THE WEIGHT OF THE GAZE:
BODY MASS INDEX, WEIGHT-BASED BULLYING, AND ANXIETY IN ADULTS: A ROMANIAN CROSS-SECTIONAL STUDY

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Abstract

This study examined the relationships among body mass index (BMI), weight-based bullying, and evaluative anxiety (performance and social) in a sample of Romanian adults (N = 149). Participants were classified into four BMI categories—underweight, normal weight, overweight, and obesity—to explore group differences and predictive patterns. Correlational analyses showed that BMI was unrelated to anxiety but weakly associated with bullying, while weight-based bullying demonstrated moderate positive associations with both anxiety dimensions. Although levels of performance and social anxiety were similar across BMI categories, individuals with obesity reported higher exposure to weight-based bullying than those in other weight groups. Multiple regression analyses showed that bullying, but not BMI, significantly predicted both performance anxiety (21% explained variance) and social anxiety (19% explained variance). These findings suggest that weight-related teasing, rather than weight status itself, plays a central role in shaping evaluative fear. The results align with previous research highlighting the psychological consequences of weight-related stigma and underscore the importance of addressing bullying experiences when considering the mechanisms underlying social and performance anxiety.

Keywords: body mass index, weight-based bullying, social anxiety, performance anxiety, stigma

1. INTRODUCTION

Contemporary society places individuals under increasingly stringent expectations regarding both appearance and performance, creating an environment in which self-worth is often tied to externally imposed standards. A culture dominated by visual comparison, achievement pressures, and digital visibility has amplified these expectations, shaping self-perception in ways that can undermine psychological wellbeing. Research indicates that exposure to idealised images and competitive social contexts is associated with elevated levels of anxiety, dissatisfaction, and emotional distress (Grabe et al., 2008; Saiphoo & Vahedi, 2019). Within this climate, understanding how bodily self-perception interacts with

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interpersonal experiences such as teasing or criticism becomes essential for explaining variations in social–evaluative anxiety.

Body image plays a central role in identity formation, influencing self-esteem, social functioning, and emotional adjustment (Cash & Pruzinsky, 2011; Wood-Barcalow et al., 2010). The pervasive presence of digitally altered photographs, appearance-focused content, and stylised representations of success intensifies discrepancies between individuals' actual bodies and culturally promoted ideals. Such discrepancies often lead to cognitive distortions, heightened self-scrutiny, and maladaptive behavioural patterns including restrictive dieting, avoidance of social situations, or withdrawal from evaluative contexts (van der Berg et al., 2007; Myers & Crowther, 2009). These processes create fertile ground for anxiety, particularly in social or performance situations where individuals anticipate judgement based on appearance or perceived inadequacy.

Within this broader landscape, body mass index (BMI) functions as both an objective indicator of body composition and a psychologically meaningful cue that shapes self-evaluation. Although BMI provides a standardised measure of weight relative to height, individuals' subjective interpretations of their bodies may diverge substantially from objective classifications. Research suggests that people with normative BMI values may still perceive themselves as overweight when exposed to comparison-based environments, increasing vulnerability to body dissatisfaction and anxiety (Swami et al., 2010; Myers & Crowther, 2009). Discrepancies between objective and perceived body size have been shown to predict lower self-esteem and heightened emotional distress, particularly among adolescents and young adults (Cash & Pruzinsky, 2011; Voelker et al., 2015). Thus, BMI is not merely a biomedical construct but interacts with cultural norms and internalised ideals to influence self-concept.

Another key factor in this psychological ecosystem is weight-based bullying, a specific form of peer harassment that targets individuals on the basis of body shape or size. Such experiences have been consistently linked to diminished emotional wellbeing, social withdrawal, and long-term mental health difficulties (Eisenberg et al., 2003). The Weight-Based Teasing Scale, developed within broader research on peer victimisation (Hamburger et al., 2011), captures the frequency and impact of teasing behaviours related to weight. These experiences can intensify feelings of shame, social insecurity, and fear of negative evaluation, potentially acting as precursors to heightened social anxiety. For many individuals, weight-related teasing becomes a chronic stressor that shapes expectations of interpersonal rejection and contributes to avoidance of evaluative contexts.

