

ORIGINAL ARTICLE

Medicine Science 2026;15(3):1438-44

Perceived body image and satisfaction after single and combined cosmetic surgery: A cross-sectional study

Özkan Balık¹, Fatma Nilay Tutak², Fadime Cinar³, Semra Bulbulglu⁴¹Private Clinic, Plastic, Reconstructive and Aesthetic Surgery, İstanbul, Türkiye²Vetal Animal Health Products Joint Stock Company, Adıyaman, Türkiye³İstanbul Nişantaşı University, Faculty of Health Sciences, Department of Nursing, Division of Surgical Nursing, İstanbul, Türkiye⁴İstanbul Aydın University, Faculty of Health Sciences, Department of Nursing, Division of Surgical Nursing, İstanbul, Türkiye

Received 15 January 2026; Accepted 22 February 2026

Available online 31 August 2026 with doi: 10.5455/medscience.2026.01.016

Content of this journal is licensed under a Creative Commons Attribution-NonCommercial-NonDerivatives 4.0 International License.



Abstract

Cosmetic surgeries prioritize individual expectations and utilize optimal enhancement strategies, and aim to maintain functionality. The plastic surgeon must thoroughly analyze the individual's body structure before surgery and make the most appropriate choices. The impact of combined cosmetic surgeries, where several cosmetic body procedures are performed simultaneously under a single anesthesia, on patients' body image perception and satisfaction compared to single cosmetic surgeries remains poorly understood. This study examined patient satisfaction and body image perception after single and combined aesthetic body contouring procedures. This study is descriptive and cross-sectional. A sample of 96 individuals who underwent single and combined cosmetic body procedures participated in the study. Data were collected via an online platform using an introductory information form, the Body Image Scale, and the Visual Analog Scale for Satisfaction (VAS-S). Data analysis involved the descriptive statistics and nonparametric tests. All individuals who underwent cosmetic body procedures in this study were female, with a mean age of 34.15 ± 6.48 , and had between one to four children. 96.9% had a spouse or partner, and 70.8% had a good financial status. Of the individuals who underwent cosmetic body procedures, 56.2% underwent single procedures, and 43.8% underwent combined cosmetic body procedures. In this study, those with a high-income level had a better body image perception ($p < 0.001$); however, combined surgery resulted in both higher body image and satisfaction regardless of income level ($p < 0.001$). There was a positive, moderate, and statistically significant relationship between body image perception and satisfaction among individuals who underwent cosmetic body procedures ($r = 0.341$, $p = 0.034$). The results of this study showed that individuals who underwent combined cosmetic surgery had better body image perception and satisfaction than those who underwent single cosmetic surgery. We recommend a detailed analysis of individuals' expectations before undergoing cosmetic surgery.

Keywords: Aesthetic surgery, body aesthetic, cosmetic surgery, perceived body image, satisfaction

Introduction

Combined cosmetic body surgeries involve performing one or more cosmetic procedures in a single surgical session [1]. Individuals who wish to undergo surgery to reshape their body in a single day and under a single anesthesia may opt for combined cosmetic surgeries [2]. In this context, combinations are chosen based on complementary procedures. Abdominoplasty and liposuction, cosmetic breast surgery, and arm lift, or thigh lift surgeries are often planned simultaneously [3-5]. This allows multiple cosmetic surgeries to be performed during a single anesthesia session. To achieve the best cosmetic and functional

results in combined cosmetic surgeries, the patient's expectations, recovery potential, any comorbidities, and body structure must be thoroughly analyzed, and a patient-centered approach should be adopted [6].

Body contouring procedures constitute an important part of cosmetic surgery. Individuals may need cosmetic body procedures as they age or due to changes in body weight. In women, cosmetic needs may be caused by weight that cannot be lost after childbirth, sagging abdominal tissue, or thickening of the waist [7,8]. Combined cosmetic surgeries save time in meeting women's cosmetic needs. One of the most common

CITATION

Balık O, Tutak FN, Cinar F, Bulbulglu S. Perceived body image and satisfaction after single and combined cosmetic surgery: A cross-sectional study. Med Science. 2026;15(3):1438-44.



