


## Body Dissatisfaction and Somatic Complaints: The Mediating Role of Self-Criticism

Ali. Aghaziarati<sup>1\*</sup> 

<sup>1</sup> Department of Psychology and Counseling, KMAN Research Institute, Richmond Hill, Ontario, Canada

\* Corresponding author email address: ali\_aghaziarati@edu.ui.ac.ir

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### ABSTRACT

This study aimed to investigate whether self-criticism mediates the relationship between body dissatisfaction and somatic complaints in adolescents. A descriptive correlational research design was employed with a sample of 413 high school students from Georgia, selected based on the Morgan and Krejcie sample size determination table. Participants completed three standardized self-report instruments: the Body Shape Questionnaire-16 (BSQ-16) for body dissatisfaction, the Levels of Self-Criticism Scale (LOSC) for self-criticism, and the Children's Somatization Inventory (CSI-24) for somatic complaints. Data were analyzed using SPSS-27 for descriptive statistics and Pearson correlation coefficients, and AMOS-21 for Structural Equation Modeling (SEM) to assess model fit and test the hypothesized mediation model. Descriptive results showed moderate to high levels of body dissatisfaction ( $M = 56.74$ ,  $SD = 11.29$ ), self-criticism ( $M = 89.63$ ,  $SD = 13.57$ ), and somatic complaints ( $M = 38.12$ ,  $SD = 8.41$ ). Pearson correlations indicated significant positive associations between body dissatisfaction and self-criticism ( $r = .48$ ,  $p < .001$ ), body dissatisfaction and somatic complaints ( $r = .44$ ,  $p < .001$ ), and self-criticism and somatic complaints ( $r = .52$ ,  $p < .001$ ). The SEM model demonstrated good fit indices ( $\chi^2/df = 1.75$ ,  $CFI = 0.96$ ,  $RMSEA = 0.042$ ). Path analysis revealed a significant direct effect of body dissatisfaction on somatic complaints ( $\beta = .25$ ,  $p < .001$ ), a significant indirect effect via self-criticism ( $\beta = .20$ ,  $p < .001$ ), and a total effect of  $\beta = .45$  ( $p < .001$ ), supporting partial mediation. The findings highlight self-criticism as a significant cognitive mechanism through which body dissatisfaction contributes to somatic complaints in adolescents. Interventions aimed at reducing self-critical thought patterns may help mitigate the negative physical and psychological effects of body dissatisfaction in youth.

**Keywords:** Body dissatisfaction, Self-criticism, Somatic complaints, Adolescents.

## 1. Introduction

Body dissatisfaction has emerged as a salient psychological concern among adolescents and young adults, marked by negative evaluations of one's body and appearance. This dissatisfaction is not merely a superficial concern but has been consistently linked to a host of mental and physical health outcomes, including anxiety, depression, disordered eating, and somatic symptoms (Cruz-Sáez et al., 2018; Hashmi et al., 2022; Wang, 2025). Given the rising societal emphasis on physical appearance, particularly among youth, understanding the pathways through which body dissatisfaction affects health is vital. One such pathway involves self-critical thinking, a maladaptive cognitive style in which individuals harshly judge themselves and attribute perceived flaws to personal inadequacies (Geller et al., 2024; Momeñe et al., 2022). Notably, self-criticism may act as a psychological bridge linking negative body image to physical manifestations of distress, such as somatic complaints.

Somatic complaints—bodily symptoms with no identifiable medical origin, such as headaches, stomach pain, or fatigue—are frequently reported by adolescents and often co-occur with psychological distress (Bugge et al., 2017; Denovan et al., 2018). Research suggests that somatic symptoms may be psychosomatic responses to internal conflicts, negative emotional states, and unresolved cognitive distress (Akram & Irvine, 2020; Ballester et al., 2022). In particular, the internalization of body dissatisfaction may trigger self-critical thoughts, which in turn manifest physically as somatic complaints. This chain of influence highlights the need to examine self-criticism as a potential mediating variable that might explain how dissatisfaction with one's body contributes to physical discomfort and health complaints.

Body dissatisfaction is a multidimensional construct shaped by sociocultural, psychological, and biological factors. Sociocultural pressures—including media representations, peer norms, and cultural standards—play a substantial role in shaping individuals' body image ideals (Pattamarruk et al., 2020; Yang et al., 2020). Adolescents, in particular, are highly susceptible to these influences, often comparing themselves to unrealistic ideals portrayed in social media and popular culture. Studies have demonstrated that frequent engagement in appearance-based comparisons and internalization of idealized body types are directly associated with increased levels of body dissatisfaction and lower self-esteem (Awad et al., 2020; Türk et al., 2021).

These negative perceptions not only erode psychological resilience but also increase vulnerability to self-criticism and psychological distress.