The interplay between body-related concerns and anxiety is further highlighted in research examining evaluative pressures and social comparison processes. Individuals who perceive themselves as diverging from aesthetic norms often report intensified social apprehension, particularly in situations involving scrutiny or performance (Levinson et al., 2013; Lloyd et al., 2015). These findings are congruent with broader theories of social–evaluative anxiety, which emphasise fear of criticism, embarrassment, or negative judgement as central components of anxious responding (Zeidner, 1998). The Liebowitz Social Anxiety

Scale (Liebowitz, 1987) distinguishes between social anxiety, characterised by discomfort in interpersonal interactions, and performance anxiety, triggered by tasks such as public speaking or professional evaluations. Both forms of anxiety may be exacerbated when individuals internalise appearance-based pressures or experience weight-related victimisation.

Recent studies suggest that digital environments—particularly social media platforms—contribute to intensifying these dynamics by promoting unrealistic aesthetic ideals and fostering environments of constant comparison (Fardouly & Vartanian, 2016; Tiggemann & Slater, 2013). Visual platforms such as Instagram expose users to curated images that elevate unattainable norms of thinness or muscularity, leading to increased body dissatisfaction and feelings of inadequacy (Marengo et al., 2018; Saiphoo & Vahedi, 2019). These emotional responses can, in turn, shape how individuals navigate social interactions, particularly those in which appearance or competence may be scrutinised (Cash & Pruzinsky, 2011; Wood-Barcalow et al., 2010).

Taken together, empirical evidence indicates that BMI, weight-based bullying, and social–evaluative anxiety are closely interconnected within contemporary cultural contexts. Experiences of teasing contribute to negative self-perception and heightened vulnerability to social evaluation (Eisenberg et al., 2003; Voelker et al., 2015), while exposure to idealised standards reinforces body-related concerns and anxiety (Swami et al., 2010; Saiphoo & Vahedi, 2019). Despite these insights, empirical studies examining the combined influence of BMI and weight-based bullying on both social and performance anxiety in adults remain limited. The present study addresses this gap by exploring these associations within a Romanian sample.

2. OBJECTIVE AND HYPOTHESES

2.1. OBJECTIVE

The main objective of this study is to investigate the relationships among body mass index (BMI), weight-based bullying, and anxiety, with a focus on both social and performance-related forms of evaluative fear. Previous research shows that heightened body dissatisfaction and exposure to weight-related victimisation increase individuals' sensitivity to negative social evaluation and performance pressures (Swami et al., 2010; Eisenberg et al., 2003; Levinson et al., 2013; Myers & Crowther, 2009). Given that BMI categories often reflect meaningful differences in how people experience body image concerns and social scrutiny (Voelker et al., 2015), this study aims to examine whether individuals across four BMI groups—underweight, normal weight, overweight, and obesity—differ in their experiences of weight-based bullying and in their levels of social and performance anxiety. Furthermore, the study seeks to determine the extent to which BMI and weight-based bullying together predict these two distinct dimensions of anxiety.

2.2. HYPOTHESES

Body-related experiences are consistently linked to evaluative anxiety: individuals with higher BMI or who have experienced weight-based teasing tend to report greater discomfort in socially or performance-based evaluative contexts (Swami et al., 2010; Eisenberg et al., 2003; Levinson et al., 2013). Based on these findings, we propose the following hypothesis:

H1: Higher BMI and more frequent experiences of weight-based bullying will be positively associated with both social anxiety and performance anxiety.

A growing body of research shows that individuals with higher BMI are more frequently exposed to weight-based teasing and negative social feedback, which in turn increases vulnerability to social-evaluative concerns and anxiety (Eisenberg et al., 2003; Swami et al., 2010; Levinson et al., 2013). Those in overweight or obese categories tend to experience more appearance-related scrutiny and stigma, which amplifies fear of negative evaluation and distress in both social and performance contexts (Myers & Crowther, 2009; Voelker et al., 2015). Given these documented associations, meaningful psychological differences are expected across BMI classifications.

H2: Individuals across BMI categories (underweight, normal weight, overweight, and obese) will differ significantly in their experiences of weight-based bullying and in their levels of social and performance anxiety.

Weight-related victimisation has been identified as a robust predictor of emotional distress, including fear of negative evaluation, social withdrawal, and heightened anxiety (Eisenberg et al., 2003; Puhl & Luedicke (2012). In parallel, discrepancies between actual and ideal body weight amplify self-consciousness and avoidance in evaluative situations (Swami et al., 2010; Levinson et al., 2013). Based on this evidence, we propose:

H3: BMI and weight-based bullying will significantly predict social anxiety and performance anxiety, with bullying expected to be the stronger predictor in both models.

