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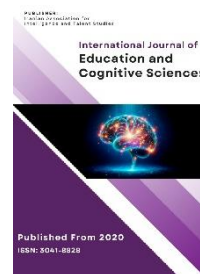
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Structural Equation Modeling of the Relationship of Body Image Concern and Social Anxiety with the Tendency Toward Cosmetic Surgery among Female University Students: The Mediating Role of Engagement with Beauty-Related Social Media Content

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ABSTRACT

Purpose: This study aimed to examine the relationships of body image concern and social anxiety with the tendency toward cosmetic surgery among female university students, with particular emphasis on the mediating role of engagement with beauty-related content on social media.

Methods and Materials: This descriptive-correlational study employed structural equation modeling. The study population consisted of female university students aged 18–25 years, from whom 400 participants were recruited. Data were collected using measures assessing body image concern, social anxiety, engagement with beauty-related social media content, and tendency toward cosmetic surgery. Confirmatory factor analysis was conducted to evaluate the measurement model, and structural equation modeling was used to test the hypothesized direct and indirect relationships among the study variables. Model fit indices were also examined to determine the compatibility of the proposed conceptual model with the empirical data.

Findings: The model fit indices indicated that the proposed structural model had an acceptable fit to the collected data. Body image concern had a positive and statistically significant direct effect on the tendency toward cosmetic surgery ($\beta = 0.241$, $p = 0.001$). Engagement with beauty-related social media content also partially mediated the relationship between body image concern and the tendency toward cosmetic surgery (indirect effect = 0.173, $p = 0.005$). In contrast, social anxiety did not have a statistically significant direct effect on the tendency toward cosmetic surgery ($t = -0.19$, $p = 0.848$). Furthermore, engagement with beauty-related social media content did not significantly mediate the relationship between social anxiety and the tendency toward cosmetic surgery.

Conclusion: Body image concern appears to be an important psychological predictor of female university students' tendency toward cosmetic surgery, both directly and indirectly through greater engagement with beauty-related social media content. Exposure to and involvement with idealized beauty content may reinforce unrealistic appearance standards and intensify dissatisfaction with physical appearance, thereby increasing interest in cosmetic procedures. Preventive interventions should therefore promote critical social media literacy, realistic beauty standards, and a healthier body image among young women.

Keywords: Body Image Concern; Social Anxiety; Cosmetic Surgery Tendency; Beauty-Related Social Media Content; Structural Equation Modeling.

1. Introduction

Cosmetic surgery has become an increasingly visible means of modifying physical appearance and managing dissatisfaction with specific bodily features. Unlike reconstructive procedures, which are primarily performed to restore function or repair congenital, traumatic, or disease-related abnormalities, cosmetic procedures are generally undertaken to alter features that fall within the normal range of appearance. The growing social acceptance of such interventions, together with technological developments, commercial promotion, greater accessibility, and the normalization of appearance modification in popular culture, has contributed to increased consideration of cosmetic surgery among young adults. Although cosmetic procedures may provide psychological benefits for appropriately selected individuals, including improvement in appearance satisfaction and self-confidence, these outcomes are not universal and depend substantially on preoperative motivations, expectations, psychological functioning, and the degree to which appearance concerns are realistic and proportionate (Kam et al., 2022; Sarwer, 2019). Accordingly, the tendency toward cosmetic surgery should not be regarded solely as a medical or aesthetic preference; rather, it is a multidimensional phenomenon shaped by psychological vulnerabilities, interpersonal experiences, sociocultural standards, and media environments.

The decision to undergo cosmetic surgery is particularly important among young women because physical appearance often occupies a central position in social evaluation, identity formation, interpersonal acceptance, and perceived social value. Sociocultural perspectives propose that individuals learn dominant appearance ideals through family, peers, traditional media, advertising, and increasingly through social media. These standards are often narrow, gendered, and difficult to attain, emphasizing youthfulness, thinness, facial symmetry, clear skin, and highly controlled bodily proportions. When these ideals are internalized, people may evaluate their bodies against socially constructed standards rather than functional, diverse, or personally meaningful criteria. Such comparisons can produce dissatisfaction, shame, body surveillance, and a persistent sense that appearance requires correction (Tiggemann, 2011). In this context, cosmetic surgery may be perceived as an instrument for reducing the discrepancy between the actual body and the socially idealized body,

thereby transforming a culturally created concern into an individual medical or aesthetic project.

Body image is a complex psychological construct that includes individuals' perceptions, thoughts, emotions, evaluations, and behaviors concerning their physical appearance. Body image concern extends beyond ordinary dissatisfaction and may involve repetitive appearance checking, concealment of perceived flaws, embarrassment, avoidance, reassurance seeking, and interference with social or academic functioning. Evidence from clinical and nonclinical settings indicates that intense appearance concerns can be associated with considerable psychological distress. For example, fear of bodily deformity has been linked with suicidal ideation among individuals attending skin, hair, and weight clinics, demonstrating that appearance-related distress can have serious emotional consequences (Entezari & Alavizadeh, 2012). Body image concerns may also arise after medically necessary procedures that alter physical appearance, illustrating that changes in the body can influence identity, adjustment, and psychosocial well-being even when surgery is undertaken for health-related reasons (Taylor, 2015). Within cosmetic contexts, however, body concern often precedes intervention and may function as a primary motivational factor.

Research on cosmetic surgery applicants has repeatedly highlighted the importance of negative body image and appearance-focused cognitions. A structural model involving individuals seeking cosmetic procedures demonstrated the relevance of body image concern and obsessive beliefs to body-management behaviors (Mafakhri et al., 2021). Similarly, negative body image and irrational beliefs have been associated with the tendency toward cosmetic surgery among women, with cognitive emotion-regulation processes helping to explain how appearance-related thoughts may be translated into surgical intentions (Khabbazzabet et al., 2022). More recent work has also emphasized the possible contribution of early maladaptive schemas, body dysmorphic symptoms, rumination, and cognitive emotion regulation among cosmetic surgery applicants (Rashidifar & Karami, 2025). These findings suggest that surgical inclination may emerge through a sequence in which negative self-schemas heighten attention to perceived bodily flaws, repetitive thinking intensifies emotional distress, and surgery becomes conceptualized as a solution to a fundamentally psychological discrepancy.

Body image concern may influence cosmetic surgery consideration through both direct and indirect mechanisms. Directly, dissatisfaction may increase the perceived

desirability of altering a disliked feature. Indirectly, body concern may encourage individuals to seek appearance-related information, monitor other people's bodies, follow beauty influencers, photograph themselves repeatedly, or search for surgical transformations. These behaviors can expose users to additional idealized images and reinforce the belief that physical attractiveness is central to success and acceptance. Appearance esteem, weight esteem, and fear of negative appearance evaluation have been shown to be relevant to attitudes toward cosmetic surgery, indicating that individuals' private evaluations of their bodies are closely intertwined with anticipated social judgment (Dunaev et al., 2018). Among men, self-awareness and social influences have similarly predicted body dissatisfaction and acceptance of cosmetic surgery for social reasons, suggesting that the underlying processes are not confined to women, even though women may experience stronger and more persistent sociocultural appearance pressures (Nerini et al., 2023).