Moreover, body dissatisfaction does not occur in isolation but is frequently accompanied by other psychological maladaptations, including perfectionism, self-objectification, and low self-worth (Cai et al., 2021; Hashmi et al., 2022). These factors may intensify the likelihood of developing self-critical thought patterns. In a longitudinal context, adolescents who demonstrate high levels of body dissatisfaction are more likely to internalize self-deprecating beliefs over time, which then influence their emotional responses and behavior (Jimin et al., 2022; Mo & Bai, 2022). Importantly, these self-critical beliefs may exacerbate physical symptom reporting through heightened stress reactivity, disrupted sleep, and attentional biases toward bodily sensations (Akram & Irvine, 2020; Geller et al., 2024). Thus, the interplay between body dissatisfaction and self-criticism has profound implications not only for mental health but also for physical well-being.

Self-criticism, as a cognitive-affective construct, encompasses both the tendency to evaluate oneself harshly and the inability to derive a sense of worth from achievements (Ballester et al., 2022; Momeñe et al., 2022). Research indicates that individuals with higher levels of self-criticism experience greater emotional reactivity, lower self-compassion, and increased psychological distress when confronted with failures or social evaluations (Bahri-Ammari et al., 2021; Türk et al., 2021). In the context of body dissatisfaction, self-criticism becomes particularly salient as individuals attribute bodily imperfections to personal flaws and moral failings. This perspective not only magnifies perceived appearance discrepancies but also strengthens the link between body dissatisfaction and broader psychosomatic distress.

Notably, the mediating role of self-criticism in the relationship between body image and health has been explored in emerging literature. For example, Momeñe et al. (2022) found that self-criticism mediated the relationship between childhood trauma and body dissatisfaction among young adult women, suggesting that early adverse experiences may shape maladaptive self-evaluative processes that later impact body image perceptions (Momeñe et al., 2022). Similarly, Geller et al. (2024) reported that self-criticism and body image concerns jointly contributed to psychological distress in individuals with irritable bowel syndrome, highlighting the physiological implications of cognitive-affective vulnerability (Geller et

al., 2024). These findings underscore the relevance of examining self-criticism not as a mere correlate, but as a central mechanism driving the relationship between subjective body experiences and physical health outcomes.

Somatic symptoms in adolescents are often dismissed as minor or unimportant, yet they can significantly disrupt academic performance, social relationships, and overall quality of life (Bugge et al., 2017; Denovan et al., 2018). When experienced alongside cognitive-emotional factors such as self-criticism and body dissatisfaction, somatic symptoms may represent a maladaptive coping mechanism or a form of psychological escape. For example, studies have shown that adolescents who struggle with body-related concerns may experience heightened physiological stress, sleep disturbances, and attentional biases toward internal bodily sensations (Akram & Irvine, 2020; Wang, 2025). These disruptions often translate into real somatic complaints, further entrenching negative self-perceptions and limiting emotional regulation capacity.

Furthermore, recent research suggests that sociocultural variables, such as classroom context and peer influences, may exacerbate body dissatisfaction and psychological complaints (Saminathan et al., 2023). In collective environments where appearance-related standards are reinforced—whether explicitly or implicitly—adolescents may internalize negative evaluations of their bodies, contributing to a feedback loop of self-criticism, emotional suppression, and physical symptomatology (Li et al., 2023; Zhao et al., 2023). The classroom context is particularly crucial as it represents a social arena where comparison and social ranking are routine. When adolescents perceive themselves as falling short in these evaluations, they may adopt harsh self-critical narratives that have cascading effects on emotional and physical well-being.

Gender and cultural context also play a moderating role in the associations between body dissatisfaction, self-criticism, and somatic symptoms. In many cultural settings, gender-specific beauty ideals place disproportionate pressure on females, making them more vulnerable to body dissatisfaction and internalizing disorders (Awad et al., 2020; Morken et al., 2018). However, recent studies also highlight the growing prevalence of these concerns among males, particularly in relation to muscularity and physical stature (Cai et al., 2021; Mo & Bai, 2022). Regardless of gender, the adoption of self-critical perspectives in response to body image discrepancies appears to be a key pathway through which psychological distress manifests physically. Cross-cultural research is therefore essential to deepen our

understanding of how these constructs interact across diverse populations.

Additionally, the influence of emotional factors such as anxiety, self-esteem, and emotional regulation has been acknowledged in the relationship between body dissatisfaction and psychological distress (Ballester et al., 2022; Cruz-Sáez et al., 2018; Hashmi et al., 2022). These emotional variables not only serve as potential moderators but may also operate as alternative mediators. For instance, studies have shown that lower self-esteem and heightened anxiety can strengthen the relationship between body dissatisfaction and both self-critical thoughts and somatic complaints (Huangfu et al., 2024; Jimin et al., 2022). While the current study focuses on self-criticism as the primary mediating factor, future research may benefit from integrating emotional variables into more comprehensive models.

The theoretical framework guiding this study aligns with cognitive-behavioral and psychosomatic models that posit internal cognitions—especially negative self-appraisals—as central to understanding both psychological and somatic outcomes. According to these models, body dissatisfaction serves as a stressor that activates maladaptive cognitive scripts such as self-criticism, which then elicit physiological stress responses that manifest in bodily complaints (Ballester et al., 2022; Denovan et al., 2018). Thus, the proposed mediation model not only offers a psychological explanation for the emergence of somatic symptoms but also supports integrated approaches to adolescent health that address both cognitive and physical domains. In light of the above, the present study aims to investigate the mediating role of self-criticism in the relationship between body dissatisfaction and somatic complaints among adolescents.

