised (PACS-R)

PACS-R was validated for reliability and validity by Lauren M. Schaefer in 2014. The PACS-R was developed to measure how frequently an individual compares their physical appearance to others. The questionnaire includes 11 items that assess whether individuals compare body shape, body weight, and body fat with others in social settings like gyms, workplaces, or schools. Participants use a 5-point Likert scale, spanning from 0 ("Never") to 4 ("Always"), to reflect how often they engage in these comparisons. Higher scores reflect a greater frequency of appearance comparisons (Schaefer & Thompson, 2014). In Turkey, Acar (2020) conducted a reliability and validity study of this scale with 110 participants aged 12 to 21. The Cronbach's alpha coefficient for the 11-item version was determined to be 0.914.

Procedure

Following ethical approval from the Dokuz Eylül University Ethics Committee, all 385 participants were asked to respond to an online questionnaire package containing the specified measures. The questionnaires were distributed via a link shared on social media platforms like Facebook, Instagram, WhatsApp, and Telegram. In addition to online sharing, data collection also took place in public settings, including universities, libraries, youth centers, and gyms, where participants could access the study questions through a barcode. All participants took part voluntarily and gave informed consent before participation. Upon completing data collection, 20 respondents were randomly chosen to receive a \$10 cash reward.

Data Analysis

Group comparisons were conducted to examine differences in scores on the Eating Disorders Examination Questionnaire (EDE-Q), Body Appreciation Scale (BAS), and Physical Appearance Comparison Scale (PACS) among four BMI categories (underweight, normal weight, overweight, and obese). Prior to analysis, assumptions of normality and homogeneity of variances were tested. Normality was tested with the Shapiro-Wilk test, while homogeneity of variances was assessed using Levene's test. Assumptions were met for the EDE-Q, BAS, and PACS-R. Therefore, a One-Way ANOVA with Bonferroni post-hoc tests was employed. The significance level was set at $p < .05$ for all analyses.

RESULTS

A One-Way ANOVA with Bonferroni post-hoc tests revealed significant differences in EDE-Q scores across the four BMI groups. The underweight group reported significantly lower EDE-Q scores compared to the normal weight group (Mean Difference = -14.99, $p = .007$), the overweight group (MD = -34.40, $p < .001$), and the obese group (MD = -47.82, $p < .001$). Additionally, the normal weight group had significantly lower EDE-Q scores compared to the overweight group (MD = -19.40, $p < .001$) and the obese group (MD = -32.82, $p < .001$). No significant differences were found between the overweight and obese groups ($p = .295$).

The difference between BAS scores across the BMI groups was also significant. The underweight group reported significantly higher body appreciation scores compared to the overweight group (MD = 6.19, $p = .002$) and the

obese group (MD = 7.42, $p = .003$). The normal weight group also reported significantly higher BAS scores compared to the overweight group (MD= 5.06, $p = .001$) and the obese group (MD = 6.29, $p = .003$). No significant differences in body appreciation scores were found between the overweight and obese groups ($p = 1.000$).

PACS-R scores across the BMI groups revealed no significant differences. All pairwise comparisons yielded non-significant results, with p -values greater than .05. This suggests that physical appearance comparison scores did not significantly differ across the underweight, normal weight, overweight, and obese groups.

DISCUSSION

This study aimed to compare disordered eating, body appreciation, and physical appearance comparisons across four BMI groups (underweight, normal weight, overweight, and obese) among Turkish women. The findings provide valuable insights into how BMI influences these psychological constructs within a cultural context. The results revealed that disordered eating, as measured by the EDE-Q, was significantly higher in the overweight and obese groups compared to the underweight and normal weight groups. This is consistent with previous research suggesting that higher BMI is associated with increased dietary restraint, shape concerns, and eating-related distress (Mond et al., 2006; Fairburn & Beglin, 1994). These findings may be attributed to the societal stigma surrounding higher body weight, which can lead to internalized weight bias and attempts to control weight through disordered eating behaviors. The elevated EDE-Q scores in the obese group highlight the need for interventions aimed at reducing weight stigma and promoting healthy, non-restrictive eating practices.

Body appreciation scores decreased significantly with increasing BMI. The underweight and normal weight groups reported higher body appreciation compared to the overweight and obese groups. This finding is consistent with research indicating that individuals with a lower BMI are more likely to exhibit positive body image due to societal reinforcement of thinness (Avalos et al., 2005; Tylka & Wood-Barcalow, 2015). In contrast, women in higher BMI categories may face societal pressures and negative body-related feedback, contributing to lower body appreciation. These results underscore the importance of body positivity initiatives and interventions that challenge culturally ingrained beauty standards, especially for women in higher BMI categories.

Interestingly, no significant differences were found between BMI groups in physical appearance comparison scores. This indicates that the tendency to compare one's physical appearance to others is prevalent across all BMI categories. In a social media-driven culture where appearance comparisons are frequent, these behaviors may affect women irrespective of their BMI. This finding supports the notion that appearance comparisons are a universal phenomenon influenced by cultural and societal factors (Fardouly et al., 2015). Interventions promoting media literacy and self-compassion may be beneficial for reducing the negative impact of appearance comparisons.

Cultural context and implications

The findings must be interpreted within the unique cultural context of Turkey, where traditional values intersect with Westernized beauty ideals. Turkish women may experience dual pressures to conform to both cultural expectations and globalized beauty standards. These pressures can exacerbate body dissatisfaction and disordered eating behaviors. Addressing these issues requires culturally sensitive interventions that promote body acceptance, reduce stigma, and foster positive body image.

CONCLUSION

This study highlights significant differences in disordered eating and body appreciation across BMI groups, with higher BMI associated with increased disordered eating and lower body appreciation. Physical appearance comparisons did not differ significantly between BMI groups, suggesting that these behaviors are common regardless of body weight. These findings underscore the need for interventions that address weight stigma, promote body positivity, and reduce the harmful effects of appearance comparisons. By understanding these dynamics, we can better support women in developing healthier relationships with their bodies and improving psychological well-being.

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