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Investigating the relationship between self-esteem and body image in patients scheduled for rhinoplasty

Abstract

Objective: The aim of this study was to investigate the relationship between body image and self-esteem in patients scheduled for rhinoplasty.

Materials and methods: This descriptive, cross-sectional study was conducted at the otorhinolaryngology clinic of a public hospital between September 2022 and June 2023. The sample consisted of 78 patients who volunteered to participate in the study. The personal information form, body image scale and Rosenberg self-esteem scale were used in the study. Descriptive statistics, t-tests, Mann-Whitney U tests, Kruskal-Wallis variance analysis and Pearson correlation analysis were used for statistical analysis.

Results: The study revealed that 41 (52.6%) of the participants were between the ages of 18 and 25, with the majority, 53 (67.9%), being female. The participants displayed high levels of self-esteem (1.18±1.38) and positive body image (157.22±21.56). The scores for self-esteem and body image were similar for different characteristics including age, gender, marital status, education level, occupation/employment, income–expenditure, having children and chronic disease ($p>0.05$). However, it was noted that individuals without a history of aesthetic surgery had significantly higher body image scores, while those who had undergone aesthetic surgery had higher self-esteem scores ($p<0.05$).

Conclusion and recommendations: Based on the results of this study, it can be concluded that patients who are scheduled for rhinoplasty have high self-esteem and positive body image. Furthermore, there was a weak negative correlation found between body image and self-esteem.

Keywords: rhinoplasty, self-esteem, body image, nursing

Introduction

Aesthetic surgery aims to transform the external appearance of an otherwise normal body part into a shape that will be perceived as more beautiful in society or the individual's mind; thus reconstructing the individual's body image and increasing the patient's satisfaction with their body[1,2]. Rhinoplasty is a surgical method used to change the shape of the nose and aims to preserve both facial aesthetics and nasal function. It is divided into functional rhinoplasty, which focuses on improving the airways, and aesthetic rhinoplasty, in which the main goal is to improve facial aesthetics. Aesthetic nose correction falls within the field of aesthetic surgery[3]. Such interventions positively affect the emotional state, body image, social life and mental health of the individual[2].

The fact that the nose is in the centre of the face plays an important role in facial beauty. For this

reason, in recent years, with the understanding of the importance of rhinoplasty in improving facial beauty, the number of patients seeking rhinoplasty has gradually increased[3]. A beautiful face improves body image and self-confidence[4]. The results of studies of aesthetic surgery show that the main psychological reasons why people resort to aesthetic surgery are depression, low self-esteem and anxiety about body image[5]. Self-esteem is the individual's perception of themself as valuable, worthy of admiration and love[6]. As long as the individual likes themself physically, self-esteem increases and they have positive feelings about themself[7].It has been reported that low self-esteem is the driving force that leads individuals to plastic surgery procedures[8].

Body image is the internal perception of an individual's external appearance, including physical, cognitive and attitudinal dimensions[5]. Body image is the picture of one's own body in the mind; it is how a person perceives the appearance of their own body[9]. If an individual feels physically well, they are more likely to have a positive body image[10]. People with a negative body image are more interested in plastic surgery[11]. Although its effects vary according to different parts of the body, body image significantly affects self-esteem. People who psychologically enjoy their body image show higher self-esteem. On the contrary, a negative body image may lead to lower self-esteem[8,12].

Successful results of aesthetic surgery improve basic psychological variables such as self-esteem, body image and mental health[13]. Although individuals know the procedure's risks, they want it because it increases their self-confidence[8]. First of all, the body image and self-esteem of patients who apply for aesthetic surgery should be determined; nurses should provide guidance and counselling to patients seeking aesthetic surgery due to deteriorated body image and low self-esteem. It is necessary to identify the reasons that cause patients with impaired body image and low self-esteem to want plastic surgery. These patients should be referred to psychiatric clinics according to their needs and should be re-evaluated for plastic surgery after receiving adequate psychological support[7].

Studies examining the relationship between body image and self-esteem in patients scheduled for rhinoplasty are limited in the literature. This study aimed to evaluate the relationship between body image and self-esteem levels in patients scheduled for rhinoplasty. The results may be used to guide care management for patients scheduled for rhinoplasty and contribute to obtaining positive patient outcomes with accurate and rapid evaluation.