## 2. Methods and Materials

### 2.1. Study Design and Participants

This study employed a descriptive correlational design to investigate the relationship between body dissatisfaction, self-criticism, and somatic complaints among adolescents. The target population consisted of high school students from various urban and rural schools across Georgia. Using the Morgan and Krejcie (1970) sample size determination table, a total of 413 participants were selected through stratified random sampling to ensure representation across gender and grade levels. Inclusion criteria required participants to be between the ages of 14 and 18, currently enrolled in secondary education, and willing to provide informed

consent. All participants completed the research instruments anonymously during school hours under the supervision of trained research assistants. Ethical approval was obtained prior to data collection, and participation was entirely voluntary.

## 2.2. Measures

### 2.2.1. Somatic Complaints

To assess somatic complaints, the Children's Somatization Inventory (CSI-24) developed by Walker, Garber, and Greene (1991) was used. Although originally developed for children, the 24-item version has been validated in adolescent and young adult populations as well. This self-report instrument evaluates the frequency of common somatic symptoms such as headaches, stomachaches, fatigue, and dizziness experienced over the past two weeks. Respondents rate each symptom on a 5-point Likert scale ranging from 0 (not at all) to 4 (a whole lot), with higher scores indicating greater somatic complaints. The CSI-24 provides a total somatization score and does not include distinct subscales. Previous research has supported the scale's high internal consistency (Cronbach's  $\alpha > 0.85$ ) and good convergent validity with related health measures, confirming its utility in both clinical and non-clinical populations (Denovan et al., 2018; Seiffge-Krenke et al., 2021; Seiffge-Krenke & Sattel, 2024).

### 2.2.2. Self-Criticism

Self-criticism was measured using the Levels of Self-Criticism Scale (LOSC) developed by Thompson and Zuroff (2004). This 22-item self-report questionnaire captures two distinct dimensions of self-criticism: comparative self-criticism (CSC), which reflects concerns about being inferior to others, and internalized self-criticism (ISC), which pertains to self-directed feelings of failure and inadequacy. Respondents indicate their agreement with each statement using a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Subscale scores are derived for both CSC and ISC, and a total score can also be computed to reflect general self-critical tendencies. The LOSC has demonstrated excellent psychometric properties, with studies reporting strong internal consistency (Cronbach's  $\alpha$  ranging from 0.82 to 0.88) and robust validity through correlations with depressive symptoms and maladaptive perfectionism (Mohamadi & Jabalameli, 2024; Pour Panjeh & Tabatabaenejad, 2023; Sekowski et al., 2022).

### 2.2.3. Body Dissatisfaction

The Body Shape Questionnaire-16 (BSQ-16), a shortened version of the original tool developed by Cooper, Taylor, Cooper, and Fairburn (1987), was used to assess body dissatisfaction. The BSQ-16 consists of 16 items that measure concerns about body shape, fear of weight gain, and distress related to physical appearance. Participants rate how often they have experienced each concern over the past four weeks on a 6-point Likert scale ranging from 1 (never) to 6 (always), with higher scores reflecting greater body dissatisfaction. The BSQ-16 yields a single total score without subscales. It has been widely validated across different age and gender groups, showing high internal consistency (Cronbach's  $\alpha > 0.90$ ) and good test-retest reliability, as well as strong construct and convergent validity with other measures of body image disturbance and eating pathology (Intan & Dhani, 2025; Saeed et al., 2025; Silva, 2025; Wang, 2025).

## 2.3. Data Analysis

Data were analyzed using both descriptive and inferential statistical methods. Initial data screening and assumption testing were conducted to ensure normality, linearity, and absence of multicollinearity. Pearson correlation coefficients were calculated using SPSS version 27 to examine the bivariate relationships between somatic complaints (dependent variable) and the two independent variables—body dissatisfaction and self-criticism. To further explore the hypothesized mediating role of self-criticism in the relationship between body dissatisfaction and somatic complaints, Structural Equation Modeling (SEM) was conducted using AMOS version 21. Model fit was assessed through standard indices including the Chi-square statistic, Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), and Tucker-Lewis Index (TLI). Statistical significance was set at  $p < .05$  for all analyses.

## 3. Findings and Results

The sample consisted of 413 adolescents from Georgia, including 223 females (53.99%) and 190 males (46.01%). Participants ranged in age from 14 to 18 years, with the largest age group being 16-year-olds ( $n = 124$ , 30.02%), followed by 17-year-olds ( $n = 102$ , 24.70%), 15-year-olds ( $n = 97$ , 23.49%), 18-year-olds ( $n = 52$ , 12.59%), and 14-year-olds ( $n = 38$ , 9.20%). In terms of educational level, 149

participants (36.08%) were in the 10th grade, 132 (31.96%) in the 11th grade, 89 (21.55%) in the 12th grade, and 43 (10.41%) in the 9th grade. The majority of participants were

from urban areas (n = 265, 64.17%), while the remaining 148 (35.83%) were from rural settings.