Corresponding Author: Semra Bulbulglu, İstanbul Aydın University, Faculty of Health Sciences, Department of Nursing, Division of Surgical Nursing, İstanbul, Türkiye
Email: semrabulbulglu@aydin.edu.tr

postpartum cosmetic body procedures for women is cosmetic breast surgery (augmentation, reduction, or lift), which can be performed in conjunction with various body contouring surgeries [9,10]. Today, it is believed that cosmetic surgery not only addresses cosmetic concerns but also boosts self-confidence, supports body image, improves quality of life, and enhances functionality [11,12]. These outcomes may contribute to improved psychological well-being and self-perception. A positive body image perception undoubtedly plays an important role in individuals feeling good about themselves.

The concept of body image has been discussed in the literature for over 20 years [13,14]. It has been previously reported that a positive body image perception is important for psychological health and well-being [14]. People with a low perceived body image may withdraw into their homes, become unhappy, and fall into depression by not wanting to socialize [15]. This is because they may think that they are not liked and are looked down upon in society. As a result, their stress levels rise, and they may feel condemned to an unhappy life. Furthermore, it is not fully known whether individuals who have undergone combined or single cosmetic surgery are highly satisfied. Moreover, studies addressing changes in perceived body image after cosmetic surgery are limited in number and quality. In this context, it is unknown whether cosmetic surgery contributes to body image and the level of patient satisfaction. Single and combined cosmetic surgeries may have different effects on body image and patient satisfaction. This study aimed to examine the satisfaction and body image perception of individuals after single or combined cosmetic body surgeries.

Material and Methods

Research Design and Participants

We conducted our study as a descriptive and cross-sectional study. Our study was conducted at a private plastic, reconstructive, and cosmetic surgery clinic in Istanbul. The sample for this study was created using purposive sampling. We used G*Power-3.1.9.2 software to calculate the sample size. The power analysis showed that at least $n = 88$ individuals who had undergone cosmetic body procedures needed to be included, with a margin of error of 0.05, 0.05 effect size, and a 90% confidence interval. Purposive sampling method was used in this study. For this purpose the sample of $n = 96$ individuals was included. The inclusion criteria for sampling were “being over 18 years of age,” “not having undergone cosmetic body procedures before,” “having undergone single or combined cosmetic body procedures at least 6 months ago,” “having no history of mastectomy or cancer surgery,” and “volunteering to participate in the study.” Failure to meet the inclusion criteria was the primary exclusion criterion. In addition, individuals who had undergone cosmetic breast surgery for reconstruction after mastectomy, had undergone abdominoplasty during abdominal cancer surgery, or had psychiatric comorbidity were excluded from the sample. Data collection tools were sent via text message to the cell phones of individuals who met the inclusion criteria, and they were asked to proceed with the questions after obtaining their informed consent.

Data Collection Method and Tools

Data for this study were collected prospectively on an online platform. Data collection took place between May 2 and December 30, 2025. Researchers used an introductory information form, Body Image Scale, and Visual Analog Scale for Satisfaction (VAS-S) for data collection. Information about the data collection tools is shown below.

Demographic Information Form

This is an information form that asks about the demographic characteristics of individuals who have undergone cosmetic body procedures, such as age, gender, number of children, marital status, educational status, type of cosmetic procedure performed, and time of procedure.

Body Image Scale

The Body Image Scale (BIS) was developed by Secord and Jourard in 1953 [16]. The validity and reliability analyses of the BIS were conducted in Türkiye by Anbar ve Hovardaoglu in 2013 [17]. The BIS has 40 items, no subscales, and is a 5-point Likert scale (1 = Strongly disagree, 2 = Somewhat disagree, 3 = Undecided, 4 = Somewhat agree, 5 = Strongly agree). The BIS score range is between 40 and 200 points. The cut-off point for the BIS is 135; those scoring below 135 are considered to have a low body image perception. The internal consistency coefficient of the Turkish version of the BIS has been reported to be 0.79 and 0.87 [17]. The internal consistency coefficient in our study was calculated as 0.86.

