

## Appearance comparison, fear of negative evaluation and attitudes toward cosmetic surgery in adults

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### Abstract

**Objective:** To investigate the connection between appearance comparison, fear of negative evaluation, and attitude towards cosmetic surgery, and to find out the mediating role of fear of negative evaluation.

**Method:** The cross-sectional study was conducted at the Riphah Institute of Clinical and Professional Psychology, Riphah International University, Lahore, from April to November 2022, and comprised adults aged 19-40 years of both genders from across the country. Data was collected online using a self-designed demographic sheet, the Physical Appearance Comparison Scale, the Acceptance of Cosmetic Surgery Scale, and the Fear of Negative Appearance Evaluation Scale. Data was analysed using SPSS 21.

**Results:** Of the 405 participants, 337(83.2%) were females and 68(16.8%) were males. The overall mean age was  $27.17 \pm 5.450$  years. Appearance comparison related to body image was positively linked with fear of negative evaluation and attitudes towards cosmetic surgery ( $p < 0.05$ ), while appearance comparison related to body image and fear of negative evaluations significantly predicted attitudes towards cosmetic surgery ( $p < 0.005$ ). Moreover, fear of negative evaluation significantly mediated between appearance comparison related to body image and attitude towards cosmetic surgery ( $p < 0.000$ ).

**Conclusion:** Appearance comparison related to body image was found to be significantly associated with fear of negative evaluation and attitude towards cosmetic surgery.

**Keywords:** Body image, Attitudes, Cosmetic surgery, Fear of negative evaluation. (JPMA 76: 652; 2026)

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### Introduction

Body image has gained much attention in the last decade as it is considered a top concern for people these days.<sup>1</sup> The multifaceted concept that includes individuals' thoughts, feelings and behaviours regarding their body and bodily appearance is known as body image.<sup>2</sup> People's perception of themselves about how they look and how they appear to others is most important for wellness<sup>3</sup> This phenomenon is equally important for both men and women, and can crop up anytime across a lifetime.<sup>4</sup> Body image dissatisfaction occurs when there is an inconsistency between actual and ideal body image. The use of different social media platforms has been linked to body image dissatisfaction because they promote filtered and edited images. This unrealistic promotion creates an ideal body image, specially for adults.<sup>1</sup> Pakistan has 71.70 million social media users, of whom 53.20 million are adults.<sup>5</sup> Adulthood is a critical developmental and a transitional phase in which frequent bodily changes occur.<sup>6</sup> Attitudes towards one's appearance are cognitively and affectively grounded on different personality, psychological or sociocultural

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factors.<sup>7</sup> Social media platforms play a major role in causing dissatisfaction during this stage.<sup>8</sup> Research has indicated that dissatisfaction or having negative views of oneself in adolescence can lead to eating disorders, self-esteem issues, depression, anxiety, unhealthy dieting, risky behaviours, like too much exercise, use of steroids, alcohol/smoking, and cosmetic surgery.<sup>7</sup>

Cosmetic surgery has become one of the fastest-expanding medical practices around the world.<sup>9</sup> Recently, the International Society of Aesthetic Plastic Surgery has reported an overall 19.3% increase in cosmetic surgery procedures.<sup>10</sup> Pakistan is among the top 20 countries globally for these procedures. Recent studies provide insights into the increasing trend in these behaviours in Pakistan, as seen through social media.<sup>11</sup>

Cosmetic surgery refers to the repositioning, conservation or enhancement of any body part for the improvement of physical appearance through the use of surgical and non-surgical methods.<sup>12</sup> Liposuction, breast augmentation, Botox injections, and eyelid and nose surgery are the most common procedures.<sup>13</sup> The purpose of cosmetic surgeries has changed over time into enhancing beauty and diminishing aging effects to meet the beauty standards of a society.<sup>14</sup> Attitudes towards cosmetic surgery have been dramatically updated from negative to positive across various geographical locations as well<sup>15</sup> However, gender

differences also exist, as women are more prone to seeking cosmetic surgeries, with their ratio being almost 90% compared to men despite negative consequences related to it.<sup>9</sup> Different factors are held responsible for decisions and predisposition towards cosmetic surgery, including availability and accessibility of aesthetic centres, negative body image, negative evaluation by others, self-esteem, social pressure, age, beauty-ideal internalisation, personal benefits, and willingness.<sup>16</sup>