**Table 1**

*Descriptive Statistics for Study Variables (N = 413)*

Variable	Mean (M)	Standard Deviation (SD)
Body Dissatisfaction	56.74	11.29
Self-Criticism	89.63	13.57
Somatic Complaints	38.12	8.41

Body dissatisfaction had a mean of 56.74 (SD = 11.29), indicating a moderately high level of dissatisfaction among participants. The mean score for self-criticism was 89.63 (SD = 13.57), and the mean for somatic complaints was 38.12 (SD = 8.41), suggesting that somatic symptoms were relatively prevalent in the sample (Table 1).

Prior to conducting inferential analyses, key statistical assumptions were examined and met. Normality of the variables was assessed using skewness and kurtosis values, all of which fell within the acceptable range of -2 to +2. For somatic complaints, the skewness was 0.47 and kurtosis was

-0.51; for body dissatisfaction, skewness was 0.32 and kurtosis was -0.38; and for self-criticism, skewness was 0.56 and kurtosis was 0.12. Linearity was evaluated through scatterplots, which indicated linear relationships among the variables. Multicollinearity was also assessed using Variance Inflation Factor (VIF), with all values well below the cutoff of 5 (VIF for body dissatisfaction = 1.38; VIF for self-criticism = 1.42), confirming the absence of multicollinearity. Thus, the data met the assumptions for conducting Pearson correlation and SEM analyses.

**Table 2**

*Correlation Matrix With Pearson Coefficients and Significance Levels*

Variable	1	2	3
1. Body Dissatisfaction	—		
2. Self-Criticism	.48** (p < .001)	—	
3. Somatic Complaints	.44** (p < .001)	.52** (p < .001)	—

There was a significant positive correlation between body dissatisfaction and self-criticism (r = .48, p < .001), as well as between body dissatisfaction and somatic complaints (r =

.44, p < .001). Self-criticism was also significantly associated with somatic complaints (r = .52, p < .001), supporting the initial hypotheses (Table 2).

**Table 3**

*Fit Indices for the Structural Model*

Fit Index	Value	Recommended Threshold
$\chi^2$	129.47	—
df	74	—
$\chi^2/df$	1.75	< 3.00
GFI	0.95	≥ 0.90
AGFI	0.91	≥ 0.90
CFI	0.96	≥ 0.90
TLI	0.94	≥ 0.90
RMSEA	0.042	≤ 0.08

The model demonstrated a good fit with the data:  $\chi^2(74) = 129.47$ , p < .001;  $\chi^2/df = 1.75$ ; GFI = 0.95; AGFI = 0.91; CFI = 0.96; TLI = 0.94; RMSEA = 0.042. All indices met or

exceeded the recommended thresholds, indicating a well-fitting structural model (Table 3).



**Table 4**

*Total, Direct, and Indirect Effects Among Variables in the Structural Model*

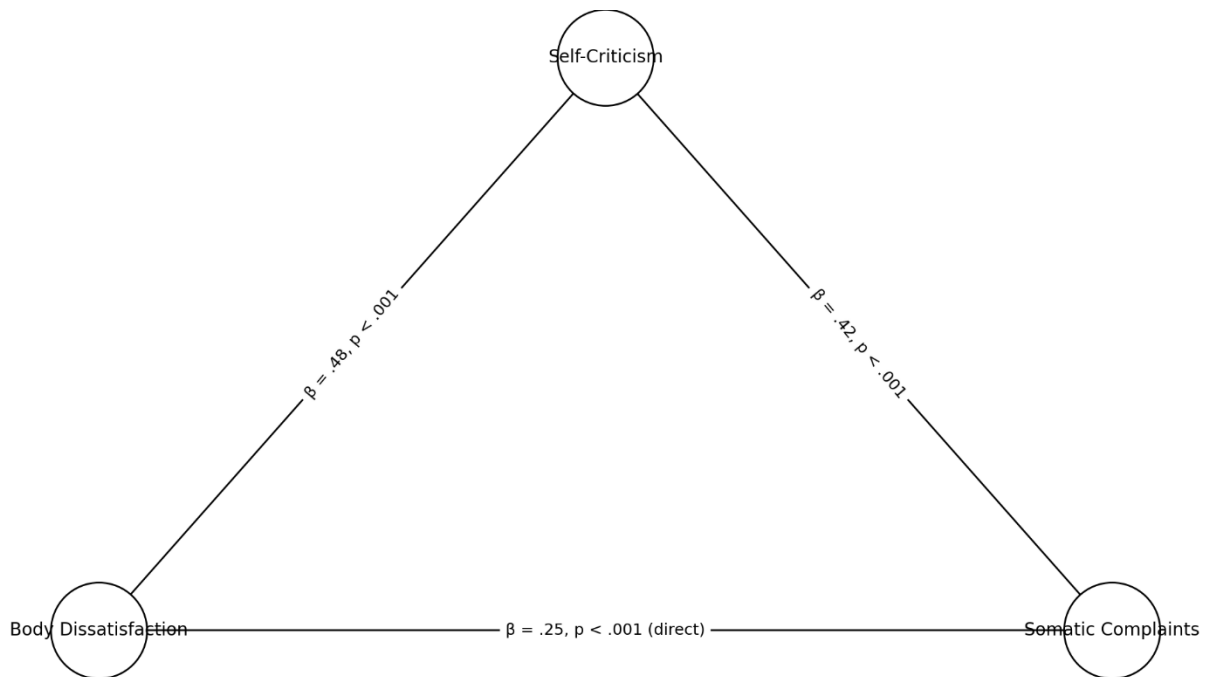
Path	b	S.E	Beta	p
Body Dissatisfaction → Self-Criticism	0.52	0.07	.48	< .001
Self-Criticism → Somatic Complaints	0.39	0.06	.42	< .001
Body Dissatisfaction → Somatic Complaints (Direct)	0.21	0.05	.25	< .001
Body Dissatisfaction → Somatic Complaints (Indirect via Self-Criticism)	0.20	0.04	.20	< .001
Body Dissatisfaction → Somatic Complaints (Total)	0.41	0.06	.45	< .001