Visual Analog Scale for Satisfaction

The VAS-S rates from 0 to 10, from low to high. It was used in this study to score satisfaction with cosmetic surgery. In this study, the VAS-S, a numerical scale where no satisfaction is 0 points, the lowest satisfaction is 1 point, and the highest satisfaction is 10 points, was used [18]. Numerical scales are preferred because they facilitate the definition and scoring of satisfaction intensity. Therefore, the VAS-S rating scale was used in this study.

Ethical Considerations

Before starting this study, ethical approval was obtained from the Ethics Committee of İstanbul Nişantaşı University (Date: 03/20/2025 and Decision No: SBETKK2025-03). Institutional Review Board (IRB) approval was obtained from the Director of Dr. Ozan Balık Plastic, Reconstructive, and Cosmetic Surgery Clinic. The principles of the Helsinki Declaration were taken into account in all stages of the research. Written informed consent was obtained from each patient individually.

Statistical Analyses

Statistical analyses of the results obtained from the study were performed using the Statistical Package for Social Sciences-SPSS for IBM 25 software package. Descriptive statistical methods (Frequency, Standard Deviation, and Mean) were used in data evaluation. The Kolmogorov-Smirnov analysis was performed to determine the assumptions of normal distribution, and the data

did not show a normal distribution. The Mann-Whitney U test and Kruskal-Wallis test were used to determine the relationship between the descriptive variables and scale scores. The Post hoc Bonferroni test was used to calculate statistical differences. The Spearman rho correlation test was used to examine the relationship between continuous variables and scale scores. We evaluated our results at a 95% confidence interval and a significance level of $p < 0.05$.

Results

Table 1 shows the characteristics of individuals who underwent body cosmetic surgery. All individuals who underwent body cosmetic surgery were female, with a mean age of 34.15 ± 6.48

and a mean number of children of 1.95 ± 0.86 . The time elapsed since cosmetic surgery was 14.95 ± 4.79 . Of participants who underwent cosmetic body procedures, 83.3% were married, 70.8% had a good financial status, 40.6% were high school graduates, and 59.4% had a college degree or higher. Of the participants, 56.2% underwent cosmetic body procedures had single procedures, and 43.8% had combined cosmetic body procedures. When the procedures performed were examined, 25% of individuals who underwent cosmetic body procedures had cosmetic breast surgery (augmentation, reduction, or lift), 31.2% had abdominoplasty, and 43.8% had abdominoplasty combined with cosmetic breast surgery with or without thigh or arm lift.

Table 1. Characteristics of individuals who underwent cosmetic body procedures

Characteristics	Mean $\pm$ Sd.	Min-Max
Mean values		
Age (Years)	34.15 $\pm$ 6.48	30-56
Number of children	1.95 $\pm$ 0.86	1-4
Time elapsed since cosmetic surgery (Months)	14.95 $\pm$ 4.79	6-36
Frequencies	n	%
Gender	96	100
Marital status		
Single	3	3.1
Married	80	83.3
In a relationship	13	13.5
Financial status		
Middle	28	29.2
Good	68	70.8
Education		
High school	39	40.6
College and above	57	59.4
Procedure type		
Single	54	56.2
Combined	42	43.8
Procedure performed		
Cosmetic breast surgery (augmentation, reduction, or lift)	24	25.0
Abdominoplasty	30	31.2
Abdominoplasty and cosmetic breast surgery with or without thigh or arm lift	42	43.8

Table 2 shows the mean BIS and VAS-S scores and statistical differences according to the characteristics of individuals who underwent cosmetic body procedures. Marital status and education variables did not have a statistically significant effect on BIS and VAS-S scores ($p > 0.05$); similarly, the economic status variable did not have a statistically significant effect on VAS-S scores ($p > 0.05$). The economic status variable had a statistically significant effect on the BIS score ($p < 0.001$).