The fear of receiving negative comments or feedback greatly influences one's self-image. Distress, anxiety and expectation that one would be critically evaluated by others is known as the fear of negative evaluation.<sup>17</sup> It is one of the constructs of social anxiety disorder and its core diagnostic feature in the Diagnostic and Statistical Manual of Mental Disorders Fifth Edition, Text Revision (DSM-5TR).<sup>18</sup> This concept arises from rigorous self-appraisal and is related to disruptive behaviours, like social isolation, difficulty in making friends, fear of presentation in public, disturbed academic performance, acquisition of social skills, depressive symptoms, and quality of life.<sup>19,20</sup> Moreover, elevated anxiety about receiving a poor review can also result in significant levels of stress, anxiety and guilt-based emotions.<sup>20</sup> Individuals with this kind of fear often avoid situations in which they could be assessed negatively or rejected, and prefer to use body gestures instead of speech expressions.<sup>21</sup> Distress of negative evaluation is reported as a prominent symptom of developing social anxiety, specifically in adolescence, along with an increased inclination towards artificial surgeries.<sup>18</sup>

With social media promotions influencing people to consider cosmetic procedures in Pakistan, the trend has major consequences and is influenced by a variety of circumstances. However, research in this area is crucial to assess the motivation behind cosmetic surgery and its psychological effects in Pakistan. The current study was planned to fill the gap in literature by investigating the connection between appearance comparison, fear of negative evaluation, and attitude towards cosmetic surgery, and to find out the mediating role of fear of negative evaluation.

## Subjects and methods

The cross-sectional study was conducted at the Riphah Institute of Clinical and Professional Psychology, Riphah International University, Lahore, from April to November 2022. After approval from the institutional ethics review committee, the sample size was determined using G\*Power<sup>22</sup> calculator with 0.95 power, 0.05 alpha, and 0.3 effect size. The sample was raised from among the general population using non-probability snowball sampling

technique. Those included were adults of either gender aged 19-40 years regardless of marital status who could read and understand English. Individuals having a diagnosis of any physical disability or psychological disorder, and those who had taken cosmetic surgery procedures for a genuine reason, like burns victims, natural physical deformity, and deformity caused by accidents, were excluded. The data-collection tool was a Google Form that included the informed consent document, a brief description of the study and a demographic sheet. Then the forms were distributed through emails, Facebook and WhatsApp. The self-designed demographic sheet included basic information about participants' age, gender, educational level, marital status, family system, monthly income, socioeconomic status (SES), family history of cosmetic surgery procedures, and history regarding visits to doctors and treatments, etc.

Also used was the revised Physical Appearance Comparison Scale (PACS-R)<sup>23</sup> to measure the dissatisfaction with body image and the frequency of comparison with the ideal figure. The 11 items were scored on a five-point Likert scale, ranging from 0 = never to 4 = always, and higher scores indicated greater appearance comparison. The reliability of the scale in the current study was 0.96.

The Acceptance of Cosmetic Surgery Scale (ACSS)<sup>24</sup> was used to evaluate the 3 different attitudinal mechanisms related to cosmetic surgery: interpersonal (assess attitudes linked to the self-pleased benefits of having cosmetic surgery), social (assess social motives to cosmetic surgery), and consider (assess the possibility that a person would consider having cosmetic surgery). The 15 items were scored on a five-point Likert scale, ranging from 1=strongly disagree to 5=strongly agree, with higher scores indicating greater chances of acceptance of cosmetic surgery. The reliability of the scale in the current study was 0.97.

The Fear of Negative Appearance Evaluation Scale (FNAES)<sup>25</sup> was used to check anxiety related to physical appearance. The 6 items were rated using a 5-point Likert tool, ranging from 1=not at all to 5=extremely, with higher scores indicating more fear of negative evaluation. The reliability of the scale in the current study was 0.92.