The tendency toward cosmetic surgery is also influenced by interpersonal and emotional factors. Social support and interpersonal emotion regulation have been associated with willingness to undergo cosmetic procedures, indicating that appearance decisions may be embedded within individuals' relational environments and methods of managing difficult emotions (Vahid Harandi et al., 2021). Adverse childhood experiences may contribute to more severe or repetitive patterns of cosmetic surgery involvement, potentially through long-term effects on self-worth, affect regulation, attachment, and bodily self-perception (Li et al., 2025). These findings support the view that cosmetic surgery inclination cannot be explained adequately through dissatisfaction alone. For some individuals, the wish to modify appearance may reflect attempts to obtain validation, reduce rejection sensitivity, manage shame, or regulate negative affect. Consequently, investigating psychological and social variables simultaneously is essential for identifying the pathways through which cosmetic surgery attitudes develop.

Social anxiety may be especially relevant in this regard. Social anxiety involves marked fear of being observed, judged, embarrassed, rejected, or negatively evaluated in social situations. It includes cognitive concerns, avoidance behaviors, emotional distress, and physiological arousal. Experimental and psychophysiological research has shown that social anxiety and public-speaking fear are associated with distinctive patterns of fear, distress, and bodily reactivity (Panayiotou et al., 2017). In appearance-focused settings, socially anxious individuals may become

particularly sensitive to how their face, body, clothing, and photographs are evaluated by others. They may interpret ordinary social feedback as negative, exaggerate the importance of perceived flaws, or believe that improved appearance would reduce the risk of rejection. Research has directly examined the association between social anxiety and desire for cosmetic surgery, highlighting the mediating relevance of body image and appearance-based rejection sensitivity (Amirian et al., 2024). This suggests that social anxiety may not necessarily lead to cosmetic surgery consideration in a simple direct manner; instead, its effects may operate through negative body evaluation and heightened concern about appearance-based exclusion.

The relationship between anxiety and surgical motivation is nevertheless likely to differ across procedures and populations. Research on bariatric surgery has demonstrated that anxiety and social influence can be considered alongside motivating and demotivating factors in decisions to undergo major appearance- and health-related interventions (Mousa et al., 2023). Although bariatric and cosmetic surgery have different clinical purposes, both may be shaped by self-evaluation, social reactions, anticipated changes in quality of life, and concern regarding procedural consequences. The psychological meaning of surgery may therefore range from health restoration to identity transformation or perceived social protection. Understanding whether social anxiety independently predicts cosmetic surgery inclination, or whether its influence is explained by body image concern and media engagement, remains important for avoiding overly simplistic interpretations.

Social media has fundamentally altered the conditions under which body image and social evaluation develop. Unlike traditional media, social networking platforms allow users to consume, produce, edit, distribute, and receive immediate feedback on visual content. Appearance is quantified through likes, comments, views, follower counts, shares, and algorithmic visibility. Users are not merely exposed to beauty ideals; they participate in their circulation and may continuously evaluate their own appearance through digital feedback. Specific platform features also shape online emotional disclosure and communication among adolescents and young adults, particularly for individuals with social anxiety (Angelini & Gini, 2024). Because socially anxious users may prefer mediated communication to face-to-face interaction, they may spend substantial time in environments where visual self-presentation is highly salient, potentially increasing exposure to appearance-based comparison.

The visual architecture of platforms such as Instagram, Snapchat, TikTok, and videoconferencing applications may intensify appearance monitoring. Instagram influencers can affect the identity construction of adolescents and young adults by linking attractiveness with lifestyle, popularity, consumption, and personal success (Mañas-Viniegra et al., 2020). Snapchat filters and image-editing features can alter facial proportions, skin appearance, eye size, and other characteristics, potentially shifting users' understanding of what their unedited appearance should resemble. Snapchat use has been associated with self-image and inclination toward cosmetic procedures, demonstrating that platform-specific practices may be related to surgical consideration (Alhusaini et al., 2022). Similarly, taking and posting selfies has been investigated as a factor associated with increased desire for cosmetic surgery, possibly because repeated self-photography encourages detailed facial scrutiny and comparison with edited or idealized images (Shome et al., 2020).

Videoconferencing has introduced another form of sustained self-observation. During online classes, meetings, and conversations, users frequently see their own image for prolonged periods, often under unflattering lighting, camera angles, or technical distortion. This experience may increase appearance concerns, especially among adolescents who are already vulnerable to peer evaluation and body dissatisfaction (Hart et al., 2022). The COVID-19 pandemic expanded reliance on digital communication and altered both social media use and acceptance of cosmetic procedures, thereby increasing scholarly attention to the possibility that intensified self-viewing and online exposure affected aesthetic concerns (Khan et al., 2024). These developments indicate that digital technology does not merely transmit beauty ideals but also creates new practices of self-inspection through front-facing cameras, filters, image editing, and continuous visual feedback.

Empirical research provides substantial evidence that social media exposure is associated with body dissatisfaction. Experimental work has shown that Facebook-based social comparison can negatively affect young women's body image concerns and mood (Fardouly et al., 2015). Social media use, exposure to thin ideals, body dissatisfaction, and disordered eating attitudes have also been linked, demonstrating that appearance-oriented online environments may influence both psychological outcomes and health-related behaviors (Aparicio-Martinez et al., 2019). Experimental research among young adults further suggests that the type of image content viewed and the

psychological constructs activated during exposure are important in determining body dissatisfaction outcomes (Castellanos Silva & Steins, 2023). Therefore, the effects of social media cannot be reduced to total screen time. What users view, whom they follow, how they compare themselves, and how actively they engage with appearance-related content may be more influential than general usage duration.

Beauty-related engagement is a particularly important construct because it captures active participation in appearance-focused digital environments. Such engagement may include following beauty, fashion, celebrity, fitness, and cosmetic surgery accounts; viewing transformation photographs; searching for procedural information; posting edited selfies; monitoring reactions to one's photographs; and assigning high importance to likes and comments. Research testing pathways between engagement with beauty content and cosmetic surgery consideration found that appearance-based social media activity may influence surgical attitudes through mediating psychological mechanisms (Seekis & Barker, 2022). A systematic review similarly concluded that social media exerts meaningful influence on body image and consideration of cosmetic surgery, although the strength and mechanisms of this relationship vary across platforms, populations, and study designs (Mironica et al., 2024). These findings justify examining engagement with beauty content as a distinct mediator rather than treating social media use as a uniform behavior.