Individuals who underwent combined cosmetic body procedures had higher BIS and VAS-S scores than those who underwent single procedures, and this difference was statistically significant ($p < 0.001$). Individuals who underwent abdominoplasty combined with cosmetic breast surgery with or without thigh or arm lift had higher BIS and VAS-S scores than those who underwent only cosmetic breast surgery or only abdominoplasty, and these differences were statistically significant ($p < 0.001$).

Table 2. BIS and VAS-S mean scores and statistical differences according to the characteristics of individuals who underwent cosmetic body procedures (n = 96)

Characteristics	BIS (Mean ± Sd.)	VAS-S (Mean ± Sd.)
Marital status		
Single	173.66 ± 8.73	8.33 ± 1.15
Married	176.91 ± 11.70	4.92 ± 2.76
In a relationship	173.15 ± 15.27	5.07 ± 2.66
Test and Sig.	Kw = 0.430, p = 0.512	Kw = 0.089, p = 0.766
Financial status		
Middle	169 ± 13.71	4.67 ± 2.53
Good	179.30 ± 10.05	5.20 ± 2.85
Test and Sig.	U = -3.550, p < 0.001**	U = -0.858, p = 0.391
Education		
High school	176.71 ± 13.67	5.51 ± 2.40
College and above	176.01 ± 11.05	4.73 ± 2.96
Test and Sig.	U = 0.992, p = 0.371	U = 928, p = 0.167
Procedure type		
Single	173.14 ± 12.05	2.92 ± 1.47
Combined	180.35 ± 11.08	7.78 ± 1.13
Test and Sig.	U = 1.500, p < 0.001**	U = 696, p < 0.001**
Procedure performed		
Cosmetic breast surgery (augmentation, reduction, or lift) (1)	172.50 ± 13.21	3.08 ± 1.76
Abdominoplasty (2)	173.66 ± 11.24	2.80 ± 1.21
Abdominoplasty and cosmetic breast surgery with or without thigh or arm lift (3)	180.35 ± 11.08	7.78 ± 1.13
Test and Sig.	Kw = 10.534, p < 0.001**	Kw = 71.883, p < 0.001**
Post hoc		
	1, 2 < 3	1, 2 < 3

**p < 0.01, Kw: Kruskal-Wallis test, U: Mann-Whitney U test, VAS-S: Visual Analog Scale for Satisfaction, BIS: Body Image Scale

Table 3 shows the mean total scores for BIS and VAS-S. The mean BIS score was 176.30 ± 12.12 , and the mean VAS-S total score was 5.05 ± 2.76 .

Table 4 presents the correlation analysis between variables (number of children, age) and scale scores (BIS, VAS-S). There was no statistically significant difference between the BIS score of individuals who underwent body cosmetic surgery and their number of children and age ($p > 0.05$). Similarly, there was no statistically significant difference between the VAS-S score

and the age variable ($p > 0.05$). In this study, no statistically significant correlation was found between the time elapsed since cosmetic surgery and the VAS-S and BIS scores ($p > 0.05$). There was a positive, moderate, and statistically significant relationship between the VAS-S scores of individuals who underwent cosmetic body procedures and the number of children ($r = 0.318$, $p = 0.002$). There was a positive, moderate, and statistically significant relationship between the VAS-S and BIS scores of individuals who underwent cosmetic body procedures ($r = 0.341$, $p = 0.034$).

Table 3. BIS and VAS-S mean total scores

Scales	Number of questions	Items	Score range	Min-Max	Mean ± Sd.
BIS	40	1-40	40-200	138-198	176.30 ± 12.12
VAS-S	1	1	1-10	1-10	5.05 ± 2.76

BIS: Body Image Scale, VAS-S: Visual Analog Scale for Satisfaction

Table 4. Correlation analysis between variables (number of children, age) and scale scores (BIS, VAS-S) (n = 96)

Variables	Test and Sig.	Scales	
		BIS	VAS-S
Number of children	r	0.155	0.318
	p	0.133	0.002**
Age	r	0.087	-0.093
	p	0.400	0.370
Time elapsed since cosmetic surgery	r	0.029	0.057
	p	0.776	0.583
VAS-S	r	0.341	-
	p	0.034*	-

r, Spearman’s rank correlation test, *p < 0.05, **p < 0.01; BIS: Body Image Scale, VAS-S: Visual Analog Scale for Satisfaction

Figure 1 illustrates the correlation between BIS and VAS-S. According to this, perceived body image scores ranged from 138 to 198 points. The range of scores was quite narrow, with all of them above the cut-off value on the scale. In contrast, cosmetic satisfaction scores ranged widely from 1 to 10.