3. METHOD

3.1. PARTICIPANTS

The study included 149 Romanian adults aged between 18 and 64 years ($M = 40.42$, $SD = 10.44$, 74.5% women). Regarding educational attainment, 24.2% had completed high school, 43.0% held a university degree, 29.5% postgraduate qualifications, and 3.4% held a doctoral degree. Employment status indicated that 21.5% were students, while among the remaining respondents, 49.0% were entrepreneurs, 15.4% worked in the private sector, and 14.1% were employed in the public sector.

According to the World Health Organization classification, 15.4% were underweight, 43.0% had a normal weight, 24.8% were overweight, 16.8% met criteria for obesity. A finer differentiation between Obesity Class I (30–34.9), Obesity Class II (35–39.9), and Obesity

Class III (BMI ≥ 40) was not feasible, as the sample did not provide sufficient representation within these subcategories.

Data were collected online using a self-report questionnaire distributed through snowball sampling between March and April 2025, ensuring confidentiality and voluntary participation.

3.2. INSTRUMENTS

Body mass index was calculated, based on participants' self-reported anthropometric data, using the standard formula: BMI = Weight (kg) / height (m)^2.

This procedure is widely recognised for assessing weight status and was used to classify individuals according to the World Health Organization (2020) guidelines: Underweight (BMI < 18.5), Normal weight (BMI 18.5–24.9), Overweight (BMI 25–29.9), Obesity (BMI ≥ 30).

Social and Performance Anxiety was measured using the Liebowitz Social Anxiety Scale (Liebowitz, 1987), a 24-item instrument rated on a 4-point Likert scale (1 = not at all, 4 = severe). The scale assesses two related constructs: Performance Anxiety (13 items, α = .92) and Social Anxiety (11 items, α = .92). The total score provides an overall index of social–evaluative anxiety and demonstrated excellent internal consistency (α = .96).

Weight-based bullying was assessed using the Weight-Based Teasing Scale from the Compendium of Assessment Tools (Eisenberg et al., 2003; Hamburger et al., 2011). The measure includes five items, each rated on a 5-point Likert scale (1 = never, 5 = at least once a month). In the present study, the scale showed good internal consistency (α = .85).

3.3. DATA ANALYSIS

Preliminary inspection of histograms, skewness–kurtosis values, and Shapiro–Wilk tests indicated that several variables deviated from normality; therefore, non-parametric analyses were used where appropriate. To test *H1*, associations among BMI, bullying, and the two anxiety dimensions were examined using Spearman's rho correlations. For *H2*, differences across the four BMI groups were assessed using the Kruskal–Wallis test, followed by Mann–Whitney U post hoc comparisons with adjusted significance thresholds. Finally, *H3* was evaluated through multiple linear regression, as regression models remain sufficiently robust to moderate deviations from normality, with all assumptions (residual distribution, homoscedasticity, and multicollinearity) inspected prior to interpretation.

4. RESULTS

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Descriptive statistics indicated that participants had, on average, a normal-range body mass index (BMI) (*M* = 24.86, *SD* = 5.11). Experiences of weight-based bullying were relatively low to moderate (*M* = 2.10, *SD* = 0.91), while both performance anxiety (*M* = 1.98, *SD* = 0.72) and social anxiety (*M* = 1.90, *SD* = 0.76) fell in the mild-to-moderate range.

Table 1. Means, Standard Deviations, and Spearman Correlations for the Study Variables (N = 149)

Variable	M	SD	1	2	3	4
1. Body mass index (BMI)	24.85	5.11	-			
2. Weight-based bullying	2.10	.91	.173*	-		
3. Performance anxiety	1.98	.72	-.005	.412**	-	
4. Social anxiety	1.90	.76	.078	.431**	.825**	-

*. Correlation is significant at the 0.05 level (2-tailed), **. Correlation is significant at the 0.01 level (2-tailed).

Spearman's rho correlations (Table 1) showed that BMI was weakly but significantly associated with bullying (r_s = .17, $p < .05$), yet unrelated to either performance anxiety (r_s = –.01, $p = .953$) or social anxiety (r_s = .08, $p = .344$). In contrast, weight-based bullying demonstrated moderate positive associations with both performance anxiety (r_s = .41, $p < .001$) and social anxiety (r_s = .43, $p < .001$), indicating that individuals who experienced more teasing reported higher levels of evaluative fear. As expected, performance anxiety and social anxiety were strongly intercorrelated (r_s = .83, $p < .001$), reflecting substantial conceptual overlap between the two anxiety domains.