TikTok represents a particularly relevant contemporary platform because its algorithm rapidly curates highly personalized streams of short visual content. Beauty tutorials, before-and-after videos, cosmetic procedure diaries, body transformation clips, and user comments can normalize surgical modification and create the impression that cosmetic intervention is common, accessible, and socially rewarded. Research examining TikTok has directly explored its role in body image and acceptance of cosmetic surgery, including the significance of user commentary and interactive engagement (Dajches et al., 2025). Related studies of female social media users have reported that social media platforms can affect attitudes toward facial plastic surgery (Taishan et al., 2024). These patterns indicate that appearance-oriented engagement may operate as a reinforcing loop: users with greater body concern seek more beauty content, exposure strengthens ideal internalization and comparison, and increased dissatisfaction promotes further searching and consideration of cosmetic procedures.

At the same time, not all appearance-related social media content is necessarily harmful. Body-positive content attempts to challenge narrow beauty standards by representing diverse body sizes, skin characteristics, disabilities, gender expressions, and natural appearance variations. Qualitative research on young people's responses to body-positive content suggests that such material can be experienced as validating and supportive, although users may also respond ambivalently or question its authenticity (Rodgers et al., 2023). Thus, the influence of social media depends partly on content characteristics and the interpretive processes of users. Nevertheless, commercial beauty content, influencer culture, cosmetic advertising, and highly edited imagery remain prominent, making it important to distinguish potentially protective content from material that intensifies surveillance and dissatisfaction.

The psychological risks of appearance-focused media are especially salient when ordinary dissatisfaction approaches body dysmorphic symptomatology. Body dysmorphic disorder involves persistent preoccupation with perceived defects that are minor or unobservable to others, accompanied by repetitive behaviors and significant impairment. The relationship among beauty ideals, social media, and body dysmorphic symptoms has become a major concern in aesthetic and dermatological practice (Laughter et al., 2023). Individuals with pronounced dysmorphic concerns may seek repeated cosmetic procedures while remaining dissatisfied because the primary disturbance lies in perception and cognition rather than the objective physical feature. The existence of a validated tendency toward cosmetic surgery questionnaire underscores the need to assess surgical inclination systematically rather than inferring it solely from procedure history (Etemadi Fard & Amani, 2013).

Although cosmetic surgery is increasingly normalized, it remains medically consequential. Plastic surgery can involve anesthesia, postoperative pain, infection, scarring, thromboembolic events, and other complications. Venous thromboembolism prophylaxis is an important consideration in plastic surgery because procedural and patient-related factors may increase risk (Hernandez et al., 2016). Liposuction, despite its popularity, may also produce postoperative imaging findings and complications that require accurate clinical recognition (You et al., 2015). More broadly, perioperative decisions, including the selection and management of anesthesia, require specialized clinical knowledge, even though evidence from orthopedic regional anesthesia cannot be directly generalized to cosmetic

procedures (Kamel et al., 2022). These medical realities emphasize that cosmetic surgery decisions should be based on informed, stable, and realistic motivations rather than transient online pressure or distorted body evaluation.

Demographic and cultural context also matters. Patterns of cosmetic surgery vary by age, gender, socioeconomic position, local beauty ideals, and procedure type. Research comparing rhinoplasty patients across two periods illustrates that the demographic profile of those seeking cosmetic surgery can change over time (Loghmani et al., 2017). Findings from different national contexts, including Saudi Arabia and Iran, show that social norms, family attitudes, media exposure, and accessibility may shape willingness to pursue cosmetic procedures (Khabbazzabet et al., 2022; Taishan et al., 2024). Therefore, models developed in Western samples should be examined within specific cultural and educational populations. Female university students represent a particularly relevant group because they are situated at the intersection of emerging adulthood, identity development, peer comparison, intensive social media use, and growing autonomy in health and consumer decisions.

Research on media effects also demonstrates that exposure can influence attitudes beyond the immediate topic of the viewed content. For example, social media consumption has been investigated in relation to punitive attitudes among university students, illustrating the broader capacity of digital information environments to shape evaluative judgments and social beliefs (Intravia, 2019). Although this evidence does not concern body image directly, it supports the general proposition that repeated, selectively curated media exposure can influence attitudes through normalization, salience, emotional activation, and perceived consensus. In appearance contexts, these mechanisms may lead users to overestimate the prevalence of cosmetic surgery, perceive idealized beauty as normative, and interpret surgical alteration as an ordinary component of self-improvement.

Taken together, previous studies indicate that body image concern, social anxiety, and beauty-related social media engagement may be interconnected predictors of cosmetic surgery inclination. Body image concern appears to be one of the most consistent psychological correlates, while social anxiety may exert either a direct influence or an indirect effect through appearance-based fear and rejection sensitivity. Engagement with beauty content may function both as an outcome of pre-existing vulnerability and as a mechanism that amplifies dissatisfaction. However, many

studies have examined these variables separately, focused on a single platform, or used bivariate analyses that cannot simultaneously distinguish direct and mediated pathways. Structural equation modeling provides an appropriate framework for testing these relationships concurrently while estimating the indirect role of beauty-related social media engagement.

Accordingly, the aim of this study was to model the structural relationships of body image concern and social anxiety with the tendency toward cosmetic surgery among female university students and to determine the mediating role of engagement with beauty-related social media content.

2. Methods and Materials

2.1. Study Design and Participants

This study employed a descriptive-correlational, cross-sectional design and used structural equation modeling to examine the relationships of body image concern and social anxiety with the tendency toward cosmetic surgery, as well as the mediating role of engagement with beauty-related social media content. Structural equation modeling was selected because it enables the simultaneous evaluation of direct and indirect relationships among multiple observed and latent variables and allows the hypothesized conceptual model to be tested against the empirical data. The statistical population consisted of female students aged 18–25 years who were enrolled at the Central Tabriz Branch of Islamic Azad University. A total of 400 students participated in the study. Participants were selected through cluster random sampling. In implementing this procedure, academic clusters were identified within the university, several clusters were randomly selected, and eligible female students within the selected clusters were invited to participate. The sample size was considered adequate for confirmatory factor analysis and structural equation modeling, given the number of variables and estimated parameters included in the proposed model.

The inclusion criteria were being a female student at the Central Tabriz Branch of Islamic Azad University, being between 18 and 25 years of age, willingness to participate voluntarily, and completion of all questionnaire items. Students were excluded when they withdrew from the study at any stage, returned substantially incomplete questionnaires, or provided inconsistent, implausible, or patterned responses that could compromise the validity of the data. Data were collected through the in-person administration of paper-based questionnaires. Before

questionnaire completion, the participants were informed about the objectives and general procedures of the study and were assured that participation was entirely voluntary. They were informed that refusal to participate or withdrawal from the study would have no academic or administrative consequences. To protect confidentiality, participants were instructed not to write their names, surnames, student identification numbers, or other identifying information on the questionnaires. They were also assured that the collected information would be analyzed only at the group level and used exclusively for research purposes. Questionnaires were distributed to eligible students who provided informed consent, and completed forms were reviewed before data entry to identify missing or invalid responses.