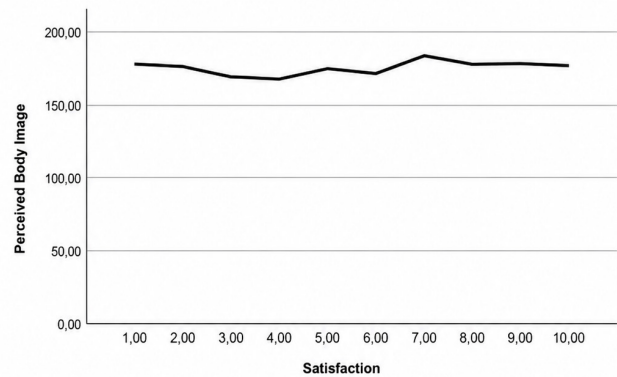


Figure 1. Relationship between BIS and VAS-S

Discussion

This study examined patient satisfaction and perceived body image following single and combined aesthetic body contouring procedure. According to 2017 data from the American Society of Plastic Surgeons, more than 700,000 liposuction, breast augmentation, and rhinoplasty procedures were performed [19]. In addition, in 2023, body and extremity procedures, including abdominoplasty, liposuction, buttock augmentation and lift, lower body lift, arm lift, thigh lift, and upper body lift, were performed more than 5.1 million times [20]. People seek cosmetic surgery to look younger than they are, improve their appearance, feel more beautiful, and increase their physical attractiveness [21]. Liposuction and abdominoplasty support physical attractiveness by reducing the waist-to-hip ratio. A good physical appearance contributes to an individual’s increased social desirability.

A previous study reported that individuals with an attractive physical appearance tend to create a positive perception and are more preferred in social life [22].

Body image is based more on the individual’s self-assessment than on the external environment and includes the individual’s evaluation of themselves. At the end of their evaluation, individuals may obtain a positive or negative result [23]. There is an important connection between personality structure and body image, and it has the ability to change over time. Individuals with a negative body image or who wish to have a more positive one may seek cosmetic surgery. A systematic meta-analysis and review from 2023 examined a total of 23 articles, 13 of which were written on self-esteem and 10 on body image. This systematic meta-analysis and review focused on the average difference in self-esteem and body image before and after cosmetic surgery. Accordingly, cosmetic surgery increased self-esteem scores by 1.1 ± 0.24 points and body image scores by 1.3 ± 0.36 points [11]. The aforementioned systematic meta-analysis and review reveal the effect of body image on self-love and self-acceptance, which are fundamental components of self-esteem. Indeed, considering the potential impact of self-esteem on life success, career, mate selection, and self-confidence [24,25], the significant effect of cosmetic surgery on improving an individual’s body image is evident. Globally, women aged 30-39 accounted for 38% of all breast augmentation procedures in 2023, while those aged 20-29 accounted for 25% of breast augmentation procedures [26]. In our study, all individuals who underwent cosmetic body procedures were women, with an average age of 34.15, and 25% had undergone cosmetic breast surgery (augmentation, reduction, or lift). 43.8% of the individuals in our study had undergone abdominoplasty combined with cosmetic breast surgery with or without thigh or arm lift. According to the BIS, the data collection tool used in this study, anyone with a cut-off score above 135 is considered to have a good body image. The

BIS scores of the individuals in this study ranged from 138 to 198. Based on this result, all individuals in the sample had a good body image, and the average level of satisfaction with cosmetic surgery was moderate.