Differences across the four BMI groups in performance anxiety, social anxiety, and weight-based bullying (see Table 2). The results indicated no significant group differences for performance anxiety, $\chi^2(3) = 0.22$, $p = .975$, with mean ranks ranging narrowly from 72.76 (obesity) to 78.00 (underweight), suggesting comparable levels of performance-related anxiety across weight categories. Similarly, social anxiety did not differ significantly across BMI groups, $\chi^2(3) = 0.93$, $p = .817$; mean ranks were again closely distributed, 71.41 for normal weight, 75.00 for obesity, 78.00 for underweight, and 79.35 for overweight, indicating that BMI was not systematically associated with interpersonal evaluative anxiety. The effect sizes for both anxiety variables were negligible ($\eta^2 = .000$), reinforcing the absence of meaningful group differences.

In contrast, the analysis revealed a significant effect of BMI group on weight-based bullying, $\chi^2(3) = 12.28$, p = .006. Examination of mean ranks showed that participants in the obesity group reported substantially higher levels of weight-related teasing (mean rank = 101.44) compared with those who were underweight (74.13), overweight (73.03), or within the normal-weight range (66.13). The effect size ($\eta^2 = .063$) fell within the small-to-medium range, indicating a meaningful association between BMI category and experiences of victimisation. This pattern is consistent with documented evidence that individuals with higher body weight are more vulnerable to stigmatising or discriminatory social treatment.

Table 2. Means, standard deviations, and Kruskal–Wallis results with effect sizes across BMI groups (N=149)

Variable	Underweight (N=23)		Normal weight (N=64)		Overweight (N=37)		Obese (N=25)		χ^2	p	η^2
	M	SD	M	SD	M	SD	M	SD			
1 WBB	2.07	.93	1.89	.73	2.07	.96	2.68	1.03	12.28	.006	.063

2	PANX	.28	.16	.27	.14	.26	.15	.27	.16	.22	.975	.000
3	SANX	.26	.17	.23	.17	.26	.17	.24	.16	.93	.817	.000

Note: N = 149, WBB = Weight-based bullying, PANX = Performance anxiety, SANX = Social anxiety, Effect sizes (η^2) follow Cohen's thresholds (0.01 = small, 0.06 = medium, 0.14 = large); the medium WBB effect in bold (η^2 = .063).

These findings offer partial support for *H2*. BMI was unrelated to both forms of anxiety, performance and social, yet was significantly associated with weight-based bullying, particularly among individuals classified as obese. This suggests that while BMI may not directly shape evaluative anxiety, it is linked to differential interpersonal experiences that may carry psychological consequences. Building on these group-level differences, the next section examines whether BMI and bullying jointly predict anxiety outcomes at the individual level.

Table 3a. Multiple regression predicting performance anxiety from BMI and weight-based bullying
(N = 149)

Model	Predictor	β	t	p	95% CI		R	R²	Δ R²	F_change
					LLCI	ULCI				
1	WBB	.46	6.31	<.001	.250	.478				
							.46	.21	.21	39.82**

Note: *p < .05, **p < .001, WBB = Weight-based bullying

Table 3b. Multiple regression predicting social anxiety from BMI and weight-based bullying
(N = 149)

Model	Predictor	β	t	p	95% CI		R	R²	Δ R²	F_change
					LLCI	ULCI				
1	WBB	.43	5.77	<.001	.237	.484				
							.43	.19	.19	33.31**

Note: *p < .05, **p < .001, WBB = Weight-based bullying

Because BMI did not correlate significantly with performance or social anxiety, it was excluded from the predictive models. Regression analyses therefore examined weight-based bullying as the sole predictor of the two anxiety dimensions. The results are presented in Tables 3a and 3b.

For performance anxiety, the regression model was statistically significant, $F(1, 147) = 39.82$, $p < .001$, with weight-based bullying explaining approximately 21% of the variance ($R = .46$, R² = .21). The standardised coefficient indicated a positive association ($\beta = .46$, t = 6.31, $p < .001$), and the 95% confidence interval [.250, .478] confirmed the robustness of this effect. These results suggest that participants reporting more frequent experiences of weight-related teasing also tended to report higher levels of performance-related anxiety.