Materials and methods

The study

The study was descriptive, cross-sectional and correlational research conducted in the otolaryngology clinic of a state hospital between September 2022 and June 2023.

The population of the study consisted of patients who underwent aesthetic rhinoplasty surgery in the same hospital. The known population sampling method was used to calculate the study sample. To determine the sample size, the number of patients who underwent aesthetic rhinoplasty surgery in the same hospital between June 2021 and June 2022 (n= 114) was taken into consideration and the sample size was calculated as 78 patients with a five per cent margin of error and 90 per cent confidence interval. Patients who planned to undergo aesthetic rhinoplasty surgery in the otorhinolaryngology clinic of the relevant hospital on the specified dates, were older than 18 years of age, volunteered to participate in the study, could read and write, could speak and understand Turkish, and had no mental, physical or communication disabilities were included in the study sample.

Data collection

A patient information form, the Rosenberg self-esteem scale (RSES) – short form and the body image scale (BIS) were used in the study. Data were collected by face-to-face interviews in the patient room before surgery.

Patient information form

The researchers created this form in line with the relevant literature. Age, gender, marital status, occupation/employment, education level, monthly income–expenditure, history of plastic surgery, having children and having chronic diseases were included[14].

Rosenberg self-esteem scale (RSES) – short form

The RSES was developed by Morris Rosenberg in 1965 to measure self-esteem. The Turkish validity and reliability study was conducted by Çuhadaroğlu in 1986[15]. The scale has 63 items in total, grouped into 12 domains, and the first 10 questions are used to measure self-esteem. Five of the ten questions consist of positive statements and five consist of negative statements. A four-point Likert-type scale is used to rate the statements as 'very true', 'true', 'false' and 'very false'.

Scoring involves cumulative scaling that combines the ratings of certain items. A score of 0–1 indicates high self-esteem, 2–4 indicates moderate self-esteem, and 5–6 indicates low self-esteem. The Cronbach alpha reliability coefficient of the RSES is 0.85. In this study, the Cronbach alpha reliability coefficient of the scale was found to be 0.80.

Body image scale

This tool was developed in 1953 by Secord and Jourand, the Turkish validity and reliability of the scale was conducted by Hovardaoğlu in 1989[16]. The Turkish version of the scale consists of 40 items and determines the satisfaction of the individual with each body part or function. The items are rated using a five-point Likert-type scale with responses of 'I don't like it at all', 'I don't like it', 'I am undecided', 'I like it' and 'I like it a lot', scored from 1 to 5, respectively. The total score obtained from the scale ranges from 40 to 200 with a cut-off score of 135 – those with a score below 135 are defined as the group with low or negative body image. The Cronbach alpha reliability coefficient of the Turkish version of the scale was found to be 0.91. In this study, the Cronbach alpha reliability coefficient of was found to be 0.93.

Data analysis

The IBM SPSS Statistics 26.0 program was used to analyse the data obtained in the study. Skewness and kurtosis values were used to determine whether the data were normally distributed. It was determined that the data showed normal distribution with skewness values between 0.07 and 0.27 and kurtosis values between -0.62 and 0.53. Nonparametric tests were used in some variables where parametric tests could not be performed. Descriptive statistics, t-test, Mann-Whitney U test, Kruskall-Wallis variance analysis and Pearson correlation analysis were used in statistical analyses.

Table 1: Participant descriptive characteristics (N = 78)

Characteristics		n
Age in years	18–25	41 (52.6%)
	26–60	37 (47.4%)
Gender	female	53 (67.9%)
	male	25 (32.1%)
Marital status	single	45 (57.7%)
	married	33 (42.3%)
Education level	middle education	41 (52.6%)
	university	37 (47.4%)
Occupation/ employment	civil servant	22 (28.2%)
	self-employed	20 (25.6%)
	unemployed	11 (14.1%)
	student	9 (11.5%)
	homemaker	8 (10.3%)
	worker	8 (10.3%)
Monthly income–expenditure	income less than expenditure	26 (33.3%)
	income matches expenditure	36 (46.2%)
	income more than expenditure	16 (20.5%)
Parental status	has a child	24 (30.8%)
	does not have a child	54 (69.2%)
Presence of chronic disease	yes	7 (9.0%)
	no	71 (91.0%)
Previously had aesthetic surgery	yes	5 (6.4%)
	no	73 (93.6%)

