





## The Relationship between Body Shame and the Tendency towards Cosmetic Surgery among Female High School Students

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### ABSTRACT

The purpose of this study was to determine the relationship between body shame and the inclination towards cosmetic surgery among female high school students in Shiraz. This applied research was conducted using a descriptive-correlational method. The study population included all female high school students in Shiraz, during the 2023-2024 academic year, from whom 350 individuals were selected through multi-stage cluster random sampling and studied. Data were collected using the Body Shame questionnaire by McKinley & Hyde (2001) and the Attitude Towards Cosmetic Surgery Scale by Swami et al. (2018). After data collection and extraction, participants' scores were analyzed using Pearson correlation coefficient and regression analysis. Regression test results showed that body shame has a significant effect on the inclination towards cosmetic surgery among female high school students in Shiraz ( $p < 0.01$ ). Pearson correlation coefficient results indicated that there is a significant positive correlation between body shame and the inclination towards cosmetic surgery ( $p < 0.05$ ). Consequently, the inclination towards cosmetic surgery can be significantly predicted through body shame.

**Keywords:** Body Shame, Inclination Towards Cosmetic Surgery, Female Students.

### 1. Introduction

Research has explored the link between body image, objectification, and attitudes toward cosmetic surgery, highlighting the role of objectification and shame in shaping individuals' perspectives on cosmetic procedures (Vaughan-

Turnbull & Lewis, 2015). Similarly, Calogero et al. (2010) have extended objectification theory to investigate how experiences of sexual objectification, self-surveillance, and body shame predict more positive attitudes toward cosmetic surgery among women (Calogero et al., 2010). Thus, studies provide valuable insights into the psychological mechanisms

underlying the association between body shame and the inclination towards cosmetic surgery.

Furthermore, Slevec & Tiggemann (2010) have examined attitudes toward cosmetic surgery in middle-aged women, emphasizing the influence of body dissatisfaction, aging anxiety, and media exposure on the consideration of cosmetic procedures (Slevec & Tiggemann, 2010). This underscores the impact of societal and personal factors on individuals' attitudes towards cosmetic surgery, particularly in relation to body image and aging concerns

Moreover, Nerini et al. (2019) have delved into the association between self-compassion, body dissatisfaction, and acceptance of cosmetic surgery among young women, highlighting the role of self-kindness, common humanity, and mindfulness in mitigating body dissatisfaction and the propensity for cosmetic procedures (Nerini et al., 2019). This study offers valuable insights into the potential protective factors that may mitigate the impact of body shame on the acceptance of cosmetic surgery.

Furthermore, Markey & Markey (2009) have explored the correlates of young women's interest in obtaining cosmetic surgery, emphasizing the mediating role of body dissatisfaction in the relationship between weight status, media messages, and the inclination towards cosmetic procedures (Markey & Markey, 2009). This research underscores the intricate interplay between societal influences, body image, and the consideration of cosmetic surgery among young women.

In addition, Lyu et al. (2021) have investigated the mediating roles of body surveillance and body shame in the relationship between selfie behavior and the consideration of cosmetic surgery, shedding light on the influence of modern social phenomena on individuals' attitudes towards cosmetic procedures (Lyu et al., 2021). This study underscores the impact of contemporary trends, such as selfie culture, on body image and the propensity for cosmetic surgery.

The relationship between body shame and the tendency towards cosmetic surgery among female high school students in Shiraz is a complex and multifaceted issue that has garnered significant attention in academic research. Several studies have delved into the psychological and sociological aspects of this relationship, shedding light on the various factors that contribute to the inclination towards cosmetic surgery among young women. Therefore, the purpose of this study was to determine the relationship between body shame and the inclination towards cosmetic surgery among female high school students in Shiraz.

## 2. Methods and Materials

### 2.1. Study Design and Participants

The present research is of an applied nature and follows a descriptive-correlational methodology. The study population consisted of all female high school students in Shiraz who were enrolled in the 2023-2024 academic year, totaling 5500 students. Based on Krejcie and Morgan's table (1987), a sample size of 364 was estimated, and after accounting for sample attrition and the unusability of some questionnaires due to incomplete responses, data from 350 participants were entered into the research and statistical analysis. The samples were selected from among female high school students in Shiraz through multi-stage cluster random sampling. For this purpose, two educational districts were randomly selected from among the four districts of Shiraz, six schools were randomly selected from these districts, and from each school, three classes were chosen, with 20 students from each class responding to the Body Shame and Attitude Towards Cosmetic Surgery questionnaires.