2.2. Measures

The Tendency Toward Cosmetic Surgery Questionnaire was used to assess participants' willingness and inclination to undergo cosmetic surgical procedures. The instrument was developed by Etemadi-Fard and Amani in 2013 and consists of 24 items scored on a five-point Likert scale ranging from 1, representing "strongly disagree," to 5, representing "strongly agree." Total scores range from 24 to 120, with higher scores indicating a stronger tendency toward cosmetic surgery. The questionnaire evaluates cognitive, attitudinal, and motivational aspects of interest in cosmetic procedures. Etemadi-Fard and Amani reported a Cronbach's alpha coefficient of 0.79 for the instrument, indicating acceptable internal consistency. The construct validity of the questionnaire was evaluated through confirmatory factor analysis, and a validity coefficient of 0.76 was reported. In the present study, the total score was used as the observed indicator of participants' tendency toward cosmetic surgery.

The Body Image Concern Inventory was used to measure dissatisfaction, preoccupation, and concern regarding physical appearance. This 19-item instrument was developed by Littleton et al. in 2005. Respondents indicate the extent to which each statement reflects their feelings or behaviors on a five-point scale ranging from 1, meaning "I have never felt or behaved this way," to 5, meaning "I always feel or behave this way." Total scores range from 19 to 95, with higher scores representing greater dissatisfaction with or concern about physical appearance. The inventory comprises two factors. The first factor contains 11 items and assesses dissatisfaction and embarrassment about appearance, checking behaviors, and attempts to conceal

perceived physical defects. The second factor contains eight items and measures the extent to which appearance-related concerns interfere with social functioning. Littleton et al. reported a Cronbach's alpha coefficient of 0.93 for the total scale. Item-total correlations ranged from 0.32 to 0.73, with a mean correlation of 0.62. Cronbach's alpha coefficients of 0.76 and 0.92 were reported for the first and second factors, respectively, and the correlation between the two factors was 0.69. In an Iranian psychometric study, Entezari and Alavizadeh reported a Cronbach's alpha coefficient of 0.89, supporting the internal consistency of the Persian version of the inventory.

The Social Phobia Inventory was administered to assess the severity of social anxiety symptoms. This self-report instrument was developed by Connor et al. in 2000 and consists of 17 items organized into three subscales: fear, comprising six items; avoidance, comprising seven items; and physiological discomfort, comprising four items. Each item is scored on a five-point Likert scale ranging from 0, representing "not at all," to 4, representing "extremely." Higher total scores indicate more severe symptoms of social anxiety or social phobia. Connor et al. reported reliability coefficients ranging from 0.78 to 0.89. Internal consistency coefficients in a normative group were reported as 0.94 for the total scale, 0.89 for the fear subscale, 0.91 for the avoidance subscale, and 0.80 for the physiological discomfort subscale. The instrument has also demonstrated satisfactory diagnostic accuracy. A cutoff score of 15 distinguished individuals with social phobia from nonpsychiatric controls with an efficiency coefficient of 0.78, whereas a cutoff score of 16 differentiated individuals with social phobia from psychiatric controls without social phobia with an efficiency coefficient of 0.80. In an Iranian nonclinical sample, Hassanvand-Amouzadeh et al. reported split-half reliability coefficients of 0.82 and 0.76 for the first and second halves of the scale, respectively. The correlation between the two halves was 0.84, and the Spearman-Brown coefficient was 0.91. Cronbach's alpha coefficients of 0.75, 0.74, and 0.75 were reported for the avoidance, fear, and physiological discomfort subscales, respectively.

The Engagement with Beauty-Related Social Media Content Questionnaire was used to assess the extent of participants' involvement in appearance-focused activities on social networking platforms. The instrument was developed based on the Facebook questionnaire introduced by Meier and Gray in 2014 and was adapted to evaluate a broader range of beauty- and appearance-related social media behaviors. The questionnaire assesses activities such

as posting personal photographs, monitoring the number of likes and comments received on personal images, attaching importance to appearance-related feedback, following celebrities and fashion or beauty accounts, viewing fitspiration content, and engaging in appearance-based comparisons. Items assessing the frequency of beauty-related and fitspiration activities are scored on a five-point Likert scale ranging from 1, representing "never," to 5, representing "daily." Items assessing the perceived importance of likes and comments are scored from 1, representing "not at all important," to 5, representing "extremely important." Higher scores indicate more frequent and intensive engagement with beauty-related social media content. Evidence supporting the reliability of appearance-related social media measures has been reported by Seekis and Barker, who obtained Cronbach's alpha coefficients of 0.95 for upward physical appearance comparison, 0.89 for body surveillance, and 0.94 for social appearance anxiety.

2.3. Data Analysis

After the questionnaires were collected, the data were coded and entered into SPSS for screening and preliminary analysis. Data screening included an examination of missing values, response completeness, outliers, implausible response patterns, and the distributional characteristics of the study variables. Descriptive statistics, including frequency distributions, means, standard deviations, minimum and maximum scores, skewness, and kurtosis, were calculated to summarize the participants' responses and evaluate the characteristics of the variables. The Kolmogorov-Smirnov test was used to examine the normality of the score distributions. Pearson's correlation coefficient was calculated to assess the bivariate relationships among body image concern, social anxiety, engagement with beauty-related social media content, and the tendency toward cosmetic surgery.

Confirmatory factor analysis was initially conducted to assess the adequacy of the measurement model and determine whether the observed indicators appropriately represented the proposed latent constructs. Structural equation modeling was subsequently performed using AMOS to test the hypothesized relationships among the variables. The structural model included direct paths from body image concern and social anxiety to the tendency toward cosmetic surgery, paths from body image concern and social anxiety to engagement with beauty-related social media content, and a path from social media beauty-content

engagement to the tendency toward cosmetic surgery. The adequacy of the model was evaluated using commonly applied goodness-of-fit indices, including the chi-square statistic and its ratio to the degrees of freedom, the goodness-of-fit index, the adjusted goodness-of-fit index, the comparative fit index, the normed fit index, the incremental fit index, the Tucker–Lewis index, the root mean square error of approximation, and the standardized root mean square residual. Standardized path coefficients, critical ratios, and significance levels were examined to evaluate the direct effects included in the model.

The mediating role of engagement with beauty-related social media content was tested using the bootstrap procedure. Repeated bootstrap samples were generated to estimate the indirect effects of body image concern and social anxiety on the tendency toward cosmetic surgery through engagement with beauty-related social media content. The significance of each indirect effect was determined based on its bootstrap probability value and confidence interval. Mediation was considered statistically significant when the confidence interval for the indirect effect did not include zero. The type of mediation was interpreted by considering the significance of both the direct and indirect effects. A statistically significant indirect effect

accompanied by a significant direct effect was interpreted as partial mediation, whereas a significant indirect effect accompanied by a nonsignificant direct effect was considered evidence of full mediation. All statistical analyses were conducted using SPSS and AMOS, and the level of statistical significance was set at $p < 0.05$.

