



Am I Beautiful? Media, Women's Psychology, and Decision-Making towards Cosmetic Surgery

Asst. Prof. Dr. Mohammad Karami*, and Mona Rashidifar

Department of Marketing, Near East University, Nicosia, Cyprus

Abstract

Evidence revealed that cosmetic surgery has been a flourishing and highly demanding medical phenomenon in recent years. Social media and individual psychological characteristics were investigated as significant factors affecting individuals' attitudes toward cosmetic surgery. To expand this issue, this study examines the relationship between social media, perceived self-facial image, and attitudes towards cosmetic surgery, simultaneously investigating the moderating role of self-objectification and mental imagery on the hypothesized relationships. To test the hypotheses, empirical data were collected using a judgmental sampling technique from 304 females aged 20-40 in the beauty clinics in Tehran, Iran, and were analyzed in structural equation modeling (PLS-SEM). The results demonstrated a significant relationship between appearance-related social media preoccupation, perceived self-facial image, and attitudes towards cosmetic surgery. The indices highlighted the strong influence of mental imagery and self-objectification sequentially. The outcomes of this study, both theoretically and empirically, contribute to the literature of psychology, beauty/cosmetics, and marketing, and will also serve as a valuable guide for consulting in surgical procedures.

Keywords: body image; cosmetic surgery; mental imagery; self-objectification; social media

1. Introduction

Social media has become an integral part of the lives of young people worldwide, and researchers have recently expressed concern about the potential negative impact of social media use (Fardouly et al., 2018). In recent years, the swift expansion of social media has subjected a growing audience to content that reinforces traditional beauty norms, prioritizes thinness, and idealizes perfection. As a result, individuals may experience body dissatisfaction by internalizing these aesthetic ideals and facing challenges in adhering to the beauty standards perpetuated by the media (Fardouly et al., 2015; Merino et al., 2024).

Cosmetic surgery entails modifying or enhancing physical features to improve their appearance (Voelker & Pentina, 2011). Cosmetic surgery has been largely linked to women, who have traditionally constituted the majority of individuals undergoing aesthetic procedures. This pattern is deeply embedded in societal norms that associate physical attractiveness with success in areas such as romantic relationships and professional achievements (Heggenstaller, 2017). Furthermore, a systematic review indicated that social media plays a significant role in shaping the acceptance of cosmetic surgery, with women

accounting for 90% of all cosmetic surgery patients. The extent to which cosmetic surgery is embraced varies across different countries, cultures, and ethnic groups (Alotaibi, 2021).

Cosmetic surgery is closely linked to an individual's psychological state, particularly their body image; evaluating body image can result in either satisfaction or dissatisfaction with various physical features (Nowosielski et al., 2019). Personal identity is greatly influenced by one's physical appearance, and this relationship between appearance and self-perception starts early in life (Davison & Birch, 2001). Body image refers to the evolving perception of an individual's body encompassing its appearance, sensations, and movements, which can fluctuate depending on emotions, physical experiences, and environmental factors (Croll, 2007). The perceptual, affective, cognitive, and behavioral facets of body image have all been significantly impacted by social media (Fardouly et al., 2015). Women who adopt societal beauty ideals are more inclined to compare their physical appearance with others to determine whether they align with culturally accepted beauty standards (Matera et al., 2013).

Self-objectification is a psychosocial mechanism suggested to explain the higher prevalence of negative body image among women (Sherman et al., 2024). Girls and women are conditioned to view their bodies as objects subject to external evaluation. This internalization of an objectified self-perspective begins in childhood and is reinforced through various individual and societal influences at both micro and macro levels (Calogero et al., 2010). Self-objectification is linked to body shame, which serves as a mediator in the relationship between body dissatisfaction and mental health challenges (Saunders et al., 2024). It entails individuals adopting an external observer's perspective of their bodies, which often results in adverse mental health outcomes (Polskaya & Novikova, 2023). The inclination to objectify one's own body and that of other women may influence attitudes and behaviors related to seeking help for body image issues, both personally and on behalf of others. While no existing research has explored this connection, it is plausible that internalizing an objectified body perspective could contribute to heightened body image dissatisfaction and the normalization of such issues (Tiggemann & Lynch, 2001).

Mental images are internal representations that capture sensory, perceptual, emotional, or other experiential states consciously recognized by an individual, occurring in the absence of external stimuli that would typically evoke similar perceptual or emotional responses (Wong & Lim, 2017; Pearson, 2019). Mental imagery frequently contributes to self-comparisons with unattainable ideals, exacerbating negative perceptions of body image. It often integrates these unrealistic standards (Holland & Tiggemann, 2016). Moreover, social media enables the exchange and critique of mental imagery, particularly evident in fan communities that engage in discussions about adaptations of literary works, highlighting how shared imagination influences collective interpretation (Grek Martin et al., 2013).

1.1 Social Media in Iran

Social media's rise has profoundly changed people's perceptions of their bodies by promoting a standardized definition of beauty and attractiveness that emphasizes limited and usually unattainable standards (Rounsefell et al., 2020). It was acknowledged that social media usage frequency may not be accurate enough to pinpoint instances in which social media use is a risk factor for body image. Therefore, it was recommended that research be done on how people feel emotionally connected to using appearance-related social media (Hawes et al., 2020). This concept, known as appearance-related social media preoccupation, draws on people's feelings of dissatisfaction with their bodies and appearance as well as their desire to alter their appearance as a result of using appearance-related social media.

Instagram boasts two billion monthly active users worldwide as of early 2024, making it one of the most popular and rapidly expanding social media platforms (Jo Dixon, 2024). The numbers revealed that 47.7% of Instagram users are female, slightly outnumbered by males, who make up 52.3% of the global user base (Stacy Jo Dixon, 2024). However, according to researchers, Instagram may be more harmful to women's appearance concerns than other social media platforms (like Facebook), which have more diverse content, because its main function is the posting and sharing of images (e.g., Fardouly & Vartanian, 2016; Holland & Tiggemann, 2016; Stacy Jo Dixon, 2024). The relationship between Instagram use and women's concerns and beliefs about appearance should thus be investigated (Fardouly et al., 2018; Di Gesto et al., 2022). Iran is among the top twenty countries using social media (WPR, 2024). In February 2024, the Iranian Students' News Agency (ISNA) reported that after Telegram, WhatsApp was the most popular platform, with about 47.7 million users. Instagram ranked third, with 47 million users. Of Iranian Instagram users, 46 percent are female; more than 21 million women (Tadrissi Hassani, 2024). Women are strongly represented among fashion and beauty accounts (Hajizadegan, 2022). Additionally, cosmetic surgeries have dramatically increased in recent years (Mozaffari Niya et al., 2019), which has positioned Iran among the top 10 plastic surgery hubs in the world (Iran Destination, 2021). Despite the important connection between social media content and cosmetic surgeries found in the literature for different regions, no attempt has been made to investigate these links in Iran.

1.2 Research Gap

Even with the increased interest in cosmetic surgery and its connections to social media and self-perception, little is known about the intricate interactions between these variables and how they influence perceptions of cosmetic surgery, especially in non-Western cultures. Prior research has mostly examined how social media affects body image (Perloff, 2014; Fardouly et al., 2015), women's self-objectification (Fardouly et al., 2018), cosmetic surgery (Seekis & Barker, 2022), or the psychological aspects of cosmetic surgery decisions separately (Sarwer et al., 1998; Veale et al., 2016), with little attention paid to how these variables interact. Although the mediating role of body self-perception between social media beauty contents and cosmetic surgery consideration was examined in previous studies (Seekis & Barker, 2022; Tylka et al., 2023), the moderating effects of mental imagery and self-objectification in the context of cosmetic surgery decision-making have not been thoroughly investigated. This study fills these gaps by investigating how attitudes toward cosmetic surgery, specifically among Iranian women in Tehran, are influenced by social media, perceived self-facial image, and their interactions with self-objectification and mental imagery. Our research provides a deeper understanding of the psychological and media factors influencing decisions to have cosmetic surgery. This adds significant insights to the literature in the fields of psychology, marketing, and beauty/cosmetics.