Ethics and permissions

Ethical permission was obtained from Bartın University Social and Human Sciences Ethics Committee (07.07.2022/SBB-0336) and institutional permission was obtained from the Provincial Health Directorate to which the hospital is affiliated. Permission to use the scale was obtained, via email, from the authors who studied the validity and reliability of the data collection tools. The patients included in the study were interviewed pre-operatively and informed consent was obtained after explaining the purpose of the study. The study was conducted according to the principles of the Declaration of Helsinki.

Results

Table 1 shows the descriptive characteristics of participants. Most participants (41, 52.6%) were young adults aged between 18 and 25. The majority (53, 67.9%) were female, a little more than half (45, 57.7%) were single, nearly half were university graduates (37, 47.4%) and had monthly income equivalent to expenses (36, 46.2%). Most participants (54, 69.2%) had no children, and nearly all had no chronic disease (71, 91.0%) or history of aesthetic surgery (73, 93.6%).

Table 2 shows the possible and actual ranges and means of participant RSES and BIS scores. The mean RSES score was 1.18 (±1.38), indicating that participants had high self-esteem. The mean BIS score was 157.22 (±21.56), indicating that participants generally had a positive perception of their bodies.

Table 3 shows correlation between the mean scores of the RSES and the BIS. There was a weak but significant negative correlation between self-esteem and body image (r=-0.307; p=0.006). Accordingly, increased body image scores correlated with decreased self-esteem scores. Since lower RSES scores indicate high self-esteem, this relationship suggests that as a patient's satisfaction with their body increases, their self-esteem increases.

Table 4 shows the comparison of the mean scores of RSES and BIS according to the descriptive characteristics of the patients. It was found that those who had had plastic surgery before had a significantly higher score on the RSES, and those who had not had aesthetic surgery before had a significantly higher score on the BIS ($p<0.05$). No significant difference between RSES and BIS scores were found according to age, gender, marital status, education level, occupation/employment, monthly income–expenditure, having children and having chronic disease ($p> 0.05$).

Table 2: Ranges and mean scores of the Rosenberg self-esteem scale (RSES) and body image scale (BIS)

Tool	Possible range	Reported range	Mean (±SD)
RSES	0–6	0–6	1.18 (±1.38)
BIS	40–200	112–197	157.22 (±21.56)

SD: standard deviation

Table 3: Correlation between the mean scores of the RSES and BIS

Tools		RSES	BIS
RSES	r	1	-0.307
	p		0.006*
BIS	r	-0.307	1
	p	0.006*	

r = Pearson correlation coefficient
*p<0.05

Discussion

It has been suggested that body image and self-esteem are interrelated concepts[9]. Negative body image may lead to low self-esteem[8]. Barlas et al.[17] found that body image scores of plastic surgery patients were high[17]. Hamurcu[18] reported that self-esteem decreased as body image decreased. In the current study, it was found that there was a weak but significant relationship between body image and self-esteem. This finding supports the results of studies indicating that there is a relationship between body image and self-esteem.

In this study, it was observed that the mean self-esteem and body image of participants was high. In the literature, it is stated that patients who undergo surgery for aesthetic purposes have higher self-esteem and body image than those who undergo surgery for treatment[19]. Chowdhury et al.[3] found that the pre-operative self-esteem scores of patients who sought aesthetic rhinoplasty were lower than the self-esteem scores of patients who were scheduled for functional rhinoplasty, indicating that those who sought aesthetic rhinoplasty had higher self-esteem. Heidarzadeh et al.[4] reported that patients who applied for aesthetic surgery had better body image and self-esteem than patients who did not apply for aesthetic surgery; however, the differences were not statistically significant.