3. Findings and Results

The final sample consisted of 400 female university students. Most participants were single (93.8%), whereas 6.3% were married. Regarding monthly family income, 19.9% reported an income of less than 15 million tomans, 27.3% reported an income between 15 and 20 million tomans, and 52.7% reported an income above 20 million tomans. A history of cosmetic surgery was reported by 13.8% of the participants. Instagram was the most frequently used social media platform, reported as the primary platform by 75.1% of the participants. YouTube was the dominant platform for 13.8%, other social media platforms for 8.7%, X for 2.1%, and Facebook for 0.3%. The mean age of the participants was 21.18 years ($SD = 1.42$), with ages ranging from 18 to 26 years.

Table 1

Descriptive Statistics for the Study Variables

Variable	Mean	SD	Skewness	Kurtosis	Minimum	Maximum
Tendency toward cosmetic surgery	68.01	21.58	0.44	-0.27	26	116
Body image concern	44.08	14.85	0.29	-0.35	19	93
Appearance dissatisfaction and embarrassment	23.09	9.00	0.73	0.16	11	53
Interference of appearance concerns with functioning	20.97	7.36	0.05	-0.80	8	40
Social anxiety	17.66	12.99	0.76	0.09	0	66
Fear	5.86	4.91	0.83	-0.01	0	23
Avoidance	7.16	5.76	0.85	0.29	0	28
Physiological discomfort	4.64	3.66	0.65	-0.10	0	16
Engagement with beauty-related social media content	44.81	12.11	0.32	0.02	17	80
Beauty, fashion, and celebrity content	19.02	5.29	0.08	-0.46	6	30
Fitness-related content	11.94	3.96	0.45	0.07	5	25
Importance of likes and comments	13.84	5.87	0.66	-0.25	6	30

As shown in Table 1, the mean score for the tendency toward cosmetic surgery was 68.01 ($SD = 21.58$), while the mean body image concern score was 44.08 ($SD = 14.85$). Among the dimensions of body image concern, appearance dissatisfaction and embarrassment had a mean score of 23.09 ($SD = 9.00$), whereas interference of appearance concerns with functioning had a mean score of 20.97 ($SD = 7.36$). The mean social anxiety score was 17.66 ($SD = 12.99$), with

mean scores of 5.86 for fear, 7.16 for avoidance, and 4.64 for physiological discomfort. The mean score for engagement with beauty-related social media content was 44.81 ($SD = 12.11$). Among its dimensions, engagement with beauty, fashion, and celebrity content had the highest mean score, followed by the importance attributed to likes and comments and engagement with fitness-related content. The skewness and kurtosis coefficients were within

acceptable ranges, providing preliminary evidence that the distributions did not substantially deviate from normality.

Before testing the structural model, the assumptions underlying the statistical analyses were examined. The Kolmogorov–Smirnov test indicated that the distributions of the main variables did not differ significantly from a normal distribution. Specifically, the test results were nonsignificant for the tendency toward cosmetic surgery ($Z = 1.322$, $p =$

0.059), body image concern ($Z = 1.190$, $p = 0.118$), social anxiety ($Z = 1.307$, $p = 0.066$), and engagement with beauty-related social media content ($Z = 1.239$, $p = 0.093$). In addition, the skewness and kurtosis values reported in Table 1 were within acceptable limits. Therefore, the normality assumption was considered satisfied, and the data were deemed appropriate for Pearson correlation analysis and structural equation modeling.

Table 2

Pearson Correlations among the Main Study Variables

Variable	1	2	3	4
1. Tendency toward cosmetic surgery	1			
2. Body image concern	0.471**	1		
3. Social anxiety	0.226**	0.480**	1	
4. Engagement with beauty-related social media content	0.676**	0.317**	0.119*	1

As presented in Table 2, the tendency toward cosmetic surgery was positively and significantly correlated with body image concern ($r = 0.471$, $p < 0.001$), social anxiety ($r = 0.226$, $p < 0.001$), and engagement with beauty-related social media content ($r = 0.676$, $p < 0.001$). These findings indicate that higher levels of body image concern, social anxiety, and engagement with beauty-focused social media content were associated with a stronger tendency toward

cosmetic surgery. Body image concern was also positively associated with social anxiety ($r = 0.480$, $p < 0.001$) and engagement with beauty-related social media content ($r = 0.317$, $p < 0.001$). In addition, social anxiety showed a weak but statistically significant positive correlation with engagement with beauty-related social media content ($r = 0.119$, $p = 0.017$).

Table 3

Goodness-of-Fit Indices for the Structural Model

Fit Index	Obtained Value	Recommended Criterion	Interpretation
CMIN/DF	0.001	< 5.00	Acceptable fit
Chi-square p value	1.000	> 0.05	Acceptable fit
Goodness-of-Fit Index (GFI)	1.000	> 0.90	Acceptable fit
Tucker–Lewis Index (TLI)	1.000	> 0.90	Acceptable fit
Comparative Fit Index (CFI)	1.000	> 0.90	Acceptable fit
Root Mean Square Error of Approximation (RMSEA)	0.050	< 0.08	Acceptable fit
Parsimonious Normed Fit Index (PNFI)	0.500	≥ 0.50	Acceptable fit

The structural model demonstrated an acceptable overall fit to the observed data. The chi-square test was nonsignificant ($p = 1.000$), indicating no statistically significant discrepancy between the hypothesized model and the empirical covariance matrix. The CMIN/DF value was 0.001, which was below the recommended upper limit of 5.00. The GFI, TLI, and CFI were all equal to 1.000,

indicating excellent comparative and absolute fit. The RMSEA value was 0.050, which was below the recommended threshold of 0.08 and reflected an acceptable approximation error. The PNFI value was 0.500, meeting the minimum acceptable criterion for parsimonious fit. Collectively, these indices supported the adequacy of the proposed structural model.