1.3 Objective of the Study

This research aims to examine the relationship between social media, body image, and women's attitudes towards cosmetic surgery, with a specific focus on the moderating roles of self-objectification and mental imagery. The study seeks to explore how social media reinforces traditional beauty norms, influences body dissatisfaction, and contributes to the normalization of cosmetic surgery while investigating the psychological mechanisms of self-objectification and the impact of mental imagery in shaping these attitudes and behaviors.

1.4 Research Questions

This study attempts to reach the objectives by addressing three main questions as follows:

- **RQ1:** How the social media engagements affect the individual perception of facial beauty and attitudes towards cosmetic surgery?
- **RQ2:** Does self-objectification regulate the individual's attitudes towards cosmetic surgery?
- **RQ3:** Does mental imagery regulate the individual's attitudes toward cosmetic surgery?

2. Hypotheses Development and Research Model

To answer each question, this study developed the hypotheses based on the background of the study.

- **H1:** Social media engagement has a positive effect on the perceived self-facial image.
- **H2:** Perceived self-facial image has a positive effect on women's attitudes toward cosmetic surgery.
- **H3:** Perceived self-facial image mediates the path between social media engagement and attitudes towards cosmetic surgery.
- **H4a:** Self-objectification moderates the relationships between social media engagement and perceived self-facial image.
- **H4b:** Self-objectification moderates the perceived self-facial image and women's attitudes toward cosmetic surgery.
- **H5a:** Self-objectification moderates the relationships between Social media engagement and perceived self-facial image.
- **H5b:** Mental imagery moderates the relationship between perceived self-facial image and women's attitudes toward cosmetic surgery.

To address each question, this study proposed a conceptual framework to present the relationships between variables (Figure 1).

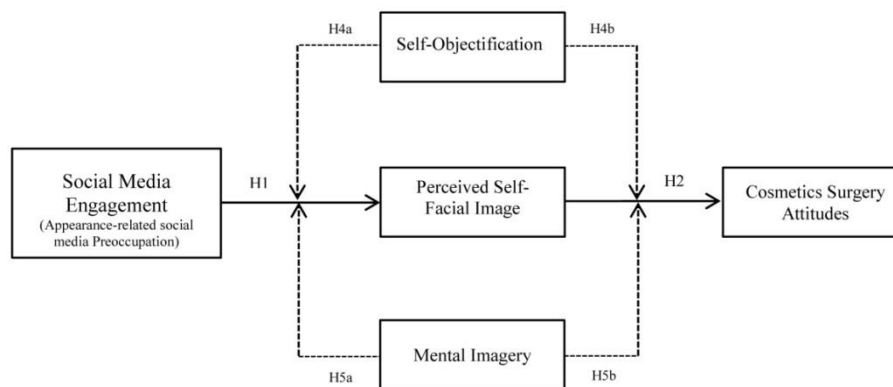


Figure 1. Research model

3. Research Methodology

3.1 Study Design

To address the research questions and test the proposed hypotheses, this study employed a cross-sectional approach due to the collected data from a single point in time, focusing on a particular group of the population.

3.2 Sample Size

Tehran was reported as the most populated city and the center of most medical facilities in Iran (Kalantar Hormozi et al., 2018). Hence, the population of this study includes females who follow beauty and cosmetics Instagram channels and visit the cosmetics clinics in

Tehran. Hair et al. (2010) recommended that the sample size be between 150 to 400 data points for SEM analysis. Therefore, a self-administrative survey questionnaire using the judgmental sampling technique was distributed to 350 respondents in December and January 2024-2025. In return, 304 questionnaires were completed and submitted back (satisfactory response rate of 86.8 %). Therefore, 304 valid responses were selected to test the model. No participants were promised any rewards to fill out the questionnaire. Additionally, all participants signed a term of free, informed consent, which was separated from the research protocol to ensure data anonymity. The cross-sectional nature of the data also restricts causal inference regarding the observed relationships. To strengthen confidence in the results, several robustness checks were performed. Specifically, key analyses were repeated after excluding influential observations and using alternative model specifications; the results remained stable.

3.3 Questionnaire Construct

The first section of the questionnaire consisted of age, gender, education, marital status, profession, and the frequency of using Instagram cosmetic pages per day. The demographic data are presented in Table 1.

Table 1. Demographic profile

Measure	Item	Frequency (N=304)	Percentage (%)
Age	20-24	88	28.9
	25-29	154	50.6
	30-34	33	10.8
	35-40	29	9.5
Education	Bachelor's or less	25	8.2
	Bachelor's	188	61.8
	Master's and above	91	30.2
Marital status	Single	183	60.1
	Married	98	32.2
	Divorced	23	7.5
Profession	Government	67	22
	Private	112	40.1
	Self-employed	12	3.9
	Unemployed	71	23.3
	Student	32	10.5
	Others	10	3.2

In the second part, the respondents were asked to respond to items related to each construct according to their perceptions and experience.

3.4 Assessment Instruments

In this study, the participants were tested with the Derriford Appearance Scale (DAS-59), Self-Objectification Questionnaire (SOQ), and Mental Imagery Scale (MIS). Additionally, to measure the social media engagement, items were adopted from Fardouly et al. (2015), Holland and Tiggemann (2016), and Thompson et al. (2004). To measure the attitudes towards cosmetic surgery, items were adopted from Henderson-King and Henderson-King (2005), measured based on a 5-point Likert scale (e.g., I feel positive about cosmetic surgery). The original English questionnaire was translated into Persian to conform to the language of the respondents and then back-translated into English by a native Persian researcher to ensure that it corresponded with the English version. The following instruments were used in the current study. The following is the explanation of each scale:

3.4.1 Social Media Engagement (SME)

To measure the *Instagram participants' usage* two questions were used according to the previous studies (Fardouly et al., 2015): “How often do you check Instagram (even if you are logged on all day)?” (1=not at all, 2=every few days, 3=once a day, 4=every few hours, 5=every hour, 6=every 30minutes, 7=every 10minutes, 8=every 5minutes), and “Overall, how long do you spend on Instagram on a typical day?” (1=5minutes or less, 2=15minutes, 3=30minutes, 4=1 hour, 5=2hours, 6=3hours, 7=4hours, 8=5 hours, 9=6hours, 10=7hours, 11=8hours, 12=9hours, 13=10 hours or more).

To assess the *viewing of beauty models' facial images on Instagram*, participants were asked to report how often they viewed beauty facial models' images on Instagram (1=never, 5=every time I use Instagram; range=1–5). The scale was borrowed from Holland and Tiggemann (2016) and modified based on the objective of the study.

To evaluate the *comparisons to beauty models' facial images on Instagram*, participants reported on the frequency with which they compare their appearance to models' facial images on Instagram (Fardouly et al., 2015). In each case, participants were asked on a 5-point scale, “When looking at photos of the following people on Instagram, how often do you compare your face to theirs?” (1=never, 5=very often). On the same 5-point scale, participants were also asked to report how often they compare their faces to other females in model images on Instagram.

Finally, the internalization-general subscale of the Sociocultural Attitudes Towards Appearance Questionnaire–3 (SATAQ-3), which was taken from Thompson et al. (2004), was used to measure the extent to which participants have internalized the beauty ideal portrayed within their society. Participants scored the extent to which they agreed (1=definitely disagree, 5=definitely agree) with statements regarding their desire to look like people in the media (e.g., “I would like my face to look like the models on Instagram channels”) and the extent to which they compare their face to people in the media (e.g., “I compare my face to the faces of people who are on Instagram channels”).

3.4.2 Perceived Self-facial Image (PSI)

The Derriford Appearance Scale (DAS-59) was created by Harris and Carr (2001) as a self-report measure to assess psychological distress and difficulties in daily life associated with concerns about appearance (Carr et al., 2000). While it is suitable for appearance-related concerns from any cause, it was originally designed for clinical settings involving individuals with disfigurements. The DAS-59 includes 59 items, each with a distinct response format, and has shown strong psychometric properties. Responses are scored on a Likert-type scale (e.g., 1 = "not at all" to 5 = "all the time"), reflecting the frequency or severity of specific thoughts or behaviors (e.g., “Does your appearance make you feel anxious in public?”). Its criterion validity is supported by significant associations with clinical diagnoses, and it demonstrates excellent internal consistency, with Cronbach's alpha values typically exceeding 0.90. For the current study, a 15-item short form of the DAS-59 was developed to minimize participant burden and focus specifically on perceived facial self-image. The items were selected based on their theoretical relevance and the highest item; total correlations from a pilot test. Minor wording adjustments were made to fit the study context while retaining the conceptual intent of each item. Construct validity was examined using exploratory factor analysis, which supported a unidimensional structure consistent with the original scale. Reliability analysis indicated acceptable internal consistency (Cronbach's $\alpha = 0.79$), suggesting that the adapted version adequately captures the intended construct of facial self-image distress. The full list of adapted items is provided in Appendix A.