People with low self-esteem may believe that plastic surgery is a solution to meet the standards of society regarding their appearance. However, it has been found that people are generally dissatisfied with their bodies even after surgery. People who have a positive body image and are at peace with their

Table 4: Comparison of the descriptive characteristics of the patients and the mean scores of the RSES and BIS

Characteristic		RSES score Mean (±SD)	BIS score Mean (±SD)
Age in years	18–25	1.32 (±1.36)	158.15 (±21.68)
	26–60	1.03 (±1.40)	156.19 (±21.69)
	Test value	t=0.923, p=0.359	t=0.398, p=0.692
Gender	female	1.15 (±1.32)	157.70 (±23.42)
	male	1.24 (±1.53)	156.20 (±17.37)
	Test value	U=649.50, p=0.883	U=662, p=0.996
Marital status	single	1.18 (±1.31)	156.00 (±20.16)
	married	1.18 (±1.48)	158.88 (±23.55)
	Test value	t=-0.013, p=0.990	t=-0.580, p=0.564
Education level	middle education	1.41 (±1.50)	160.12 (±21.92)
	university	0.92 (±1.21)	154.00 (±20.98)
	Test Value	t=1.615, p=0.111	t=1.257, p=0.213
Occupation/employment	civil servant	0.86 (±1.12)	154.77 (±24.61)
	self-employed	1.35 (±1.49)	153.60 (±18.59)
	unemployed	1.27 (±1.55)	168.36 (±20.21)
	student	1.00 (±1.00)	160.00 (±20.99)
	homemaker	1.63 (±2.06)	161.88 (±20.49)
	worker	1.25 (±1.28)	149.88 (±22.45)
	Test value	KW=1.762, p=0.788	KW=5.311, p=0.395
Monthly income–expenditure	income less than expenditure	1.54 (±1.63)	158.04 (±23.95)
	income matches expenditure	1.08 (±1.38)	156.06 (±20.54)
	income more than expenditure	0.81 (±0.75)	158.50 (±20.99)
	Test value	KW=1.808, p=0.220	KW=0.287, p=0.908
Parental status	has a child	1.25 (±1.48)	159.54 (±23.17)
	does not have a child	1.15 (±1.35)	156.19 (±20.95)
	Test value	U=624, p=0.783	U=603.50, p=0.630
Presence of chronic disease	yes	1.43 (±2.14)	153.86 (±23.26)
	no	1.15 (±1.30)	157.55 (±21.54)
	Test value	U=243, p=0.919	U=233, p=0.786
Previously had aesthetic surgery	yes	2.40 (±1.67)	124.80 (±17.92)
	no	1.10 (±1.33)	159.44 (±20.04)
	Test value	**U=83, p=0.031***	**U=39, p=0.003**

U = Mann-Whitney U test, KW = Kruskall Wallis test, t = independent variables t-test
*p<0.05

bodies may want to have plastic surgery to improve their appearance and to further improve their existing positive self-esteem because they or others want it[8]. In this study, unlike the literature, the patients in the sample showed dissatisfaction in the nasal area because only rhinoplasty was to be performed. This situation may be related to psychosocial factors of the change they want, which is a research question that should be examined separately.

Some studies report that people's self-esteem does not change after plastic surgery, suggesting that rhinoplasty does not affect people's self-esteem. According to psychological theories, characteristics such as self-esteem are multidimensional structures, and a change in beauty, which is one of these dimensions, cannot completely change the entire structure. On the other hand, according to psychoanalytic views, physical concerns can also be considered as an expression of deeper psychological problems that people do not recognise[20]. Some researchers report that psychological reasons play an important role in the desire for plastic surgery[21]. Therefore, not only characteristics such as self-esteem but also other factors should be examined[20].

In this study, age was not a significant factor affecting body image and self-esteem scores of the participants. Most of the participants in the study were young people aged between 18 and 25 years. This is consistent with a study by Çiçek[22] showing that young people are more likely to undergo rhinoplasty. The desire to look beautiful and the of onset of anxiety about this issue begins in late adolescence and early adulthood[21]. There are many studies in the literature that have found that patients who apply for plastic surgery are in young adulthood[4,19,20,23].