In this study, individuals with a high-income level had a better body image than those with a medium economic status. To our knowledge, no study in the literature was found that directly linked economic status to body image perception. However, this result obtained in our study can be attributed to the fact that limited access to financial resources, such as buying clothes and shoes, dyeing and styling hair at the hairdresser's, and purchasing high-end clothing brands, had a weakening effect on body image perception. In this study, individuals who underwent combined cosmetic surgery had a more positive body image and satisfaction level compared to those who underwent single cosmetic surgery. In a study where 47.6% had breast augmentation surgery, 11.3% had abdominoplasty, 12.9% had liposuction, and 81.9% of the sample were women (average age 35.35 years), the percentage of individuals satisfied with their body image increased from 7.3% to 38.6% thanks to cosmetic surgery [27]. The results of our study are similar to the previous literature.

Several previous studies have reported good levels of patient satisfaction after cosmetic surgery [28-30]. Furthermore, it has been known in the literature for more than 20 years that cosmetic surgery improves body image [31,32]. However, there are studies in the literature that argue that it takes between 2 and 5 years to achieve the best results and the best body image after cosmetic surgery [33,34]. Our study included women who had undergone cosmetic surgery between 6 months and 3 years prior (mean 14.95 ± 4.79), and the time elapsed since surgery did not affect body image and satisfaction. In our study, individuals who underwent combined cosmetic surgery reported higher levels of body satisfaction than those who underwent cosmetic breast surgery or abdominoplasty alone, and these differences were statistically significant ($p < 0.001$). Individuals who need combined cosmetic surgery but undergo only cosmetic breast surgery or only abdominoplasty cannot see a flawless body when they look in the mirror. They see the body part that underwent surgical correction and the body part requiring cosmetic correction/improvement at the same time, and become demoralized. In this respect, undergoing combined cosmetic surgery is advantageous over single cosmetic surgery procedures. In our study, there was a positive relationship between body image and cosmetic satisfaction; women who underwent combined cosmetic surgery had higher satisfaction and body image perception. The single-center nature of this study, the small sample size, the reasons for opting for single cosmetic surgery despite the need for combined cosmetic surgery, and the lack of information on outcomes after more than three years were considered limitations.

Conclusion

In this study, One-fourth of the individuals who underwent cosmetic body procedures had cosmetic breast surgery, nearly

half of the sample had combined cosmetic body procedures (abdominoplasty combined with cosmetic breast surgery, with or without thigh/arm lift), and the rest had only abdominoplasty. Those who underwent combined cosmetic surgery had a higher body image perception and cosmetic surgery satisfaction than those who underwent single cosmetic body procedures in this study. In this study, cosmetic surgery satisfaction increased as the number of children increased. In addition, the increase in cosmetic surgery satisfaction also increased body image perception. Clearly defining individuals' expectations before cosmetic surgery is fundamental to ensuring high satisfaction in the subsequent process. For this reason, the possible outcomes of single and combined cosmetic surgery should be clearly explained before the operation.

Ethical Approval

Ethical approval was obtained from the Ethics Committee of İstanbul Nişantaşı University (Date: 03/20/2025 and Decision No: SBETKK2025-03).

Patient Consent

The principles of the Helsinki Declaration were taken into account in all stages of the research. Written informed consent was obtained from each patient individually.

Conflict of Interest

The authors confirm the absence of any conflicts associated with this work.

Funding

The authors declare that they have received no financial support for the study.