3.4.3 Self-Objectification (SO)

The Self-Objectification Scale (SOS), developed by Fredrickson, Roberts, Noll, Quinn, and Twenge in 1998, includes 10 body attributes ranked by participants based on their perceived importance (Fredrickson et al., 1998). These attributes are categorized into competence-based attributes (e.g., health, strength, energy level) and appearance-based attributes (e.g., muscle tone, weight, and body attractiveness). Higher scores on the scale indicate a greater focus on face-based attributes compared to competence-based ones, reflecting a higher level of self-objectification. The scale's construct validity is supported by its correlations with related constructs such as body shame and disordered eating (Fredrickson et al., 1998). While the original publication did not explicitly report reliability data, subsequent research has generally demonstrated acceptable reliability, with Sinclair and Myers (2004) reporting an internal consistency of 0.72 and a test-retest reliability of 0.76 over 30 days. For the current study, the SOS was adapted into a 15-item Likert-type version to allow participants to indicate the frequency or intensity of self-objectifying thoughts and behaviors rather than rank attributes (Dahl, 2014). This modification was made to enhance sensitivity to individual differences and to improve applicability to facial self-image in clinical settings. Items were developed to capture both appearance- and competence-related aspects of facial self-perception, using the original SOS framework as guidance. Responses were scored on a 5-point Likert scale (1 = "not at all" to 5 = "all the time"). Example items include "I spend significant time worrying about how my face appears to others" and "My sense of confidence depends on how attractive my face looks." Construct validity was examined using exploratory factor analysis, which supported a single-factor structure, and internal consistency was acceptable (Cronbach's $\alpha = 0.73$) (See Appendix A)

3.4.4 Mental Imagery (MI)

The Mental Imagery Scale (MIS), developed by Sheehan in 1967, consists of 35 items across seven sensory modalities: visual, auditory, tactile, gustatory, olfactory, kinesthetic, and organic. Participants rate the vividness of their mental imagery using a seven-point Likert scale (1 = no image present at all, to 7 = perfectly clear and as vivid as the experience), yielding a total score ranging from 35 to 245. Higher scores indicate a greater ability for vivid mental imagery. The scale's reliability was established with a test-retest reliability coefficient of 0.78, and its validity was demonstrated through correlations with other recognized measures of imagery, such as the Betts Questionnaire Upon Mental Imagery (Marks, 1973). Subsequent studies have further supported the MIS's psychometric properties, highlighting its effectiveness in measuring individual differences in imagery ability across various sensory domains (e.g., Isaac & Marks, 1994). An example of items for mental imagery is "I can vividly imagine a scene as if I were actually there". The Cronbach's $\alpha = 0.76$ accepts the internal consistency (See Appendix A).

3.5 Data Analysis

In this study, to check whether the item of each construct should be removed (construct validity), exploratory factor analysis (EFA) was run. Further, Alpha coefficients and composite reliability (CR) are checked to determine the constructs' internal consistency. Additionally, construct validity and discriminant validity were checked relying on the values of average variance extracted (AVE) and the loading factor in confirmatory factor analysis (CFA). Structural equation modeling (PLS-SEM) was utilized to examine the hypotheses in the proposed model. The model goodness of fit was evaluated using the standard indices recommended for PLS-SEM. The Standardized Root Mean Square Residual (SRMR) was used as an absolute measure of model fit, where values below 0.08 indicate a good fit (Henseler et al., 2016; Hair. et al., 2021). In addition, the Normed Fit Index (NFI) was

examined, with values above 0.90 considered acceptable (Bentler & Bonett, 1980). The d_{ULS} and d_G discrepancy measures were also assessed, and the estimated values fell within the 95% bootstrap confidence interval, suggesting an adequate model fit (Henseler et al., 2016). Finally, the RMS_{θ} value was checked to evaluate the measurement model specification, with values below 0.12 indicating a well-fitting reflective measurement model (Henseler et al., 2016).

3.5.1 Common Method Bias

If data for all variables (independent and dependent) were collected via a single survey, common method variance (CMV) could have an impact on the interactions between constructs in the model (Podsakoff et al., 2003). Therefore, before assessing the validity and reliability of the constructs, it was suggested that any bias in the data be checked (Kataria & Saini, 2020). Therefore, Herman's single-factor test, a widely accepted test for assessing common method bias (CMB), was performed to check whether a single factor could account for the majority of the variance (Podsakoff et al., 2003). The values of the test indicated that 39.18% of the variance was accounted for by the first factor, which is lower than the maximum accepted limit of 50% suggested by Herman (Podsakoff et al., 2003; Fuller et al., 2016), indicating no CBM in the data.

4. Results

4.1 Exploratory Factor Analysis

The dimensionality of all constructs was evaluated by principal component factor analysis using varimax rotation. The KMO (Kaiser-Meyer-Olkin) and Bartlett's test of sphericity were checked to ensure the appropriateness of items and constructs. The results of the test showed the overall measure of sampling adequacy (MSA) with a value higher than of 0.5 for KMO, as greater than the acceptable limit. In addition, Bartlett's test of sphericity was significant at the level of $p < 0.01$, which indicated that factor analysis compressed the data in a meaningful way with a significant correlation among variables (Hair et al., 2010). Due to the large sample size, the varimax rotation method was used to extract the factors. Furthermore, an Eigenvalue greater than 1 was chosen to extract the five factors given the variables in the model of study. In the EFA analysis in this study, the results of the component rotated matrix significantly confirmed that component SME could be measured by 7 items, component PSI by 15 items, SO by 15 items, and MI and CSA by 18 and 5 items, respectively. According to the results, 17 items was removed from the constructs (MI). Therefore, five constructs in total containing 60 components (items) were confirmed for the rest of the analysis. The results of the extracted factors are reported Appendix A.

4.2 Reliability and Validity

The results show that the model demonstrated an adequate fit, with $SRMR = 0.056$, $NFI = 0.93$, d_{ULS} and d_G values within the 95% bootstrap confidence interval, and $RMS_{\theta} = 0.09$, all meeting the recommended thresholds.

The Cronbach's alpha and CR test results showed that all values were above the accepted limit of 0.7, which was recommended by earlier research (Fornell & Larcker, 1981; Nunnally, 1975). Consequently, the desired reliability of the research was confirmed by the adequate internal consistency of all constructs. Alpha and CR values were reported to be between 0.71-0.82 and 0.71-0.82, respectively.

In order to ensure the convergent validity, factor loading values are recommended to be greater than 0.5 for every item, and the CR and AVE values must be higher than 0.7 and 0.5 for every construct, respectively (Bagozzi & Yi, 1988; Jalilvand et al., 2017). Considering the

results, all of the measurement model's indicators for factor loading, CR, and AVE surpassed the acceptable limits, ensuring sufficient conditions for convergent validity. The relative factor loading values for AVE were between 0.62-0.83 and 53-0.68 (Table 2).

Table 2. The indicators of internal consistency and convergent validity

Variables	Mean	Std.Dev.	Cronbach's α	CR	AVE
SME	4.3	1.04	0.86	0.88	0.64
PSI	3.77	0.87	0.79	0.81	0.59
CSA	4.40	0.72	0.71	0.73	0.52
SO	3.74	0.86	0.73	0.75	0.56
MI	3.81	0.87	0.73	0.76	0.55

Notes: SME: Social Media Engagement; PSI: Perceived Self-Facial Image; CSA: Cosmetics Surgery Attitudes; SO: Self-Objectification; MI: Mental Imagery.