In this study, body image and self-esteem scores of men and women were similar. It can be said that the gender variable does not affect self-esteem and body image in patients scheduled for rhinoplasty. Similarly, Radman and Pourhoseinali's[21] found that body image scores of rhinoplasty patients were similar between the genders. Most of the participants were women in both Radman and Pourhoseinali's research and the current study. Other studies have also found that women are more common than men among patients undergoing rhinoplasty[20,23,24]. In many societies and cultures, women are more likely to undergo rhinoplasty than men[17]. In most societies, women are evaluated more according to their physical attractiveness than their abilities or personal or social achievements. The cultural or social pressure on women may cause women to want to be physically and sexually attractive, thus increasing their desire for aesthetic surgery. Since being beautiful and attractive may be a source of power for women, women may use aesthetic operations to gain power[25]. Having a career, getting married and having children is a life desire for many women, and there is a possibility that they may want to have plastic surgery to realise this desire[8].

In this study, marital status was not a significant factor affecting body image and self-esteem scores of the participants. Similarly, Radman and Pourhoseinali[21] reported no statistically significant difference in body image score between married and single rhinoplasty patients. The majority of participants in the current study were single (45, 57.7%), which is consistent with other studies that have found that the majority of rhinoplasty patients are single[4,17,19,20,21]. Among the reasons why single people consider plastic surgery more than married people, is the common belief that physical beauty is the most important factor in marriage and that it is necessary to be as beautiful as possible for a successful marriage[25].

In this study, education level was not a significant factor affecting body image and self-esteem scores of the participants. Çapar[27] evaluated the self-esteem of women who underwent aesthetic surgery and also found that there was no significant difference between the education level of women and their self-esteem after surgical intervention. In contrast, Gören[19] observed that body image and self-esteem increased as the education level increased. Similar to other studies[5,17,19,20,28] we found that 37 (47.4%) of the participants were university graduates. The fact that the majority of the sample in the study was female and had a high level of education may have increased the likelihood of applying for rhinoplasty to get help from specialists for an area of their body that they were not satisfied with.

The highest frequency of occupation in our study was civil servant (22, 28.2%), followed by self-employment (20, 25.6%). Borujeni et al.[20] reported student as the occupation with the highest prevalence, followed by unemployed and self-employed. We did not find that occupation/employment was significant in relation to body image and self-esteem scores of the participants.

In our study, nearly half the participants (36, 46.2%) had income equal to expenses. We found that income and expenditure did not significantly affect body image and self-esteem scores of the participants. Socioeconomic status

may be a motivating factor for rhinoplasty, but the fact that the majority in our study were middle-income contradicts the common perception that aesthetic surgery is usually performed by people with high incomes. Chowdhury et al.[3] suggest that the reason for the low rate of rhinoplasty in high-income individuals may be due to the institution where the study was conducted.

This study also found no significant difference in body image and self-esteem scores of participants with and without children. There were more participants who did not have children (54, 69.2%) than participants with children in the current study. Obeid et al.[26] also reported that the proportion of individuals with children in the non-rhinoplasty group (83, 51.88%) was higher than in the rhinoplasty group (70, 43.75%) and suggested that parental responsibilities and personal perceptions of family members potentially affect the decision to undergo plastic surgery.

Almost all of the patients in the current study did not have chronic disease. This may be explained by the fact that the majority of the patients who participated in the study were in young adulthood and therefore had a low probability of developing chronic diseases.

In this study, it was observed that there was a significant difference between body image and self-esteem scores of participants who had previously had aesthetic surgery and those who had not. It was found that those who had undergone plastic surgery before had higher self-esteem and less positive body image perceptions. This may be related to the positive feedback received from the environment after aesthetic surgery. In contrast, Karaca and Beydağ[7] reported that there was no significant difference between the mean body image and self-esteem scores of women who had undergone aesthetic surgery before and those who had not.

Strengths and limitations

A limitation of the study is that it was conducted only in a state hospital.

Conclusion

This study found that participants scheduled for rhinoplasty had high self-esteem and positive body image. In addition, there was a weak negative relationship between body image and self-esteem. It was found that participants with a history of aesthetic surgery had higher self-esteem and less positive body image than those who had not previously had aesthetic surgery. The variables of age, gender, marital status, educational status, income–expenditure, occupation/employment and presence of chronic disease do not affect body image and self-esteem. Before deciding on aesthetic surgery, patients should be evaluated not only physically but also psychologically and socially by different disciplines such as nurses, doctors and psychologists. We recommend qualitative research into the reasons why patients seek rhinoplasty.

Declaration of conflicting interests

The authors have declared no competing interests with respect to the research, authorship and publication of this article.

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