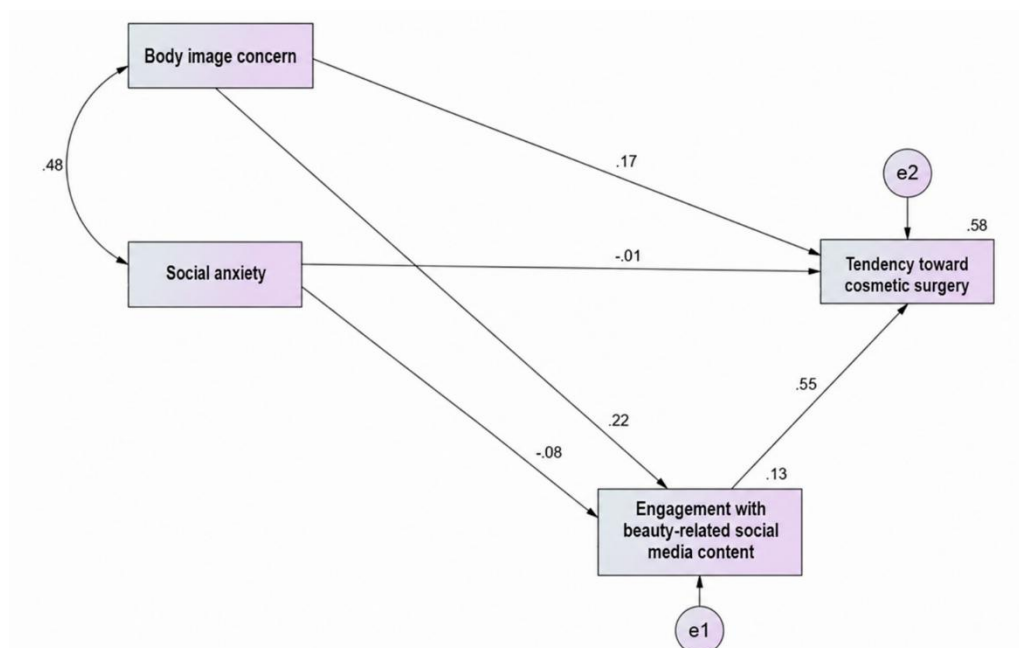
Table 4

Direct, Indirect, and Total Effects in the Structural Model

Effect Type	Independent Variable	Dependent Variable	B	SE	Critical Ratio	p	β	Standardized Total Effect
Direct effect without mediator	Body image concern	Tendency toward cosmetic surgery	0.414	0.081	5.104	< 0.001	0.285	0.285
Direct effect without mediator	Social anxiety	Tendency toward cosmetic surgery	-0.082	0.081	-1.016	0.310	-0.049	-0.049
Direct effect with mediator	Body image concern	Tendency toward cosmetic surgery	0.241	0.065	3.698	< 0.001	0.166	0.285
Direct effect with mediator	Social anxiety	Tendency toward cosmetic surgery	-0.012	0.064	-0.192	0.848	-0.007	-0.049
Direct effect	Body image concern	Beauty-related social media engagement	0.176	0.050	3.490	< 0.001	0.216	—
Direct effect	Social anxiety	Beauty-related social media engagement	-0.071	0.050	-1.412	0.158	-0.076	—
Indirect effect through beauty-related social media engagement	Body image concern	Tendency toward cosmetic surgery	0.173	0.033	—	0.005	0.119	—
Indirect effect through beauty-related social media engagement	Social anxiety	Tendency toward cosmetic surgery	-0.070	0.030	—	0.120	-0.042	—

Figure 1

Structural Model of the Relationships of Body Image Concern and Social Anxiety with the Tendency Toward Cosmetic Surgery: The Mediating Role of Engagement with Beauty-Related Social Media Content



The path analysis showed that body image concern had a positive and statistically significant direct effect on the tendency toward cosmetic surgery before the mediator was introduced into the model ($B = 0.414$, $\beta = 0.285$, $CR = 5.104$, $p < 0.001$). After engagement with beauty-related social media content was entered as a mediator, the direct effect remained statistically significant but decreased in magnitude ($B = 0.241$, $\beta = 0.166$, $CR = 3.698$, $p < 0.001$). Body image concern also had a positive and significant effect on

engagement with beauty-related social media content ($B = 0.176$, $\beta = 0.216$, $CR = 3.490$, $p < 0.001$). The indirect effect of body image concern on the tendency toward cosmetic surgery through beauty-related social media engagement was statistically significant ($B = 0.173$, $\beta = 0.119$, $p = 0.005$). Because both the direct and indirect effects remained significant, engagement with beauty-related social media content partially mediated the relationship between body image concern and the tendency toward cosmetic surgery.

In contrast, social anxiety did not have a significant direct effect on the tendency toward cosmetic surgery before the mediator was included ($B = -0.082$, $\beta = -0.049$, $CR = -1.016$, $p = 0.310$) or after the mediator was entered into the model ($B = -0.012$, $\beta = -0.007$, $CR = -0.192$, $p = 0.848$). Social anxiety also did not significantly predict engagement with beauty-related social media content ($B = -0.071$, $\beta = -0.076$, $CR = -1.412$, $p = 0.158$). Moreover, the indirect effect of social anxiety on the tendency toward cosmetic surgery through beauty-related social media engagement was not statistically significant ($B = -0.070$, $\beta = -0.042$, $p = 0.120$). Therefore, engagement with beauty-related social media content did not mediate the relationship between social anxiety and the tendency toward cosmetic surgery.

4. Discussion and Conclusion

The present study examined the structural relationships of body image concern and social anxiety with the tendency toward cosmetic surgery among female university students, while testing the mediating role of engagement with beauty-related social media content. The findings supported the adequacy of the proposed structural model and indicated that body image concern was positively and significantly associated with the tendency toward cosmetic surgery. Body image concern also significantly predicted greater engagement with beauty-related social media content, and this engagement partially mediated the relationship between body image concern and cosmetic surgery tendency. In contrast, social anxiety did not exert a significant direct effect on the tendency toward cosmetic surgery and did not significantly predict engagement with beauty-related social media content. Consequently, beauty-related social media engagement did not mediate the relationship between social anxiety and cosmetic surgery tendency. Although social anxiety was positively correlated with cosmetic surgery tendency at the bivariate level, this relationship became nonsignificant after the effects of body image concern and beauty-related social media engagement were considered simultaneously. Overall, the results suggest that body image concern is a more proximal psychological predictor of cosmetic surgery tendency than social anxiety and that appearance-focused engagement on social media constitutes an important mechanism through which body-related concerns may be translated into stronger interest in cosmetic procedures.

The significant positive direct effect of body image concern on cosmetic surgery tendency is consistent with a

substantial body of research demonstrating that dissatisfaction with physical appearance is one of the principal psychological factors underlying interest in cosmetic modification. Individuals who experience persistent dissatisfaction, embarrassment, preoccupation, or interference related to their appearance may perceive cosmetic surgery as a means of reducing the discrepancy between their actual and ideal bodies. Sarwer argued that body image occupies a central position in the decision to undergo cosmetic and minimally invasive treatments and that candidates' expectations and psychological functioning are essential for understanding surgical motivation (Sarwer, 2019). Similarly, research among women seeking cosmetic surgery has shown that negative body image and irrational beliefs are associated with stronger cosmetic surgery tendencies, while cognitive emotion-regulation processes may further shape this relationship (Khabbazzabet et al., 2022). Structural evidence has also linked body image concern and obsessive beliefs with body-management behaviors among cosmetic surgery applicants (Mafakhri et al., 2021). The present findings extend these observations by showing that body image concern predicts cosmetic surgery tendency even after accounting for social anxiety and social media engagement.

This result may be explained through self-discrepancy and sociocultural perspectives. When individuals compare their actual appearance with an internalized ideal and perceive a substantial gap, they may experience shame, dissatisfaction, or reduced self-worth. Sociocultural theories emphasize that appearance ideals are learned and reinforced through social relationships, media, and cultural standards, leading individuals to evaluate themselves according to narrow and often unrealistic criteria (Tiggemann, 2011). For female university students, these pressures may be intensified by developmental concerns regarding identity, intimate relationships, peer acceptance, and future social or professional opportunities. Cosmetic surgery can therefore become cognitively framed not merely as an optional aesthetic intervention but as a corrective strategy for perceived personal inadequacy. The significant association between body image concern and cosmetic surgery tendency is also compatible with evidence indicating that appearance esteem, weight esteem, and fear of negative appearance evaluation are related to attitudes toward cosmetic surgery (Dunaev et al., 2018). Thus, the stronger the dissatisfaction with one's body, the greater the likelihood that surgical alteration will be regarded as a plausible method of attaining an acceptable or socially valued appearance.