The collected data was analysed using SPSS 21. All the variables were continuous. Moreover, all the postulations of the parametric statistics were confirmed before extracting analyses, i.e., normality test, (p-p plots, q-q plots, Kolmogorov-Smirnov test, and homogeneity of variance, which was verified with Levene's tests). Descriptive statistics were expressed, as appropriate, as mean  $\pm$  standard deviation, or as frequencies and percentages. In inferential statistics, Pearson product-moment correlation,

multiple linear regression, and mediation analysis through PROCESS<sup>26</sup> were used.  $P < 0.05$  was considered significant.

**Results**

Of the 405 participants, 337(83.2%) were women and 68(16.8%) were men. The overall mean age of the respondents was  $27.17 \pm 5.450$  years. Overall, 315(77.8%) subjects lived in urban areas, 256(63.2%) belonged to the middle class, 281(69.4%) were part of a nuclear family system, 352(86.9%) had completed graduation, 181(44.7%) were unemployed, 118(29.1%) were employed, 106(26.2%) were self-employed, 185(45.7%) were married, 198(48.9%) were single, 18(4.4%) were separated, 4(1%) were divorced, and 258(63.7%) agreed that people should opt for cosmetic surgery to enhance their beauty.

The mean PACS-R score was  $23.51 \pm 11.25$ , mean FANES score was  $19.25 \pm 6.274$ , and the mean ACSS score was  $45.26 \pm 16.26$ .

Multiple linear regression depicted that appearance comparison related to body image and fear of negative evaluation were significant predictors of agreeable attitude towards cosmetic surgery in adults (Table 1).

Path 'a', focussing on the link between appearance comparison related to body image (independent variable) and fear of negative evaluation (mediator), suggested a significant relationship between the variables. Path 'b', focussing on the association of fear of negative evaluation

**Table-1:** Predictors of attitudes towards cosmetic surgery in young adults.

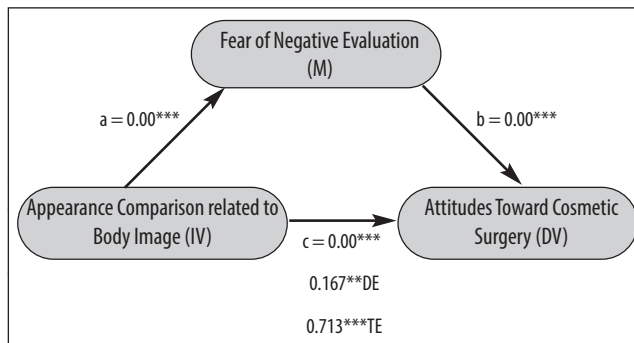
Variables	Attitudes Toward Cosmetic Surgery		95% C. I
	B	$\beta$	
Constant	0.061		-0.100 - 0.222
Appearance Comparison related to Body Image	0.178	0.197	0.059 - 0.297
Fear of Negative Evaluation	0.616	0.654	0.492 - 0.740
R <sup>2</sup>	0.702		
F	472.497		
$\Delta R^2$	0.702		
$\Delta F$	472.497		

\* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ ,  $\beta$ : Standardised coefficient, B: Unstandardized coefficient, CI: Confidence interval,  $\Delta R^2$ : Change in R2,  $\Delta F$ : Change in F.

**Table-2:** Mediation analysis between appearance comparison related to body image and acceptance of cosmetic surgery.

Antecedent		M (FNAES)			Y (ACSS)					
		B	SE	p-value	B	B	SE	p-value	B	
X (ACRBI)	$\alpha$	0.87	0.02	0.000***	0.392	C'	-0.173	0.06	0.005	-0.073
M (FNE)		-	-	-	-	B	0.62	0.06	0.000	-0.271
		R <sup>2</sup> = 0.83		R <sup>2</sup> =0.094						
		F(1, 408) = 2041.16 $p < 0.001$			F(2, 407) = 474.69 $p < 0.01$					
Direct Effect		0.167	0.059	0.000***						
Indirect Effect		0.545		0.005**						
Total Effect		0.713	0.027	0.000***						

\*\*\* $p < 0.001$ , \*\* $p < 0.01$ , SE: Standard error, ACRBI: Appearance comparison related to body image, FNAES: Fear of Negative Appearance Evaluation Scale, ACSS: Acceptance of Cosmetic Surgery Scale.