To check the discriminant validity, square roots of the AVE and correlation coefficients between constructs were compared (Fornell & Larcker, 1981). The square roots of the AVE for each construct, as well as the indicator of all correlations between constructs, showed that the requirements for discriminant validity were adequately satisfied. In addition, the Heterotrait–Monotrait ratio (HTMT) was conducted to ensure the discriminant validity (Cohen, 1988; Tian et al., 2022). The outcomes of the HTMT test illustrated no violation of discriminant validity, as all HTMT values were below the recommended threshold of 0.90 (Henseler et al., 2015). The results of correlations and HTMT are presented in Table 3.

Table 3. Discriminant validity

Pairwise construct comparison					
Construct	SME	PSI	CSA	SO	MI
SME	0.824				
PSI	0.515	0.787			
CSA	0.442	0.680	0.728		
SO	0.518	0.649	0.691	0.768	
MI	0.481	0.461	0.512	0.574	0.800
Heterotrait–Monotrait ratio (HTMT)					
Construct	SME	PSI	CSA	SO	MI
SME	-				
PSI	0.772	-			
CSA	0.671	0.612	-		
SO	0.422	0.586	0.494	-	
MI	0.478	0.638	0.482	0.588	-

Notes: Bolded values are the square root of AVE. Below the diagonal present correlations' coefficients; level of significance is $p < 0.01$.

4.3 Tests of the Structural Model

Structural equation modeling (SEM) was used to test the study's hypotheses (Lin et al., 2017). The results of R-square (R^2), beta coefficients (β), factor loadings, and corresponding t-values were checked to confirm the model. Hypotheses were tested based on the level of significance in the path coefficient using the bootstrapping technique (Hair et al., 2011) with 1000 iterations of resampling. An acceptable model fit was supported by the model-fit indices in the structural model ($\chi^2/df = 2.36$, GFI = 0.932, AGFI = 0.921, NFI = 0.938, CFI = 0.918, and RMSEA = 0.042). The result of hypothesis testing is shown in Table 2.

4.3.1 Direct Effect:

Appearance-related social media preoccupation ($\beta = 0.392$, $t = 18.815$, $p < 0.01$) has a positive effect on the perceived self-facial image, explaining 0.501 (50.1%) of the variation in the perceived self-facial image. Thus, hypothesis 1 is supported. Furthermore, the results

revealed that perceived self-facial image positively and significantly influenced ($\beta = 0.426$, $t = 19.102$, $p < 0.01$) cosmetic surgery attitudes of women, explaining 0.524 (52.4%) of customer engagement. Thus, the results support the second hypothesis as well.

4.3.2 Mediating Effect:

The bootstrapping method was utilized to test the mediation effect of variables in the proposed model, following the well-known (Preacher & Hayes, 2008) approach. Mediation analyses were conducted using 5,000 bias-corrected bootstrap samples. Reported effects include unstandardized coefficients (β) and 95% bias-corrected confidence intervals (LL, UL). The results of the analysis are presented in Table 4.

Table 4. The results of the mediating effect

Models Statistics	SME to PSI to CSA	
	β	95% BCa CI (LL, UL)
Direct Effect	0.42**	[0.30, 0.49]
Indirect Effect	0.55 ***	[0.18, 0.66]
Total Effect	0.87 ***	[0.72, 1.02]

*Notes: * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$; LL: Lower Level; UL: Upper Level*

The mediation analysis demonstrated that perceived self-facial image partially mediated the relationship between appearance-related social media preoccupation and attitudes toward cosmetic surgery. The bootstrapped estimates indicated that both direct and indirect effects were statistically significant. Specifically, the direct effect ($\beta = 0.42$, 95% BCa CI [0.30, 0.49]), indirect effect ($\beta = 0.55$, 95% BCa CI [0.18, 0.66]), and total effect ($\beta = 0.87$, 95% BCa CI [0.72, 1.02]) were all positive and significant, as the corresponding confidence intervals did not include zero. These findings support Hypothesis 3 (H3), suggesting that appearance-related social media preoccupation influences attitudes toward cosmetic surgery both directly and indirectly through perceived self-facial image.

4.3.3 Moderating Effect

Hypothesis H4a postulated that the relationship between appearance-related social media preoccupation and perceived self-facial image is moderated by self-objectification so that the positive relationship will be stronger for women with high levels of self-objectification. As shown in Table 2, the interaction effects of self-objectification and appearance-related social media preoccupation (moderating effect 1) were significant on perceived self-facial image with path coefficients of 0.106 and p -value < 0.05 . Thus, hypothesis H4a is supported. Hypothesis H4b claimed that the relationship between perceived self-facial image and cosmetic surgery attitudes of women is moderated by self-objectification, so that the positive relationship will be stronger for women with higher self-objectification. As shown in Table 5, the self-objectification shows the moderating effect on the relationship between perceived self-facial image and cosmetic surgery attitudes of women (moderating effect 2) ($\beta = 0.057$, p -value < 0.01). Thus, hypothesis H4b is supported.

Hypothesis H5a stated that the relationship between appearance-related social media preoccupation and perceived self-facial image is moderated by mental imagery, so the positive relationship will be stronger for women with high levels of mental imagery. As shown in Table 4, the interaction effects of mental imagery and appearance-related social media preoccupation (moderating effect 3) were significant on the perceived self-facial image with path coefficients of 0.244 and p -value < 0.05 . Thus, hypothesis H5a is supported. Hypothesis H5b claimed that the association between perceived self-facial image and cosmetic surgery attitudes of women is moderated by mental imagery level, so that the positive relationship will be stronger for women with higher mental imagery. As shown in

Table 2, the mental imagery presents a moderating effect on the relationship between perceived self-facial image and cosmetic surgery attitudes of women (moderating effect 4) ($\beta = 0.386$, p -value < 0.05). Thus, hypothesis H5b is supported.

As depicted in Table 5, the R-square (R^2) value for the perceived self-facial image is 0.50, and for cosmetic surgery attitudes, the R^2 value is 0.52, with adequate explanatory power. The indices present that the moderating effects of self-objectification can boost the explanatory power of the relationship between appearance-related social media preoccupation and perceived self-facial image up to 0.51, and perceived self-facial image and cosmetic surgery attitudes up to 0.56. Furthermore, the values indicated that the moderating effects of mental imagery can enhance the explanatory power of the relationship between appearance-related social media preoccupation and perceived self-facial image up to 0.52, and perceived self-facial image and cosmetic surgery attitudes up to 0.58.

Table 5. Standardized paths for hypothesis testing

Hypothesis	Path Coefficient	R2	ΔR^2	f^2	Q2	ΔQ^2	SD	t-value	Decision
SME → PSI	0.392***	0.501	-	-	0.233	-	0.024	18.81	Supported
PSI → CSA	0.426***	0.524	0.023	0.048	0.166	-0.068	0.021	19.19	Supported
SME × SO → PSI	0.106**	0.518	0.017	0.035	0.212	-0.021	0.072	2.18	Supported
PSI × SO → CSA	0.057*	0.565	0.047	0.108	0.196	-0.016	0.033	1.61	Supported
SME × MI → PSI	0.244**	0.528	0.028	0.057	0.187	-0.009	0.057	1.77	Supported
PSI × MI → CSA	0.386***	0.583	0.082	0.196	0.119	-0.068	0.066	2.32	Supported

Notes: SD: Standard Deviation; * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$.

The change in R^2 (ΔR^2) values, ranging from 0.01 to 0.08, indicates that the inclusion of the interaction terms meaningfully improved the model's explanatory power. Corresponding f^2 effect sizes ranged from 0.03 to 0.20, representing small-to-medium effects according to Cohen's (1988) criteria.

In addition to evaluating the magnitude of the R^2 values as a criterion of predictive accuracy, Stone-Geisser's Q^2 value is suggested as a criterion of predictive relevance (Stone, 1974; Geisser, 1974). The Q^2 value of latent variables in the PLS path model is obtained by using the blindfolding procedure, which is a sample re-use technique. This study also used this method to evaluate the research model's capacity to predict. The predictive relevance retrieved determined that the Q^2 values exceed zero for a certain endogenous latent variable to illustrate the predictive relevance of the model (Hair et al., 2010).