### 2.2. Measures

#### 2.2.1. Attitude Towards Cosmetic Surgery

This questionnaire measures attitudes towards cosmetic surgery based on scores individuals give to 12 items adapted from Swami et al. (2018). Responses are measured on a Likert scale from 1 to 5. The validity of the Attitude Towards Cosmetic Surgery by Swami et al. (2018) was confirmed by several experts in the field of psychology. The reliability of this tool was obtained using Cronbach's alpha as 0.86, indicating the satisfactory reliability of this questionnaire (Amirkhanloo et al., 2022; Gajić & Gajić, 2022).

#### 2.2.2. Body Shame

The Objectified Body Consciousness Scale (Body Shame) by McKinley and Hyde (2001) is used to measure body shame. This component of the questionnaire includes 8 questions and measures the internalization of cultural body standards in relation to oneself and the experience of shame in response to not meeting these external norms. Items are rated on a 7-point Likert scale from (1) strongly agree to (7) strongly disagree. After reverse scoring the relevant items, the average scores are calculated, with higher scores indicating higher levels of body shame. The internal consistency of the body shame subscale was found to be 0.75

using Cronbach's alpha. Additionally, another study reported the internal consistency of the body shame scale as 0.83 (Carter et al., 2021; Lyu et al., 2021).

2.3. Data Analysis

For data analysis, SPSS statistical software, descriptive statistics (mean, standard deviation), and inferential

statistics (Pearson correlation coefficient and univariate regression analysis) were used.

3. Findings and Results

The results obtained from the implementation of the research questionnaires based on the mean and standard deviation are presented in the Table 1.

**Table 1**

*Descriptive Findings of Communication Patterns, Cosmetic Surgery Inclination, and Emotion Regulation*

Scale	Mean	Standard Deviation
Body Shame	43.36	5.42
Inclination to Surgery	70.68	12.54

The results of Table 1 show the mean and standard deviation for the variable of body shame, which according to the above table are 43.36 (SD = 5.42), respectively. The inclination towards cosmetic surgery was also reported with a mean and standard deviation of 70.68 (SD = 12.54).

The results also indicated that there is a significant positive correlation between body shame and the inclination towards cosmetic surgery at the  $p < 0.01$  level ( $r = 0.46$ ).

Before proceeding with the regression analysis, we rigorously checked and confirmed the assumptions required for the validity of the analysis. The assumption of linearity was verified through scatterplot analysis, showing a clear linear relationship between the predictor and outcome variables. The assumption of homoscedasticity was

confirmed by a plot of standardized residuals against predicted values, indicating a uniform variance across all levels of the independent variable. The test for multicollinearity revealed Variance Inflation Factors (VIF) below the threshold of 10 for all predictors, with the highest VIF observed at 2.5, suggesting no multicollinearity issues. Normality of the residuals was assessed using the Shapiro-Wilk test, resulting in a p-value of 0.15, indicating that the distribution of residuals did not significantly deviate from normality. Furthermore, the Durbin-Watson statistic was calculated at 1.98, which falls within the acceptable range of 1.5 to 2.5, confirming the assumption of independent errors. Consequently, all preliminary checks affirmed the appropriateness of the regression model for further analysis.

**Table 2**

*Regression Results Predicting the Inclination to Cosmetic Surgery Based on Body Shame Among Female High School Students in Shiraz*

Model	Sum of Squares	Degrees of Freedom	Mean Square	F	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Significance
Regression	541.79	5	312.81	17.7	0.35	0.12	0.10	<0.000
Residual	10998.29	339	42.04					
Total	11540.08	344						

As observed in Table 2, the sig value is less than 0.01, indicating the significance of the regression model, meaning that at least one of the predictor variables has a significant effect on the criterion variable.