The direct effect of body dissatisfaction on somatic complaints was significant ( $b = 0.21, p < .001$ ), as was the indirect effect via self-criticism ( $b = 0.20, p < .001$ ). The

total effect ( $b = 0.41, p < .001$ ) confirms that self-criticism partially mediates the relationship between body dissatisfaction and somatic complaints (Table 4).

**Figure 1**

*Model with Beta Coefficients*



**4. Discussion and Conclusion**

The present study aimed to explore the relationship between body dissatisfaction and somatic complaints among adolescents, with self-criticism examined as a mediating variable. The findings confirmed the hypothesized model: body dissatisfaction was positively correlated with somatic complaints, and self-criticism significantly mediated this relationship. Pearson correlation analyses revealed significant positive associations between body dissatisfaction and somatic complaints, and between self-criticism and both variables. Structural Equation Modeling supported the proposed mediation model, indicating that

adolescents with higher levels of body dissatisfaction were more likely to experience self-critical thoughts, which in turn contributed to increased somatic complaints. These results underscore the importance of cognitive-affective factors in translating body image concerns into physical symptoms.

The observed relationship between body dissatisfaction and somatic complaints aligns with prior research indicating that negative body image is not only a psychological concern but also a predictor of physical health complaints (Bugge et al., 2017; Denovan et al., 2018). Adolescents dissatisfied with their appearance may experience chronic stress,

disrupted sleep, and emotional suppression, which can manifest physically as fatigue, headaches, or gastrointestinal issues (Akram & Irvine, 2020; Geller et al., 2024). Importantly, this study extends those findings by identifying self-criticism as a key psychological mechanism underlying this somatic expression. This supports the growing body of literature suggesting that maladaptive cognitive styles serve as mediators between psychological vulnerability and physical health outcomes (Ballester et al., 2022; Momeñe et al., 2022).

The mediating role of self-criticism is consistent with theoretical frameworks that conceptualize it as a central cognitive-affective process that exacerbates distress across various domains. Prior studies have shown that self-criticism can magnify the psychological burden of body dissatisfaction, contributing to depressive symptoms, anxiety, and self-harm tendencies (Hashmi et al., 2022; Türk et al., 2021). In the context of this study, self-criticism appears to internalize dissatisfaction, reinforcing negative beliefs about the self and increasing physiological stress responses that contribute to somatic symptoms. This aligns with Momeñe et al. (2022), who demonstrated that self-criticism mediated the relationship between childhood trauma and body image concerns, suggesting that self-critical thinking may act as a transdiagnostic process linking early vulnerabilities to later somatic and emotional disturbances (Momeñe et al., 2022).

Our findings also resonate with recent evidence from clinical populations. For example, Geller et al. (2024) found that among individuals with irritable bowel syndrome, body image dissatisfaction and self-criticism jointly contributed to elevated psychological distress and symptom severity (Geller et al., 2024). Similarly, Akram and Irvine (2020) noted that dissatisfaction with one's facial appearance and cutaneous body image predicted insomnia symptoms through the mediating influence of depression, illustrating how negative self-evaluation leads to tangible physiological outcomes (Akram & Irvine, 2020). Though our sample was drawn from a non-clinical adolescent population, the similarity in findings suggests that these mechanisms may operate across different age groups and symptom severities.

Furthermore, the results reinforce the importance of social and cultural influences on body dissatisfaction. Adolescents in today's media-saturated environment are increasingly exposed to idealized body standards, which shape their body image through comparison and internalization (Pattamarruk et al., 2020; Yang et al., 2020). When individuals perceive themselves as failing to meet

these ideals, they may develop self-critical attitudes, which in turn generate distress and somatic symptomatology. This cycle has been observed across cultural settings. For instance, studies conducted in Asian populations have highlighted the influence of appearance comparison and internalization on binge eating, anxiety, and self-objectification (Cai et al., 2021; Jimin et al., 2022; Li et al., 2023). These findings suggest that the link between body dissatisfaction, self-criticism, and somatic complaints may be culturally robust and globally relevant.