5. Discussion and Contribution

The outcome of the current study theoretically and empirically contributes to the literature of psychology, medicine, and marketing and extends previous studies in cosmetics. For example, the results of this study confirm that facial image dissatisfaction significantly influences attitudes toward cosmetic surgery, which is similar to the findings of previous studies, such as Henderson-King & Henderson-King (2005). Similarly, the findings align with the previous research of Fardouly et al. (2015) and Perloff (2014), where the authors emphasized the significant impact of social media exposure to idealized beauty images on self-perception and body dissatisfaction, highlighted the argument that social media is a powerful driver of cosmetic surgery considerations, specifically among women. Furthermore, research by Dorfman et al. (2018), Di Gestio et al. (2022), and Galeotti et al. (2024) indicates

that social media platforms like Instagram significantly influence individuals' decisions to apply for cosmetic surgery.

Additionally, the outcomes of this study are consistent with the results of previous studies, which highlighted the mediating role of perceived self-body image on the path between social media and attitudes toward cosmetic surgery (e.g., Di Gesto et al., 2022; Seekis & Barker, 2022). The moderating roles of self-objectification and mental imagery provide new insights while supporting earlier work of Tiggemann and Lynch (2001), which identified self-objectification as a critical factor connecting social media to body image and dissatisfaction and highlighted their influence on cosmetic surgery attitudes. Furthermore, research by supports the notion that self-objectification predicts women's attitudes toward cosmetic surgery, which was supported by the findings of the current study.

However, although previous research, such as that conducted by Sarwer et al. (1998-2019), concentrated mostly on individual psychological variables like body image dissatisfaction, this study integrates social media influence, providing a more comprehensive viewpoint. Interestingly, the finding of the current study differs from those of Jung and Lee (2006), who emphasized cultural factors as dominant predictors, suggesting that digital platforms may now surpass traditional cultural drivers in shaping cosmetic surgery attitudes.

This study updates and extends the body of literature by integrating social, psychological, and media-based aspects, suggesting a more comprehensive knowledge of the variables influencing decisions about cosmetic surgery in the current digital era.

5.1 Theoretical Implications

The theoretical implications of this study contribute significantly to the understanding of attitudes toward cosmetic surgery. This study extends objectification theory (Fredrickson & Roberts, 1997) by demonstrating that self-objectification not only mediates the impact of social media on body dissatisfaction but also plays a critical role in shaping attitudes toward cosmetic surgery. The findings highlight that women who internalize objectifying messages are more likely to engage in mental imagery, reinforcing their dissatisfaction and desire for cosmetic enhancements, supporting Tiggemann & Lynch, (2001) assertions on the consequences of self-objectification.

Additionally, this study aligns with social comparison theory (Festinger, 1954), as it reveals that preoccupation with appearance-related social media increases comparisons, intensifies negative self-evaluation, and enhances the likelihood of considering cosmetic surgery. This supports the work of Fardouly et al. (2015), who identified social media as a powerful platform for appearance-based comparisons.

By combining these theories with insights into digital media's influence, the research advances our understanding of how emerging technologies reshape self-perception and beauty standards. Future theoretical models should incorporate these dynamics to explore the growing role of social media in psychological constructs related to body image and cosmetic surgery decisions.

5.2 Empirical Implicating

The findings of this study offer significant empirical implications for psychology, marketing, medicine, and the beauty industry. By investigating the interaction between social media influence, perceived self-facial image, and attitudes toward cosmetic surgery, with moderating effects of self-objectification and mental imagery, this research provides a unique understanding of the decision-making processes driving women's interest in cosmetic

surgery. These insights can inform interventions, policies, and strategies to address the psychological, social, and professional factors influencing such decisions.

In psychological practice, the study highlights the critical role of perceived self-body image and mental imagery in shaping attitudes toward cosmetic surgery. This finding is particularly relevant for mental health professionals working with women affected by social media-driven beauty standards. Psychologists can design interventions to foster positive self-perception, employing cognitive-behavioral techniques to help individuals reframe negative thoughts about their appearance and address maladaptive mental imagery patterns. Addressing appearance-related social media preoccupation is also essential. Therapists and counselors can work with clients to develop critical thinking and media literacy skills that challenge unrealistic beauty ideals and reduce the psychological toll of constant comparisons with idealized social media images.

The study's implications for marketing are equally profound. For marketers in the cosmetic surgery industry, these findings highlight the importance of establishing ethical and empathetic campaigns. Instead of emphasizing transformation narratives that exploit insecurities, marketing strategies could focus on themes of empowerment, self-care, and personal choice. By aligning campaigns with values that resonate with individuals' aspirations for confidence and authenticity, businesses can attract and maintain clients without harmful stereotypes. Furthermore, the outcomes of this study suggest a unique guidance for marketers across the beauty and cosmetics industry to promote diverse and inclusive portrayals of beauty in their commercials and advertisements, reducing societal pressures linked to unattainable standards.

In the medical field, particularly in cosmetic surgery, these findings encourage a more patient-centered approach to consultations. Clinics and practitioners can incorporate psychological assessments into their practice to better understand the motivations and mental states of their patients. By evaluating factors such as self-objectification and mental imagery tendencies, medical professionals can address underlying issues influencing the desire for cosmetic procedures. This approach ensures that patients are making informed decisions based on realistic expectations and genuine needs rather than external pressures or internalized insecurities. Additionally, clinics can use these findings to enhance client communication by providing transparent discussions about potential outcomes, combined with mental well-being assessments, to build trust and encourage ethical practices.

However, similar to other research, this study has some limitations. First, the sample size is confined to 304 women in Tehran, Iran, which may limit the generalizability of the findings to other populations or cultural contexts. Women from different countries or regions may experience varying degrees of social media influence or hold different attitudes toward cosmetic surgery. Second, the cross-sectional design of the study prevents the establishment of causality between the identified variables. Longitudinal studies would provide deeper insights into how these relationships evolve. Additionally, the use of judgmental clinic-based sampling may limit the generalizability of the findings to other populations or healthcare settings. Future research employing probabilistic or population-based sampling methods could enhance external validity. Third, the reliance on self-reported data may introduce biases, as participants may underreport or overreport their attitudes, behaviors, or psychological states due to social desirability or memory recall issues. While these findings offer actionable insights for mental health practitioners, marketers, medical professionals, and policymakers, the noted limitations highlight the need for further research. Addressing these constraints can enhance our understanding of the psychological and social factors influencing cosmetic surgery decisions and inform more effective interventions and strategies.

References

- Alotaibi, A. S. (2021). Demographic and Cultural Differences in the Acceptance and Pursuit of Cosmetic Surgery: A Systematic Literature Review. *Plastic and Reconstructive Surgery - Global Open*, 9(3). <https://doi.org/10.1097/GOX.00000000000003501>
- Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science*, 16(1). <https://doi.org/10.1007/BF02723327>
- Bentler, P. M., & Bonett, D. G. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin*, 88(3). <https://doi.org/10.1037/0033-2909.88.3.588>
- Calogero, R. M., Pina, A., Park, L. E., & Rahemtulla, Z. (2010). Objectification theory predicts college women's attitudes toward cosmetic surgery. *Sex Roles*, 63(1). <https://doi.org/10.1007/s1199-010-9759-5>
- Carr, T., Harris, D., & James, C. (2000). The Derriford Appearance Scale (DAS-59): A new scale to measure individual responses to living with problems of appearance. *British Journal of Health Psychology*, 5(2). <https://doi.org/10.1348/135910700168865>
- Cohen, J. (1988). Statistical power analysis for the behavioural sciences. Hillsdale. In NJ: Lawrence Earlbaum Associates.
- Davison, K. K., & Birch, L. L. (2001). Weight status, parent reaction, and self-concept in five-year-old girls. *Pediatrics*, 107(1). <https://doi.org/10.1542/peds.107.1.46>
- Di Gesto, C., Nerini, A., Policardo, G. R., & Matera, C. (2022). Predictors of Acceptance of Cosmetic Surgery: Instagram Images-Based Activities, Appearance Comparison and Body Dissatisfaction Among Women. *Aesthetic Plastic Surgery*, 46(1). <https://doi.org/10.1007/s00266-021-02546-3>
- Dorfman, R. G., Vaca, E. E., Mahmood, E., Fine, N. A., & Schierle, C. F. (2018). Plastic Surgery-Related Hashtag Utilization on Instagram: Implications for Education and Marketing. *Aesthetic Surgery Journal*, 38(3). <https://doi.org/10.1093/asj/sjx120>
- Fardouly, J., Diedrichs, P. C., Vartanian, L. R., & Halliwell, E. (2015). Social comparisons on social media: THE impact of Facebook on young women's body image concerns and mood. *Body Image*, 13. <https://doi.org/10.1016/j.bodyim.2014.12.002>
- Fardouly, J., & Vartanian, L. R. (2016). Social Media and Body Image Concerns: Current Research and Future Directions. In *Current Opinion in Psychology* (Vol. 9). <https://doi.org/10.1016/j.copsyc.2015.09.005>
- Fardouly, J., Willburger, B. K., & Vartanian, L. R. (2018). Instagram use and young women's body image concerns and self-objectification: Testing mediational pathways. *New Media and Society*, 20(4). <https://doi.org/10.1177/1461444817694499>
- Festinger, L. (1954). A Theory of Social Comparison Processes. *Human Relations*, 7(2). <https://doi.org/10.1177/001872675400700202>
- Fornell, C., & Larcker, D. F. (1981). Structural Equation Models with Unobservable Variables and Measurement Error: Algebra and Statistics. *Journal of Marketing Research*, 18(3). <https://doi.org/10.1177/002224378101800313>
- Fredrickson, B. L., Roberts, T.-A., Noll, S. M., Quinn, D. M., & Twenge, J. M. (1998). That swimsuit becomes you: Sex differences in self-objectification, restrained eating, and math performance. *Journal of Personality and Social Psychology*, 75(1).