The findings are also consistent with research showing that more severe forms of appearance concern may be closely connected to psychological distress. Entezari and Alavizadeh found that fear of bodily deformity was associated with suicidal ideation among individuals attending skin, hair, and weight clinics, highlighting the potential seriousness of body-related preoccupation (Entezari & Alavizadeh, 2012). More recent work has suggested that early maladaptive schemas, rumination, body dysmorphic symptoms, and cognitive emotion regulation may jointly contribute to the psychological profile of cosmetic surgery applicants (Rashidifar & Karami, 2025). Similarly, adverse childhood experiences may be associated with more problematic or repetitive cosmetic surgery involvement through their long-term effects on self-concept, emotional regulation, and bodily self-evaluation (Li et al., 2025). Although the present study did not assess these deeper clinical vulnerabilities, the positive pathway from body image concern to cosmetic surgery tendency may partly reflect a broader cognitive-emotional process in which perceived appearance defects acquire disproportionate personal importance.

A second major finding was that body image concern significantly predicted engagement with beauty-related social media content. This indicates that students who were more dissatisfied or preoccupied with their appearance were also more likely to follow, view, monitor, or interact with beauty-, fashion-, celebrity-, fitness-, and appearance-related content. This relationship is theoretically plausible because individuals often selectively seek information that is relevant to their existing concerns. A person who is dissatisfied with her body may be more attentive to beauty advice, transformation photographs, celebrity images, cosmetic procedure information, or appearance-enhancement content. However, this behavior may not relieve concern. Instead, it can create a reinforcing cycle in which body dissatisfaction increases beauty-content consumption, and repeated exposure further intensifies comparison, self-monitoring, and perceived inadequacy.

This interpretation is aligned with evidence that social media comparisons can negatively influence body image and mood among young women (Fardouly et al., 2015). Exposure to thin-ideal and appearance-focused content has also been associated with body dissatisfaction and disordered eating attitudes (Aparicio-Martinez et al., 2019). Experimental research has shown that the effects of social media on body dissatisfaction depend partly on the type of image content viewed and the psychological processes

activated during exposure (Castellanos Silva & Steins, 2023). Accordingly, students with stronger pre-existing body image concerns may not use social media neutrally; they may attend disproportionately to appearance-related material and interpret it through a self-critical lens. This selective engagement may heighten upward comparison and encourage users to perceive idealized images as realistic standards rather than carefully curated or edited representations.

The significant indirect effect of body image concern on cosmetic surgery tendency through beauty-related social media engagement was one of the most important findings of the study. Because both the direct and indirect effects remained significant, the mediation was partial. This means that body image concern influences cosmetic surgery tendency through more than one pathway. Part of its effect appears to operate directly, as dissatisfaction itself may motivate a desire for bodily alteration. Another part operates through increased engagement with beauty-related social media content, which may strengthen cosmetic ideals, normalize aesthetic intervention, and provide continuous exposure to surgical or nonsurgical appearance modification. This result closely aligns with research demonstrating that engagement with beauty content may affect cosmetic surgery consideration through mediating appearance-related mechanisms (Seekis & Barker, 2022). A systematic review likewise concluded that social media exposure is associated with body image disturbance and greater consideration of cosmetic procedures, although the mechanisms differ across platforms and populations (Mironica et al., 2024).

Several platform-specific studies support this mediating interpretation. Snapchat use has been associated with self-image concerns and inclination toward cosmetic procedures, possibly because filters and image-editing tools create altered facial standards that users may prefer to their natural appearance (Alhusaini et al., 2022). Selfie-taking has also been associated with increased desire for cosmetic surgery, as repeated photography may intensify facial scrutiny and dissatisfaction (Shome et al., 2020). Similarly, Instagram influencers may shape the identity of adolescents and young adults by connecting physical attractiveness with popularity, status, lifestyle, and personal success (Mañas-Viniegra et al., 2020). Research concerning facial plastic surgery among female social media users has also shown that online platforms may influence attitudes toward cosmetic procedures (Taishan et al., 2024). The mediating role observed in the present study therefore appears to reflect a

wider process in which beauty-focused digital environments transform private dissatisfaction into a more concrete willingness to consider surgical alteration.

TikTok and other algorithmically driven platforms may intensify this process because users are repeatedly exposed to personalized content based on prior viewing and interaction. Once a user demonstrates interest in beauty or cosmetic content, the platform may provide increasingly similar material, including procedural demonstrations, recovery diaries, before-and-after photographs, beauty evaluations, and user comments. Research on TikTok has directly linked platform engagement with body image and acceptance of cosmetic surgery, emphasizing the importance of both content exposure and interactive commentary (Dajches et al., 2025). Such content may contribute to normative misperceptions, whereby users begin to believe that cosmetic procedures are more common, safe, socially approved, and necessary than they actually are. The partial mediation identified in this study suggests that beauty-related engagement is not merely an accompanying behavior but an explanatory pathway through which body image concern may acquire behavioral relevance.

The findings also help explain why the relationship between body image concern and cosmetic surgery tendency was not completely mediated by social media engagement. Appearance dissatisfaction may originate from many sources, including family criticism, peer comparison, cultural beauty standards, romantic experiences, rejection sensitivity, and long-standing cognitive schemas. Interpersonal emotion regulation and perceived social support have been associated with cosmetic surgery tendency, indicating that relational processes may also shape aesthetic decisions (Vahid Harandi et al., 2021). In addition, demographic and cultural factors influence who seeks cosmetic procedures and why. Changes in the demographic characteristics of rhinoplasty patients over time demonstrate that cosmetic surgery behavior is responsive to broader social trends (Loghmani et al., 2017). Therefore, beauty-related social media engagement represents one important pathway but cannot account for the entire effect of body image concern.

In contrast to body image concern, social anxiety did not significantly predict cosmetic surgery tendency in the structural model. This finding differs partly from research suggesting that social anxiety may be related to desire for cosmetic surgery through body image and appearance-based rejection sensitivity (Amirian et al., 2024). However, the present result does not necessarily indicate that social

anxiety is irrelevant. Social anxiety was positively correlated with cosmetic surgery tendency at the bivariate level, but this association disappeared after other variables were entered into the model. This pattern suggests that the shared variance between social anxiety and body image concern may explain much of the initial association. In other words, socially anxious students may be more likely to consider cosmetic surgery primarily when their anxiety is accompanied by negative body evaluation, rather than because of social anxiety alone.