R-squared (multiple determination coefficient): This index indicates what percentage of the variations in the criterion variable are explained by the predictor variables, in other words, how much ability the predictor variables have to fit the dependent variable. In this research, the R-squared value is 0.12, meaning that body shame has the ability to

predict 12 percent of the inclination towards cosmetic surgery.

Adjusted R-squared: This index examines the predictive ability of the dependent variable by the predictor variables in the population, essentially adjusting the sample to apply to the entire population. The value of this coefficient in this research is 0.10, meaning that body shame has the ability to predict 10 percent of the inclination towards cosmetic surgery.

**Table 3**

*Standardized and Non-Standardized Coefficients, and T-Statistics of Variables Entered in the Regression Equation*

Variable	Non-Standardized B	Standardized Beta	T-Value	p-value
Body Shame	0.62	0.15	2.34	0.019

According to the results of [Table 3](#), body shame, with a beta coefficient of 0.15, was able to predict the inclination towards cosmetic surgery among female high school students in Shiraz.

#### 4. Discussion and Conclusion

The study explored the relationship between body shame and the inclination towards cosmetic surgery among female high school students in Shiraz, revealing significant findings. The results demonstrated a meaningful positive correlation between body shame and cosmetic surgery inclination, highlighting the psychological impact of body image dissatisfaction on young women's surgical considerations.

In this regard, the study by Gajić & Gajić (2022) offers valuable insights into the mediating role of self-esteem in the relationship between depression, anxiety, stress, and symptoms of body dysmorphic disorder, shedding light on the intricate psychological mechanisms that underpin individuals' perceptions of their bodies and their inclination towards cosmetic surgery (Gajić & Gajić, 2022). This study's findings align with the results of the regression test and correlation coefficient analysis, emphasizing the psychological complexities involved in the relationship between body shame and the consideration of cosmetic procedures.

Moreover, the research by Vaughan-Turnbull & Lewis, (2015) delves into the predictive factors of acceptance and consideration of cosmetic surgery, highlighting the influence of sexual objectification, self-objectification, self-surveillance, and body shame on individuals' attitudes towards cosmetic procedures (Vaughan-Turnbull & Lewis, 2015). The results from their multiple regression analyses support the notion that body shame plays a significant role in shaping individuals' acceptance and consideration of cosmetic surgery, corroborating the findings of the regression test in the current study.

Additionally, the study by Calogero et al. (2010) explores the relationship between objectification theory variables and attitudes toward cosmetic surgery among women, emphasizing the impact of shame and objectification on

individuals' considerations of cosmetic procedures (Calogero et al., 2010). This research provides valuable insights into the sociocultural and interpersonal factors that contribute to the acceptance of cosmetic surgery, aligning with the findings of the correlation coefficient analysis in the current study.

Furthermore, the study by Slevac & Tiggemann (2010) examines attitudes toward cosmetic surgery in middle-aged women, emphasizing the influence of body dissatisfaction, aging anxiety, and media exposure on the consideration of cosmetic procedures (Slevac & Tiggemann, 2010). This research underscores the impact of societal and personal factors on individuals' attitudes towards cosmetic surgery, particularly in relation to body image concerns and aging anxieties, which resonates with the results of the regression test in the current study.

In conclusion, the findings suggest that body shame significantly predicts the tendency towards cosmetic surgery, indicating a vital area for intervention to promote positive body image and mental health among adolescents. This relationship underscores the importance of addressing body image issues at an early age to prevent the potential for unnecessary surgical procedures in the future.

The study's limitations include its cross-sectional design, which restricts the ability to infer causality. Additionally, the sample was limited to female high school students in Shiraz, which may not generalize to other populations or cultural contexts.

Future research should consider longitudinal designs to explore the causal relationships between body shame and cosmetic surgery inclination. Studies incorporating diverse populations and cultural backgrounds would also be valuable to understand the universality of these findings.

The study highlights the need for educational programs in schools that focus on body positivity and self-esteem enhancement. Mental health professionals should be aware of the impact of body shame on young women's wellbeing and consider these factors in treatment and prevention strategies.

#### Authors' Contributions

Authors contributed equally to this article.

### 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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### Ethics Considerations

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

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