<https://doi.org/10.1037//0022-3514.75.1.269>

- Fredrickson, B. L., & Roberts, T. A. (1997). Toward understanding women's lived experiences and mental health risks. *Psychology of Women Quarterly*, 21(2). <https://doi.org/10.1111/j.1471-6402.1997.tb00108.x>
- Fuller, C. M., Simmering, M. J., Atinc, G., Atinc, Y., & Babin, B. J. (2016). Common methods variance detection in business research. *Journal of Business Research*, 69(8). <https://doi.org/10.1016/j.jbusres.2015.12.008>
- Galeotti, T., Marino, C., Canale, N., Scacchi, L., & Vieno, A. (2024). Changing to Impress: Testing a Mediation Model from Instagram Self-presentation to Cosmetic Surgery. *Aesthetic Plastic Surgery*, 48(4). <https://doi.org/10.1007/s00266-023-03501-0>
- Geisser, S. (1974). A Predictive Approach to the Random Effect Model. *Biometrika*, 61(1). <https://doi.org/10.2307/2334290>
- Grek Martin, J. M., Gruzd, A., & Howard, V. (2013). Navigating an imagined middle-earth: Finding and analyzing text-based and film-based mental images of Middle-earth through theonering.net online fan community. *First Monday*, 18(5). <https://doi.org/10.5210/fm.v18i5.4529>
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). Multivariate Data Analysis. In *Vectors*. <https://doi.org/10.1016/j.ijpharm.2011.02.019>
- Hajizadegan, H. (2022, December). *How Shifts on Instagram Drove Iran's "Mahsa Moment" — Bourse & Bazaar Foundation*. <https://www.bourseandbazaar.com/articles/2022/12/28/how-shifts-on-instagram-drove-irans-mahsa-moment>
- Harris, D. L., & Carr, A. T. (2001). The Derriford Appearance Scale (DAS59): A new psychometric scale for the evaluation of patients with disfigurements and aesthetic problems of appearance. *British Journal of Plastic Surgery*, 54(3). <https://doi.org/10.1054/bjps.2001.3559>
- Hawes, T., Zimmer-Gembeck, M. J., & Campbell, S. M. (2020). Unique associations of social media use and online appearance preoccupation with depression, anxiety, and appearance rejection sensitivity. *Body Image*, 33. <https://doi.org/10.1016/j.bodyim.2020.02.010>
- Henderson-King, D., & Henderson-King, E. (2005). Acceptance of cosmetic surgery: Scale development and validation. *Body Image*, 2(2). <https://doi.org/10.1016/j.bodyim.2005.03.003>
- Henseler, J., Hubona, G., & Ray, P. A. (2016). Using PLS path modeling in new technology research: Updated guidelines. *Industrial Management and Data Systems*, 116(1). <https://doi.org/10.1108/IMDS-09-2015-0382>
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1). <https://doi.org/10.1007/s11747-014-0403-8>
- Holland, G., & Tiggemann, M. (2016). A systematic review of the impact of the use of social networking sites on body image and disordered eating outcomes. In *Body Image* (Vol. 17). <https://doi.org/10.1016/j.bodyim.2016.02.008>
- Iran Destination. (2021). *Iran is Amongst Top 10 Plastic Surgery Hubs in the World | Destination Iran*. <https://www.destinationiran.com/plastic-surgery-hubs.htm>

- Isaac, A. R., & Marks, D. F. (1994). Individual differences in mental imagery experience: Developmental changes and specialization. *British Journal of Psychology*, 85(4). <https://doi.org/10.1111/j.2044-8295.1994.tb02536.x>
- J., H., Hult, G., Ringle, M., & Sarstedt, M. (2021). *A primer on partial least squares structural equation modeling (PLS-SEM)*.
- Jalilvand, M. R., Salimipour, S., Elyasi, M., & Mohammadi, M. (2017). Factors influencing word of mouth behaviour in the restaurant industry. *Marketing Intelligence and Planning*, 35(1). <https://doi.org/10.1108/MIP-02-2016-0024>
- Jo Dixon, S. (2024, April). *Instagram - statistics & facts | Statista*. <https://www.statista.com/topics/1882/instagram/>
- Jung, J., & Lee, S. H. (2006). Cross-cultural comparisons of appearance self-schema, body image, self-esteem, and dieting behavior between Korean and U.S. Women. *Family and Consumer Sciences Research Journal*, 34(4). <https://doi.org/10.1177/1077727X06286419>
- Kalantar Hormozi, A., Maleki, S., Rahimi, A., Manafi, A., & Amirizad, S. J. (2018). Cosmetic Surgery in Iran: Sociodemographic Characteristics of Cosmetic Surgery Patients in a Large Clinical Sample in Tehran. *The American Journal of Cosmetic Surgery*, 35(4). <https://doi.org/10.1177/0748806818764734>
- Kataria, S., & Saini, V. (2020). The mediating impact of customer satisfaction in relation of brand equity and brand loyalty: An empirical synthesis and re-examination. *South Asian Journal of Business Studies*, 9(1). <https://doi.org/10.1108/SAJBS-03-2019-0046>
- Lin, K. Y., Wang, Y. T., & Hsu, H. Y. S. (2017). Why do people switch mobile platforms? The moderating role of habit. *Internet Research*, 27(5). <https://doi.org/10.1108/IntR-04-2016-0087>
- MARKS, D. F. (1973). VISUAL IMAGERY DIFFERENCES IN THE RECALL OF PICTURES. *British Journal of Psychology*, 64(1). <https://doi.org/10.1111/j.2044-8295.1973.tb01322.x>
- Matera, C., Nerini, A., & Stefanile, C. (2013). The role of peer influence on girls' body dissatisfaction and dieting. *Revue Europeenne de Psychologie Appliquee*, 63(2). <https://doi.org/10.1016/j.erap.2012.08.002>
- Mozaffari Niya, N., Kazemi, M., Abazari, F., & Ahmadi, F. (2019). Iranians' Perspective to Cosmetic Surgery: A Thematic Content Analysis for the Reasons. *World Journal of Plastic Surgery*, 8(1), 69–77. <https://doi.org/10.29252/wjps.8.1.69>
- Nowosielski, K., Kurpisz, J., & Kowalczyk, R. (2019). Body image during sexual activity in the population of Polish adult women. *Przegląd Menopauzalny*, 8(4). <https://doi.org/10.5114/pm.2019.93118>
- Nunnally, J. C. (1975). Psychometric Theory' 25 Years Ago and Now. *Educational Researcher*, 4(10). <https://doi.org/10.3102/0013189X004010007>
- Pearson, J. (2019). The human imagination: the cognitive neuroscience of visual mental imagery. In *Nature Reviews Neuroscience* (Vol. 20, Issue 10). <https://doi.org/10.1038/s41583-019-0202-9>
- Perloff, R. M. (2014). Social Media Effects on Young Women's Body Image Concerns: Theoretical Perspectives and an Agenda for Research. *Sex Roles*, 71(11–12). <https://doi.org/10.1007/s11199-014-0384-6>

- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies. In *Journal of Applied Psychology* (Vol. 88, Issue 5). <https://doi.org/10.1037/0021-9010.88.5.879>
- Polskaya, N. A., & Novikova, Y. D. (2023). Self-Objectification, Social Media and Mental Health. *Journal of Modern Foreign Psychology*, 12(3), 83–92. <https://doi.org/10.17759/JMFP.2023120308>
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40(3). <https://doi.org/10.3758/BRM.40.3.879>
- Rounsefell, K., Gibson, S., McLean, S., Blair, M., Molenaar, A., Brennan, L., Truby, H., & McCaffrey, T. A. (2020). Social media, body image and food choices in healthy young adults: A mixed methods systematic review. In *Nutrition and Dietetics* (Vol. 77, Issue 1). <https://doi.org/10.1111/1747-0080.12581>
- Sarwer, D. B. (2019). Body image, cosmetic surgery, and minimally invasive treatments. *Body Image*, 31. <https://doi.org/10.1016/j.bodyim.2019.01.009>
- Sarwer, D. B., Wadden, T. A., Pertschuk, M. J., & Whitaker, L. A. (1998). The psychology of cosmetic surgery: A review and reconceptualization. *Clinical Psychology Review*, 18(1). [https://doi.org/10.1016/S0272-7358\(97\)00047-0](https://doi.org/10.1016/S0272-7358(97)00047-0)
- Seekis, V., & Barker, G. (2022). Does #beauty have a dark side? Testing mediating pathways between engagement with beauty content on social media and cosmetic surgery consideration. *Body Image*, 42. <https://doi.org/10.1016/j.bodyim.2022.06.013>
- Sherman, A. M., Tran, S., & Sy, J. (2024). Objectification and body esteem: age group patterns in women's psychological functioning. *Aging and Mental Health*, 28(4). <https://doi.org/10.1080/13607863.2023.2273338>
- Sinclair, S. L., & Myers, J. E. (2004). The Relationship Between Objectified Body Consciousness and Wellness in a Group of College Women. *Journal of College Counseling*, 7(2). <https://doi.org/10.1002/j.2161-1882.2004.tb00246.x>
- Stone, M. (1974). Cross-Validatory Choice and Assessment of Statistical Predictions. *Journal of the Royal Statistical Society Series B: Statistical Methodology*, 36(2). <https://doi.org/10.1111/j.2517-6161.1974.tb00994.x>
- Tadrissi Hassani, S. (2024). *Iran's Instagram Crackdown is Jeopardising Women's Livelihoods* — Bourse & Bazaar Foundation. <https://www.bourseandbazaar.com/articles/2024/3/12/irans-instagram-crackdown-is-jeopardising-womens-livelihoods>
- Thompson, J. K., Van Den Berg, P., Roehrig, M., Guarda, A. S., & Heinberg, L. J. (2004). The Sociocultural Attitudes Towards Appearance Scale-3 (SATAQ-3): Development and Validation. *International Journal of Eating Disorders*, 35(3). <https://doi.org/10.1002/eat.10257>
- Tian, H., Siddik, A. B., & Masukujjaman, M. (2022). Factors Affecting the Repurchase Intention of Organic Tea among Millennial Consumers: An Empirical Study. *Behavioral Sciences*, 12(2). <https://doi.org/10.3390/bs12020050>
- Tiggemann, M., & Lynch, J. E. (2001). Body image across the life span in adult women: the role of self-objectification. *Developmental Psychology*, 37(2).

<https://doi.org/10.1037/0012-1649.37.2.243>

Tylka, T. L., Rodgers, R. F., Calogero, R. M., Thompson, J. K., & Harriger, J. A. (2023). Integrating social media variables as predictors, mediators, and moderators within body image frameworks: Potential mechanisms of action to consider in future research. In *Body Image* (Vol. 44). <https://doi.org/10.1016/j.bodyim.2023.01.004>

Veale, D., Gledhill, L. J., Christodoulou, P., & Hodson, J. (2016). Body dysmorphic disorder in different settings: A systematic review and estimated weighted prevalence. In *Body Image* (Vol. 18). <https://doi.org/10.1016/j.bodyim.2016.07.003>

Voelker, T. A., & Pentina, I. (2011). Cosmetic surgery intent among Generation Y consumers: A social network perspective. *Health Marketing Quarterly*, 28(1). <https://doi.org/10.1080/07359683.2011.545315>

Wong, S. S. H., & Lim, S. W. H. (2017). Mental imagery boosts music compositional creativity. *PLoS ONE*, 12(3). <https://doi.org/10.1371/journal.pone.0174009>

WPR. (2024). *Social Media Users by Country 2024*. <https://Worldpopulationreview.Com/>. <https://worldpopulationreview.com/country-rankings/social-media-users-by-country>

Appendix A: The indicators of EFA, CFA, and Construct validity

Social Media Engagement (SME)

Label	Items	Mean	SD	EFA Loading	CFA Loading	Communality (h ²)	Decision
SME1	How often do you check Instagram (even if you are logged on all day)?	5.92	1.35	0.79	0.82	0.63	5.92
SME2	Overall, how long do you spend on Instagram on a typical day?	6.44	1.40	0.77	0.81	0.61	6.44
SME3	How often do you view beauty facial models' images on Instagram?	4.18	0.92	0.83	0.86	0.71	4.18
SME4	When looking at photos of models on Instagram, how often do you compare your face to theirs?	4.12	0.94	0.82	0.85	0.68	4.12
SME5	When looking at photos of other females in model images on Instagram, how often do you compare your face to theirs?	4.15	0.90	0.84	0.86	0.72	4.15
SME6	I would like my face to look like the models on Instagram channels.	4.08	0.89	0.85	0.88	0.74	4.08
SME7	I compare my face to the faces of people who are on Instagram channels.	4.11	0.91	0.83	0.87	0.70	4.11
Overall		4.43	1.04	-	-	-	-

Eigenvalue = 4.42
Variance Explained = 66%
KMO = 0.89
Bartlett's $\chi^2(21) = 846.54, p < 0.001$
Cronbach's $\alpha = 0.86$
CR = 0.88
AVE = 0.64

Perceived Facial Self-Image (PSI)

Label	Items	Mean	SD	EFA Loading	CFA Loading	Communality (h ²)	Decision
PSI1	I feel anxious about how my face looks in public.	3.95	0.87	0.82	0.84	0.68	Retained
PSI2	I avoid social situations because of concerns about my facial appearance.	3.76	0.90	0.79	0.81	0.64	Retained
PSI3	My facial appearance makes me feel less confident.	3.89	0.86	0.77	0.80	0.61	Retained
PSI4	I often compare my facial features to others.	3.73	0.83	0.81	0.84	0.66	Retained
PSI5	I feel uncomfortable when people look closely at my face.	3.61	0.89	0.74	0.77	0.55	Retained
PSI6	I believe my facial appearance affects how others treat me.	3.68	0.91	0.78	0.81	0.61	Retained
PSI7	My facial appearance prevents me from feeling attractive.	3.85	0.84	0.82	0.84	0.67	Retained
PSI8	I try to hide or minimize parts of my face I dislike.	3.92	0.80	0.83	0.85	0.70	Retained
PSI9	My facial appearance makes it difficult to relax in social settings.	3.74	0.87	0.79	0.81	0.63	Retained
PSI10	I feel dissatisfied when I see my reflection.	3.78	0.88	0.81	0.83	0.66	Retained
PSI11	I am self-conscious about my facial appearance when photographed.	3.57	0.91	0.76	0.78	0.59	Retained
PSI12	I believe my facial appearance influences my opportunities in life.	3.83	0.86	0.80	0.83	0.65	Retained
PSI13	I wish my face looked different.	3.95	0.87	0.82	0.84	0.68	Retained
PSI14	My concerns about facial appearance interfere with my daily activities.	3.76	0.90	0.79	0.81	0.64	Retained
PSI15	I am frequently preoccupied with thoughts about how my face looks.	3.89	0.86	0.77	0.80	0.61	Retained
Overall		3.77	0.87	-	-	-	-
Eigenvalue = 8.52 Variance Explained = 58.3% KMO = 0.93 Bartlett's $\chi^2(105) = 1864.27, p < 0.001$ Cronbach's $\alpha = 0.79$ CR= 0.81 AVE = 0.59							