Social anxiety is a broad construct involving fear of judgment, avoidance, distress, and physiological arousal across a variety of social situations (Panayiotou et al., 2017). Not all socially anxious individuals interpret their difficulties as appearance-based. Some may fear public speaking, interpersonal interaction, embarrassment, or performance failure without being especially dissatisfied with their bodies. Therefore, a general measure of social anxiety may not directly predict cosmetic surgery tendency unless appearance-specific anxiety, fear of negative appearance evaluation, or appearance-based rejection sensitivity is also present. This interpretation is supported by findings that fear of negative appearance evaluation is relevant to cosmetic surgery attitudes (Dunaev et al., 2018). The nonsignificant direct pathway may therefore reflect the greater conceptual proximity of body image concern to cosmetic surgery decisions.

Social anxiety also failed to predict beauty-related social media engagement, and the indirect pathway from social anxiety to cosmetic surgery tendency was nonsignificant. One explanation is that socially anxious individuals vary considerably in how they use social media. Some may use online platforms more frequently because mediated communication feels safer than face-to-face interaction, whereas others may avoid posting photographs, commenting, or interacting with appearance-focused material because such activities increase fear of evaluation. Research has shown that specific social media features influence online communication and emotional disclosure differently among socially anxious adolescents and young adults (Angelini & Gini, 2024). Consequently, the relationship between social anxiety and social media engagement may depend on the type of activity being measured. General online communication may be attractive to socially anxious users, while beauty-focused engagement may require active self-presentation and exposure to appearance judgment, which some users may avoid.

The nonsignificant mediation result also suggests that beauty-content engagement is more strongly rooted in appearance dissatisfaction than in generalized social fear. Individuals may follow beauty content because they are concerned about their bodies, interested in fashion, or motivated to improve their appearance rather than because they experience social anxiety. Moreover, some socially anxious individuals may use social media for entertainment, education, or anonymous interaction without engaging substantially with beauty content. Thus, the absence of a mediating effect is theoretically coherent and underscores the importance of distinguishing general social media use from appearance-focused use. Previous research has shown that social media exposure can influence a wide range of attitudes beyond body image, demonstrating that the effects of digital media depend heavily on content and user motivation (Intravia, 2019). In the present study, beauty-related engagement specifically mediated the effect of body image concern, not social anxiety, indicating a domain-specific pathway.

The strong association between beauty-related social media engagement and cosmetic surgery tendency further supports the role of digital environments in normalizing aesthetic intervention. Social media may reduce the psychological distance between dissatisfaction and surgery by providing procedural information, testimonials, visual transformations, promotional content, and immediate access to clinics and practitioners. During the COVID-19 pandemic, increased use of social media and videoconferencing was associated with changes in patients' acceptance of cosmetic procedures (Khan et al., 2024). Prolonged self-viewing during videoconferencing may also intensify appearance concerns by drawing attention to facial features, lighting, and camera distortion (Hart et al., 2022). Together, these findings indicate that digital self-observation and beauty-content exposure can create conditions in which cosmetic procedures are perceived as ordinary solutions to dissatisfaction.

Nevertheless, cosmetic surgery decisions must be understood within the context of potential benefits and risks. Some individuals report improved psychological well-being following successful cosmetic procedures, particularly when expectations are realistic and motivations are stable (Kam et al., 2022). However, surgery also entails medical risks, including thromboembolic complications, postoperative problems, and procedure-specific adverse outcomes (Hernandez et al., 2016; You et al., 2015). The clinical management of surgery and anesthesia also requires careful

specialist judgment, even though evidence from other surgical fields cannot be generalized directly to cosmetic procedures (Kamel et al., 2022). Therefore, strong surgical inclination arising from body dissatisfaction and social media pressure should be assessed carefully to distinguish informed aesthetic preferences from distress-driven or unrealistic expectations.

The results also have implications for the interpretation of body-positive content. Not all social media exposure necessarily increases dissatisfaction. Young people may experience body-positive material as validating, inclusive, and resistant to narrow appearance ideals, although reactions can be mixed and concerns about authenticity may remain (Rodgers et al., 2023). This suggests that the harmful or protective effect of social media depends on the nature of the content and the way users engage with it. Interventions should therefore not focus solely on reducing social media use but should also strengthen critical engagement, help users recognize commercial persuasion and digital alteration, and encourage exposure to diverse and realistic representations of bodies.

The study had several limitations that should be considered when interpreting the findings. First, the cross-sectional correlational design does not permit definitive causal conclusions, even though structural equation modeling was used to examine theoretically specified pathways. The direction of the relationships may also be reciprocal; for example, body image concern may increase beauty-content engagement, while repeated engagement may further intensify body dissatisfaction. Second, all variables were assessed through self-report questionnaires, which may be affected by social desirability, recall bias, response styles, and participants' willingness to disclose sensitive attitudes. Third, the sample consisted exclusively of female students from one university branch, limiting the generalizability of the results to male students, nonstudent populations, other age groups, or individuals from different cultural and socioeconomic contexts. Fourth, the assessment of social media engagement combined several forms of beauty-related content and did not distinguish fully among specific platforms, active and passive use, filtered and unfiltered content, or commercial and body-positive material. Finally, some relevant psychological variables, such as body dysmorphic symptoms, self-esteem, perfectionism, appearance-based rejection sensitivity, depression, and internalization of beauty ideals, were not included in the model.

Future studies should use longitudinal and prospective designs to determine the temporal ordering of body image concern, beauty-related social media engagement, and cosmetic surgery tendency. Experimental studies could compare the effects of exposure to idealized, cosmetic surgery-related, neutral, and body-positive content on body satisfaction and procedural intentions. Research should also examine platform-specific mechanisms across Instagram, TikTok, Snapchat, YouTube, and videoconferencing applications, with separate assessment of passive viewing, posting, commenting, selfie editing, and feedback monitoring. Replication with male participants, nonstudent samples, cosmetic surgery applicants, and culturally diverse populations would clarify the generalizability of the model. Future structural models should incorporate variables such as body dysmorphic symptoms, appearance-ideal internalization, self-esteem, perfectionism, social comparison orientation, rejection sensitivity, and emotion regulation. Qualitative interviews could further explore how young women interpret beauty content and how online experiences influence the transition from dissatisfaction to serious consideration of cosmetic procedures.

University counseling centers, health professionals, and student-support services should develop programs that promote healthy body image, reduce appearance-based self-criticism, and strengthen critical social media literacy. Screening for body image concern should be incorporated into counseling services for students who express strong interest in cosmetic procedures, particularly when their motivations appear linked to shame, social comparison, or online feedback. Educational interventions should explain the use of filters, image editing, influencer marketing, and algorithmic content selection so that students can evaluate beauty-related material more realistically. Cosmetic clinics should assess applicants' expectations, emotional stability, body dysmorphic symptoms, and social media-related motivations before surgery and refer psychologically vulnerable individuals for appropriate evaluation. Practitioners should also encourage balanced social media use, exposure to diverse body representations, and decision-making based on informed personal preferences rather than external pressure, transient online trends, or the pursuit of social validation.

Authors' Contributions

All authors significantly contributed to this study.

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 authors report no conflict of interest.

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Ethical Considerations

In this study, to observe ethical considerations, participants were informed about the goals and importance of the research before the start of the interview and participated in the research with informed consent.

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