Additionally, the role of educational and peer contexts cannot be ignored. Saminathen et al. (2023) emphasized that classroom environments play a significant role in shaping body image and psychological complaints, especially when appearance becomes a dominant social currency among adolescents (Saminathen et al., 2023). In such contexts, adolescents who experience body dissatisfaction may internalize negative peer feedback or engage in frequent comparison, further fueling self-critical beliefs. These beliefs not only impair emotional regulation but also heighten awareness of bodily sensations, leading to increased somatic complaints. Similarly, Zhao et al. (2023) demonstrated that body image dissatisfaction predicted academic disengagement through the mediating roles of social anxiety and unmet psychological needs, pointing to the broader impact of body image on psychosocial adjustment (Zhao et al., 2023).

The findings of this study are also consistent with those of Wang (2025), who used structural equation modeling to demonstrate that body dissatisfaction was directly related to increased rumination and restrained eating, both of which contributed to poor psychological functioning and reduced physical well-being (Wang, 2025). Likewise, Ballester et al. (2022) found that emotional intelligence influenced psychological problems via self-critical emotional processes such as guilt and shame, adding further support to the conceptualization of self-criticism as a mediator (Ballester et al., 2022). Taken together, these findings suggest a transdiagnostic model where body dissatisfaction triggers negative self-referential thinking, which in turn manifests through both psychological distress and physical symptoms.

Moreover, studies focusing on adolescent populations provide additional insight into the complex interplay between body dissatisfaction and emotional functioning. For instance, Morken et al. (2018) demonstrated that girls with higher body dissatisfaction reported significantly more depressive symptoms, and that the availability of social support acted as a protective buffer (Morken et al., 2018).

Although the current study did not examine moderating variables, these findings suggest that interventions aimed at reducing self-criticism and promoting emotional resilience could reduce somatic complaints by interrupting this maladaptive chain. Similarly, Huangfu et al. (2024) showed that among adolescents with polycystic ovary syndrome, self-compassion and self-esteem mediated the relationship between body dissatisfaction and depression, reinforcing the idea that self-critical and self-evaluative processes are key targets for intervention (Huangfu et al., 2024).

In sum, the current study contributes to a growing literature that emphasizes the psychological mechanisms linking body image concerns to physical health outcomes. By identifying self-criticism as a mediator between body dissatisfaction and somatic complaints, this study highlights the need for multidimensional interventions that address both cognitive and somatic aspects of adolescent well-being. The findings are relevant not only for researchers interested in psychosomatic functioning but also for clinicians, educators, and public health practitioners aiming to reduce the negative impact of appearance-related concerns in youth populations.

Despite its contributions, this study is not without limitations. First, the cross-sectional design precludes any firm conclusions about causal relationships between variables. While the proposed mediation model was statistically supported, longitudinal data are needed to determine whether body dissatisfaction temporally precedes self-criticism and somatic complaints. Second, the use of self-report measures may introduce bias due to social desirability or inaccurate introspection. Participants may have underreported sensitive symptoms or exaggerated concerns based on current mood states. Third, while the study focused on adolescents from Georgia, cultural and contextual differences limit the generalizability of the findings to other populations. It is possible that body image ideals and cognitive-emotional styles differ across cultures in ways not captured by this sample. Lastly, the model did not include potentially relevant moderating or mediating variables such as social support, emotional regulation, or perfectionism, which may influence the observed relationships.

Future research should employ longitudinal or experimental designs to better understand the temporal sequencing and potential causal pathways between body dissatisfaction, self-criticism, and somatic complaints. Longitudinal designs would help clarify whether early body dissatisfaction fosters self-critical thinking over time and

whether these cognitive styles predict increases in somatic symptoms. In addition, future studies should explore the role of moderating variables such as gender, media exposure, and peer influence, which may shape the strength of these associations. Research should also consider multi-method approaches, incorporating physiological measures (e.g., cortisol, sleep tracking) or qualitative interviews to triangulate findings from self-report instruments. Finally, expanding this line of inquiry to diverse cultural and clinical populations would help determine the universality or specificity of these mechanisms across contexts and subgroups.

In practice, the findings of this study suggest that interventions targeting adolescent health should incorporate strategies to reduce self-criticism and challenge unrealistic body ideals. School-based programs can promote body positivity and media literacy to help students resist harmful appearance comparisons. Mental health practitioners working with adolescents should assess for self-critical cognitive patterns, particularly among those presenting with physical complaints and body image concerns. Cognitive-behavioral strategies that foster self-compassion, reframe negative beliefs, and build emotional resilience may help mitigate the impact of body dissatisfaction on somatic health. Additionally, collaboration between educators, parents, and healthcare providers is essential to create supportive environments that buffer adolescents from the psychosocial risks associated with negative body image and harsh self-evaluation.

### Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

### Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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### Declaration of Interest

The author report no conflict of interest.



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## Ethics Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

## References

- Akram, U., & Irvine, K. (2020). Depression Mediates Cutaneous Body Image and Facial Appearance Dissatisfaction in Insomnia. *Sleep and Biological Rhythms*, 18(2), 137-142. <https://doi.org/10.1007/s41105-020-00254-0>
- Awad, G. H., Kashubeck-West, S., Bledman, R. A., Coker, A. D., Stinson, R. D., & Mintz, L. B. (2020). The Role of Enculturation, Racial Identity, and Body Mass Index in the Prediction of Body Dissatisfaction in African American Women. *Journal of Black Psychology*, 46(1), 3-28. <https://doi.org/10.1177/0095798420904273>
- Bahri-Ammari, N., Hsouna, A., Benabdallah, M., Yousaf, A., & Mishra, A. (2021). Consumer Responses to the Failure of Self-Service Banking Technology: Moderating Role of Failure Stability. *The International Journal of Bank Marketing*, 40(3), 458-483. <https://doi.org/10.1108/ijbm-05-2021-0192>
- Ballester, A. M. J., Barrera, U. d. l., Schoeps, K., & Montoya-Castilla, I. (2022). Emotional Factors That Mediate the Relationship Between Emotional Intelligence and Psychological Problems in Emerging Adults. *Behavioral Psychology/Psicología Conductual*, 30(1), 249-267. <https://doi.org/10.51668/bp.8322113n>
- Bugge, I., Dyb, G., Stensland, S. Ø., Ekeberg, Ø., Wentzel-Larsen, T., & Diseth, T. H. (2017). Physical Injury and Somatic Complaints: The Mediating Role of Posttraumatic Stress Symptoms in Young Survivors of a Terror Attack. *Journal of Traumatic Stress*, 30(3), 229-236. <https://doi.org/10.1002/jts.22191>
- Cai, Z., Gui, Y., Wang, D., Yang, H., Mao, P., & Wang, Z. (2021). Body Image Dissatisfaction and Impulse Buying: A Moderated Mediation Model. *Frontiers in psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.653559>
- Cruz-Sáez, S., Pascual, A., Włodarczyk, A., & Echeburúa, E. (2018). The Effect of Body Dissatisfaction on Disordered Eating: The Mediating Role of Self-Esteem and Negative Affect in Male and Female Adolescents. *Journal of Health Psychology*, 25(8), 1098-1108. <https://doi.org/10.1177/1359105317748734>
- Denovan, A., Dagnall, N., & Lofthouse, G. (2018). Neuroticism and Somatic Complaints: Concomitant Effects of Rumination and Worry. *Behavioural and Cognitive Psychotherapy*, 47(4), 431-445. <https://doi.org/10.1017/s1352465818000619>
- Geller, S., Levy, S., & Avitsur, R. (2024). Psychological Distress in Individuals With Irritable Bowel Syndrome: The Roles of Body Image and Self-Criticism. *Health Psychology and Behavioral Medicine*, 12(1). <https://doi.org/10.1080/21642850.2024.2334466>
- Hashmi, Z. S., Ijaz, T., & Ijaz, S. (2022). Perfectionistic Self-Presentation and Body Dissatisfaction: The Role of Anxiety and Depression. *Pakistan Journal of Psychological Research*, 37(4), 515-532. <https://doi.org/10.33824/pjpr.2022.37.4.31>
- Huangfu, H., Li, L., & Shuai, W. (2024). Mediating Effects of Self-Esteem and Self-Compassion on the Relationship Between Body Dissatisfaction and Depression Among Adolescents With Polycystic Ovary Syndrome. *Frontiers in Public Health*, 12. <https://doi.org/10.3389/fpubh.2024.1420532>
- Intan, D. S., & Dhani, D. R. (2025). Hubungan Antara Adiksi Media Sosial Dan Social Comparison Terhadap Kecenderungan Body Dissatisfaction Mahasiswi Pengguna Tiktok. *As-Syar I Jurnal Bimbingan & Konseling Keluarga*, 7(1), 322-329. <https://doi.org/10.47467/as.v7i1.6741>
- Jimin, Y., Su, H., & Li, C. (2022). Effect of Body Dissatisfaction on Binge Eating Behavior of Chinese University Students: A Moderated Mediation Model. *Frontiers in psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.995301>
- Li, C., Lyu, S., Jimin, Y., & Meng, X. (2023). The Effect of Gender in Binge Eating Behavior in Chinese Culture: The Serial Mediation Model of Body Dissatisfaction and Self-Acceptance. *Frontiers in psychology*, 14. <https://doi.org/10.3389/fpsyg.2023.1285272>
- Mo, Q.-z. L., & Bai, B. (2022). Height Dissatisfaction and Loneliness Among Adolescents: The Chain Mediating Role of Social Anxiety and Social Support. *Current Psychology*, 42(31), 27296-27304. <https://doi.org/10.1007/s12144-022-03855-9>
- Mohamadi, M., & Jabalameli, s. (2024). The Effectiveness of Group Schema Therapy on Self-Criticism and Distress Tolerance in Women with Substance-Dependent Spouses. *etiadpajohi*, 17(70), 221-244. <https://doi.org/10.61186/etiadpajohi.17.70.221>
- Momeñe, J., Estévez, A., Griffiths, M. D., Macía, P., Herrero, M., Olave, L., & Díez, I. I. (2022). Childhood Trauma and Body Dissatisfaction Among Young Adult Women: The Mediating Role of Self-Criticism. *Current Psychology*, 42(28), 24837-24844. <https://doi.org/10.1007/s12144-022-03495-z>
- Morken, I. S., Røysamb, E., Nilsen, W., & Karevold, E. (2018). Body Dissatisfaction and Depressive Symptoms on the Threshold to Adolescence: Examining Gender Differences in Depressive Symptoms and the Impact of Social Support. *The Journal of Early Adolescence*, 39(6), 814-838. <https://doi.org/10.1177/0272431618791280>
- Pattamarruk, P., Pisitsungkagarn, K., Jarukasemthawee, S., & Leangsuksant, T. (2020). The Mediating Role of Media Internalization in Body Scrutinization and Body Image Dissatisfaction in Thai Homosexual Male Youth. *The Journal of Social Sciences Research*(64), 446-451. <https://doi.org/10.32861/jssr.64.446.451>
- Pour Panjeh, S., & Tabatabaenejad, S. M. (2023). Effectiveness of Schema Therapy on Quality of Life and Self-Criticism in Women with Suicidal Thoughts: A Semi-Experimental Study. *Rafsanjan University of Medical Sciences Journal*, 21(12), 1267-1282. <https://doi.org/10.52547/jrums.21.12.1267>
- Saeed, M., Afzal, H., Khawar, H., Khan, Z., Idrees, S., & Maqbool, H. S. (2025). Role of Social Media in Comparing Physical Appearance, Body Dissatisfaction and Drive for Thinness. *Bbe*, 14(1), 6-11. <https://doi.org/10.61506/01.00571>
- Saminathen, M. G., Wahlström, J., Låftman, S. B., Modin, B., Rajaleid, K., & Löfstedt, P. (2023). Body Dissatisfaction in the Classroom Context and Adolescent Psychological Complaints. *European journal of public health*, 33(Supplement\_2). <https://doi.org/10.1093/eurpub/ckad160.834>
- Seiffge-Krenke, I., Sattel, H., Cavdar, D., & Öncü, B. (2021). Adolescents' somatic complaints in eight countries: what influence do parental rearing styles have? *European Child & Adolescent Psychiatry*, 30, 1533-1545. <https://doi.org/10.1007/s00787-020-01628-y>