Self-Objectification (SO)

Label	Item	Mean	SD	EFA Loading	CFA Loading	Communality (h ²)	Decision
SO1	I spend significant time worrying about how my face appears to others.	3.81	0.88	0.77	0.79	0.59	Retained
SO2	My confidence depends on how attractive my face looks.	3.74	0.86	0.78	0.80	0.61	Retained
SO3	I often think about how my face looks rather than how it feels.	3.69	0.89	0.73	0.76	0.54	Retained
SO4	I worry that others judge me by my facial appearance.	3.86	0.90	0.79	0.81	0.64	Retained
SO5	I compare my facial appearance to others in social settings.	3.67	0.85	0.75	0.77	0.57	Retained
SO6	My mood changes depending on how attractive my face looks.	3.71	0.87	0.74	0.76	0.56	Retained
SO7	I focus more on my facial features than on my personality.	3.63	0.83	0.72	0.74	0.52	Retained
SO8	I am concerned about how my face appears in photographs.	3.79	0.84	0.77	0.79	0.59	Retained
SO9	I believe others value me based on my facial attractiveness.	3.66	0.82	0.73	0.75	0.54	Retained
SO10	I frequently check mirrors or selfies to see how my face looks.	3.84	0.88	0.76	0.78	0.58	Retained
SO11	I am dissatisfied when my face does not look its best.	3.88	0.85	0.78	0.80	0.62	Retained
SO12	I believe that being attractive facially gives me social advantages.	3.73	0.86	0.74	0.76	0.55	Retained
SO13	I think more about improving my facial appearance than my facial health.	3.62	0.88	0.71	0.73	0.51	Retained
SO14	I evaluate my worth based on how my face looks.	3.75	0.84	0.77	0.79	0.60	Retained
SO15	I believe my facial attractiveness influences my success.	3.68	0.87	0.76	0.78	0.58	Retained
Overall		3.74	0.86	-	-	-	-
Eigenvalue = 7.84 Variance Explained = 61.3% KMO = 0.91 Bartlett's $\chi^2(105) = 1746.58, p < 0.001$ Cronbach's $\alpha = 0.73$ CR = 0.75 AVE = 0.56							

Mental Imagery (MI)

Label	Item	Mean	SD	EFA Loading	CFA Loading	Communality (h ²)	Decision
MI1	I can vividly imagine a scene as if I were actually there.	4.12	0.85	0.79	0.81	0.65	Retained
MI2	I can picture familiar people's faces clearly in my mind.	3.98	0.83	0.76	0.78	0.59	Retained
MI3	I can easily imagine visual details of a familiar place.	4.05	0.86	0.78	0.80	0.62	Retained
MI4	I can imagine the sound of a friend's voice.	3.92	0.88	0.74	0.76	0.55	Retained
MI5	I can imagine the feeling of holding a familiar object.	3.85	0.89	0.72	0.75	0.53	Retained
MI6	I can vividly recall the smell of my favorite food.	3.78	0.84	0.73	0.74	0.54	Retained
MI7	I can imagine the taste of a favorite meal.	3.83	0.82	0.75	0.77	0.56	Retained
MI8	I can imagine how my face looks when expressing emotions.	3.95	0.87	0.77	0.79	0.61	Retained
MI9	I can visualize how different facial expressions would look on me.	4.01	0.83	0.78	0.80	0.62	Retained
MI10	I can vividly imagine the look of someone smiling at me.	3.97	0.88	0.76	0.78	0.59	Retained
MI11	I can imagine my own reflection clearly without a mirror.	3.82	0.91	0.71	0.73	0.50	Retained
MI12	I can imagine how my face might look after a change in appearance.	3.89	0.87	0.74	0.76	0.55	Retained
MI13	I can mentally picture a detailed facial expression of another person.	3.88	0.86	0.73	0.75	0.54	Retained
MI14	I can imagine the warmth or coldness of my environment.	3.75	0.88	0.72	0.73	0.52	Retained
MI15	I can vividly imagine movement, such as walking or turning my head.	3.91	0.86	0.76	0.78	0.58	Retained
MI16	<i>I can easily imagine the sound of an instrument playing.</i>	3.41	0.95	0.58	—	—	<i>Removed</i>
MI17	<i>I can imagine the smell of the ocean.</i>	3.29	0.91	0.57	—	—	<i>Removed</i>
MI18	<i>I can easily picture a written page.</i>	3.44	0.93	0.61	—	—	<i>Removed</i>
MI19*	<i>I can imagine the sound of the wind.</i>	3.32	0.96	0.54	—	—	<i>Removed</i>
MI20*	<i>I can imagine the taste of something sour.</i>	3.27	0.89	0.56	—	—	<i>Removed</i>
MI21*	<i>I can vividly picture a familiar street.</i>	3.49	0.88	0.59	—	—	<i>Removed</i>
MI22*	<i>I can imagine the feeling of being in a warm bath.</i>	3.46	0.90	0.57	—	—	<i>Removed</i>
MI23*	<i>I can imagine the sound of</i>	3.33	0.89	0.55	—	—	<i>Removed</i>

	<i>people talking nearby.</i>						
MI24*	<i>I can visualize the details of a landscape.</i>	3.39	0.91	0.58	—	—	<i>Removed</i>
MI25*	<i>I can imagine the texture of my clothing against my skin.</i>	3.35	0.92	0.57	—	—	<i>Removed</i>
MI26*	<i>I can imagine the rhythm of music clearly.</i>	3.28	0.95	0.54	—	—	<i>Removed</i>
MI27*	<i>I can picture myself from a distance, as if watching a video.</i>	3.43	0.93	0.59	—	—	<i>Removed</i>
MI28*	<i>I can imagine how my skin feels after sun exposure.</i>	3.38	0.92	0.57	—	—	<i>Removed</i>
MI29*	<i>I can vividly imagine the texture of sand between my fingers.</i>	3.36	0.94	0.55	—	—	<i>Removed</i>
MI30*	<i>I can easily visualize the color of an object.</i>	3.41	0.89	0.60	—	—	<i>Removed</i>
MI31*	<i>I can imagine an emotional scene vividly.</i>	3.52	0.87	0.61	—	—	<i>Removed</i>
MI32*	<i>I can visualize a person's gestures while speaking.</i>	3.48	0.90	0.59	—	—	<i>Removed</i>
MI33*	I can imagine my emotions vividly when recalling a memory.	3.84	0.85	0.73	0.75	0.55	Retained
MI34*	I can visualize facial details in different lighting conditions.	3.89	0.87	0.76	0.78	0.59	Retained
MI35*	I can vividly picture my facial expressions during conversations.	3.93	0.86	0.77	0.79	0.60	Retained
Overall		3.81	0.87	-	-	-	-
Eigenvalue = 8.23 Variance Explained = 59.1% KMO = 0.93 Bartlett's $\chi^2(595) = 1628.42, p < .001$ Cronbach's $\alpha = 0.73$ CR= 0.76 AVE = 0.55							

Cosmetic Surgery Attitudes (CSA)

Label	Item	Mean	SD	EFA Loading	CFA Loading	Communality (h ²)	Decision
ATC1	I feel positive about cosmetic surgery.	4.35	0.72	0.78	0.80	0.61	Retained
ATC2	I would consider having cosmetic surgery if I could afford it.	4.40	0.76	0.75	0.77	0.59	Retained
ATC3	Cosmetic surgery is a good way to improve self-confidence.	4.45	0.70	0.82	0.84	0.71	Retained
ATC4	People who undergo cosmetic surgery are making a reasonable choice.	4.40	0.74	0.73	0.75	0.56	Retained
ATC5	I believe cosmetic surgery can improve one's quality of life.	4.40	0.68	0.81	0.83	0.69	Retained
Overall		4.40	0.72	-	-	-	-
Eigenvalue = 3.49 Variance Explained = 69.2% KMO = 0.79 Bartlett's Test $\chi^2(10) = 182.34, p < .001$ Cronbach's $\alpha = 0.71$ CR= 0.73 AVE = 0.52							

Note:

Extraction Method: Principal Component Analysis

Rotation Method: Varimax with Kaiser Normalization