**Figure:** Process analysis showing fear of negative evaluation as a mediator between appearance comparison related to body image and attitude towards cosmetic surgery. The indirect effect is the effect of independent variable through mediator on dependent variable, and the direct effect is the effect of independent variable on the dependent variable. Before including the mediator, the beta coefficient was 0.713 (\*\* $p < 0.001$ ) and after including the mediator, the beta coefficient was 0.168 (\*\* $p < 0.01$ ). a: Path a, b: Path b, c: Path c, DE: Direct effect, TE: Total effect.

partial mediation as the indirect effect through fear of negative evaluation was significant, and the direct effect (path c) was reduced, but it remained significant (Table 2, Figure).

**Discussion**

The current findings suggested that appearance comparison related to body image had a significant positive relation with acceptance of cosmetic surgery and fear of negative evaluation. The way individuals perceived their physical appearance directly affected their personality, social relationships and future decisions. Having good and pleasant thoughts about one's outlook is a must for a healthy and fruitful life. Individuals also remain concerned about the negative opinions of others. Distorted or unpleasant self-perception can lead to poor self-esteem, poor psychological functioning, and many other disorders, including eating patterns, depression, anxiety and adjustment issues, among the youth.<sup>27</sup> Acceptance of cosmetic surgery and fear of negative evaluation were likewise directly related to each other. Previous studies claimed that negative body image also caused negative thoughts and feelings, as the thought of

improving physical appearance led individuals to beauty-enhancing treatments.<sup>28</sup>

However, body image, either positive or negative, predicted decisions for cosmetic surgeries and increased apprehension of critical evaluation by others. Trends in surgeries have changed over time due to increasing body dissatisfaction. People like to present themselves as attractive and appealing, and want to be appreciated by others. Critique of looks by other people also affects self-image, self-esteem and confidence. This criticism may develop unhealthy or risky behaviours, especially in young adults. Therefore, people unhappy with their physical features are inclined to cosmetic treatments to enhance their beauty nowadays.<sup>8,14</sup>

Moreover, people's desire to change their physical looks directly influenced their acceptance of change through cosmetic surgeries. Individuals unsatisfied with their body image tended to have negative views about themselves and had fears of receiving similar views from social circles. Somehow, their determination to undergo physical alteration using artificial means depends on the indirect effect of fear of negative assessment by others.<sup>16</sup> Literature has found significant negative indirect effects of body image on acceptance of plastic surgery and love from significant others, and fear of negative views directly mediates among them.<sup>29</sup> Additionally, disturbing or negative schemas have been reported as prominent indicators of anxiety and desire to change.<sup>19</sup>

The current study has some limitations. The findings are not generalisable as participants with a certain age range filled out the questionnaires, who were able to understand the English language and had internet access. Also, most of the participants were females. Moreover, the data was collected through an online survey where the researcher was not available in person to answer the queries. An offline survey with questionnaires translated into respondents' native language may be used for further research and more valid results.

Regardless of the limitations, however, the present study supported the role of appearance comparison related to body image and fear of negative evaluation in the aetiology of attitude towards cosmetic surgery. Further, it would also be useful for mental health professionals to manage the attitudes towards cosmetic surgery.

## Conclusion

Appearance comparison related to body image was found to be associated with fear of negative evaluation and attitude towards cosmetic surgery. Moreover, fear of negative evaluation mediated between appearance

comparison related to body image and attitude towards cosmetic surgery.

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**RJ:** Concept, data collection, analysis, interpretation, editing, drafting and revision.

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**MN:** Concept, data collection, analysis and interpretation.