- Seiffge-Krenke, I., & Sattel, H. (2024). How Personality Factors, Coping With Identity-Stress, and Parental Rearing Styles Contribute to the Expression of Somatic Complaints in Emerging Adults in Seven Countries. *Frontiers in Psychiatry*, 15. <https://doi.org/10.3389/fpsy.2024.1257403>
- Sekowski, M., Lengiewicz, I., & Lester, D. (2022). The complex relationships between dependency and self-criticism and suicidal behavior and ideation in early adulthood. *Personality and individual differences*, 198, 111806. <https://doi.org/10.1016/j.paid.2022.111806>
- Silva, T. A. (2025). Mindfulness-Based Eating Solution (MBES) for Body Dissatisfaction and Disordered Eating Attitudes in Nutrition Students During the COVID-19 Pandemic: A Randomised Clinical Trial. *Journal of Human Nutrition and Dietetics*, 38(2). <https://doi.org/10.1111/jhn.70040>
- Türk, F., Kellett, S., & Waller, G. (2021). Determining the Potential Link of Self-Compassion With Eating Pathology and Body Image Among Women: A Longitudinal Mediation Study. *Eating and Weight Disorders - Studies on Anorexia Bulimia and Obesity*, 26(8), 2683-2691. <https://doi.org/10.1007/s40519-021-01144-1>
- Wang, Y. (2025). Exploring the Relations Between Body Dissatisfaction, Rumination, Physical Activity, and Restrained Eating: A Latent Moderated Structural Equation Approach. *Journal of eating disorders*, 13(1). <https://doi.org/10.1186/s40337-025-01229-7>
- Yang, J., Fardouly, J., Wang, Y., & Shi, W. (2020). Selfie-Viewing and Facial Dissatisfaction Among Emerging Adults: A Moderated Mediation Model of Appearance Comparisons and Self-Objectification. *International journal of environmental research and public health*, 17(2), 672. <https://doi.org/10.3390/ijerph17020672>
- Zhao, D., Bai, B., & Bai, C. (2023). Body Image Dissatisfaction and Academic Buoyancy in Adolescents: The Mediating Roles of Social Anxiety and Basic Psychological Needs Satisfaction. *Psychology in the Schools*, 61(3), 832-846. <https://doi.org/10.1002/pits.23085>