A similar pattern emerged for social anxiety. The regression model was again significant, $F(1, 147) = 33.31$, $p < .001$, with weight-based bullying accounting for 19% of the variance ($R = .43$, R² = .19). The predictor showed a substantial positive association ($\beta = .43$, t

= 5.77, *p* < .001), with a 95% confidence interval ranging from .237 to .484. As with performance anxiety, individuals who experienced more frequent teasing related to body weight reported heightened anxiety in social-evaluative contexts.

Together, these findings indicate that weight-based bullying functions as a meaningful psychological correlate of both performance and social anxiety. Although BMI itself showed no predictive contribution, experiences of weight-related teasing were consistently associated with elevated evaluative concerns, underscoring the psychological impact of weight-based social stigma.

5. DISCUSSIONS AND CONCLUSIONS

The present study examined how BMI and weight-based bullying relate to evaluative anxiety, addressing gaps in the existing literature by jointly considering objective body indicators and interpersonal experiences of teasing. Consistent with previous work showing that cultural appearance pressures undermine psychological wellbeing (Grabe et al., 2008; Saiphoo & Vahedi, 2019), our findings highlight the relevance of social feedback—rather than body weight per se—in shaping individuals' anxiety responses. Although BMI is often assumed to influence emotional functioning, the current data suggest that objective weight status plays a limited role when examined alongside interpersonal experiences that directly target the body.

The data pointed consistently to a positive link between weight-based bullying and both forms of anxiety. This pattern aligns with evidence that teasing undermines emotional security, heightens social vigilance, and contributes to expectations of negative evaluation (Eisenberg et al., 2003; Voelker et al., 2015). These interpersonal experiences appear to function as chronic stressors that extend beyond momentary discomfort, influencing how individuals approach social interactions and performance demands. By contrast, BMI showed no meaningful association with either anxiety dimension, reinforcing observations that subjective interpretation and social treatment matter more for emotional outcomes than weight itself (Swami et al., 2010; Myers & Crowther, 2009). Together, these results support a growing perspective that the psychological consequences traditionally attributed to "high BMI" may in fact reflect exposure to stigma rather than weight as an isolated construct.

Group comparisons across BMI categories further emphasised this distinction. Individuals in the obesity category reported significantly more frequent bullying, mirroring longstanding evidence that higher-weight individuals are disproportionately targeted for appearance-related criticism (Hamburger et al., 2011; Eisenberg et al., 2003). Yet despite this increased exposure to stigma, levels of social and performance anxiety did not differ significantly across BMI groups. This suggests that evaluative anxiety is not an automatic outcome of higher weight but becomes salient primarily when weight is met with teasing, judgement, or social exclusion. From a theoretical standpoint, these findings are consistent with models emphasising the role of social comparison, perceived deviation from aesthetic norms,

and internalised appearance pressures in the development of anxiety (Levinson et al., 2013; Wood-Barcalow et al., 2010).

Regression analyses reinforced this interpretation by showing that bullying—rather than BMI—accounted for a meaningful proportion of the variance in both anxiety dimensions. These results underscore the psychological impact of weight-related stigma and support the idea that interpersonal experiences play a central role in evaluative fear. Such findings resonate with broader research showing that exposure to idealised standards and critical feedback can heighten emotional distress, shape expectations of judgement, and drive avoidance behaviours (Cash & Pruzinsky, 2011; Tiggemann & Slater, 2013).

Several limitations should be noted. The cross-sectional design prevents conclusions about causality, and deviations from normality required reliance on non-parametric tests for group differences. Moreover, the distribution of BMI did not allow for finer analysis across obesity subclasses, limiting the nuance of weight-related comparisons. Finally, all measures were self-reported and collected online, which may introduce bias. Future studies would benefit from longitudinal approaches, diversified samples, and multimethod assessment to more precisely capture the mechanisms linking body-related experiences and anxiety.

In conclusion, the present findings show that weight-based bullying is a more powerful correlate of evaluative anxiety than BMI itself. This distinction highlights the psychological cost of weight-related stigma and suggests that interventions aimed at reducing teasing and appearance-based judgement may be more effective for promoting emotional wellbeing than approaches focusing narrowly on weight. Understanding how individuals internalise social messages about appearance remains critical for addressing the broader cultural forces that shape anxiety in contemporary society.

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