References

1. Kaoutzanis C, Gupta V, Winocour J, et al. Cosmetic liposuction: preoperative risk factors, major complication rates, and safety of combined procedures. *Aesthet Surg J*. 2017;37:680-94.
2. Arian H, Alroudan D, Alkandari Q, Shuaib A. Cosmetic surgery and the diversity of cultural and ethnic perceptions of facial, breast, and gluteal aesthetics in women: a comprehensive review. *Clin Cosmet Investig Dermatol*. 2023;16:1443-56.
3. Shermak MA. Abdominoplasty with combined surgery. *Clin Plast Surg*. 2020;47:365-77.
4. Toto V, Scarabosio A, Alessandri-Bonetti M, et al. Combined surgery (mommy-makeover) compared to single procedure (abdominoplasty) in after-pregnancy women: a prospective study on risks and benefits. *Aesthetic Plast Surg*. 2023;47:2533-42.
5. Knoedler S, Alfertshofer M, Matar DY, et al. Safety of combined versus isolated cosmetic breast surgery and abdominoplasty: insights from a multi-institutional database. *Aesthetic Plast Surg*. 2025;49:4273-84.
6. Garoosi K, Mundra L, Jabbari K, et al. Comorbid conditions and complications in body contouring surgery: a retrospective review. *Aesthet Surg J Open Forum*. 2023;5:ojad080.
7. Mughal M, Ross D. Management of the post-pregnancy abdomen: the plastic surgical perspective. *Hernia* 2021;25:929-38.
8. Sohrabi Z, Kazemi A, Farajzadegan Z, et al. Body perception in pregnant women: a qualitative study. *BMC Pregnancy Childbirth*. 2023;23:165.
9. Ors S. Nipple dimensions after augmentation mammoplasty, mastopexy and reduction mammoplasty: a comparative clinical study. *Aesthetic Plast Surg*. 2020;44:2089-93.

10. Liang D, Edwards V, Di Taranto G. Breast reduction with implants or augmentation reduction: patient-reported outcomes from a single-centre retrospective cohort analysis. *Medicina (Kaunas)*. 2024;60:743.
11. Kazeminia M, Salari N, Heydari M, et al. The effect of cosmetic surgery on self-esteem and body image: a systematic review and meta-analysis of clinical trial studies. *Eur J Plast Surg*. 2023;46:25-33.
12. Can Öz Y, Duran S, Özdeş R. Examination of self-esteem, self-confidence, and social support levels in patients undergoing plastic, reconstructive and aesthetic surgery. *Ordu University J Nurs Stud*. 2024;7:305-12.
13. Avalos L, Tylka TL, Wood-Barcalow N. The body appreciation scale: development and psychometric evaluation. *Body Image*. 2005;2:285-97.
14. Demir B, Bulbuloglu S. Perceived body image and distress after liver transplantation in recipients. *Transplant Immunol*. 2021;69:101483.
15. Satwik R, Sinha D, Tiwari B. Prevalence of poor body image and its correlation with self-esteem and depression in middle-aged women. *Climacteric* 2024;27:202-9.
16. Secord PF, Jourard SM. The appraisal of body-cathexis: body-cathexis and the self. *J. Consult. Psychol*. 1953;17:343-7.
17. Anbar H. Lise öğrencilerinde vücut algısı değişkeninin çeşitli değişkenlerle ilişkisinin incelenmesi ve vücut algısı ölçeğinin geçerlik güvenirlik çalışması. Undergraduate thesis. Ankara University, Ankara, Türkiye, 2013.
18. Crichton N. Information point: visual analogue scale (VAS). *J Clin Nurs*. 2001;10:706.
19. American Society of Plastic Surgeons. ASPS National clearinghouse of plastic surgery procedural statistics, 2018:8. <https://cdn.theaestheticsociety.org/media/statistics/2018-TheAestheticSocietyStatistics.pdf> access date 05.02.2026.
20. Triana L, Palacios Huatuco RM, Campilgio G, Liscano E. Trends in surgical and nonsurgical aesthetic procedures: a 14-year analysis of the International Society of Aesthetic Plastic Surgery—ISAPS. *Aesthetic Plast Surg*. 2024;48:4217-27. Erratum in: *Aesthetic Plast Surg*. 2024;48:4601.
21. Sarwer DB. Body image, cosmetic surgery, and minimally invasive treatments. *Body image* 2019;31:302-8.
22. Sarwer DB, Pertschuk MJ, Wadden TA, Whitaker LA. Psychological investigations in cosmetic surgery: a look back and a look ahead. *Plast Reconstr Surg*. 1998;101:1136-42.
23. Ferro MA, Boyle MH. Brief report: Testing measurement invariance and differences in self-concept between adolescents with and without physical illness or developmental disability. *J Adolesc*. 2013;36:947-51.
24. Birni G, Eryılmaz A. Conceptual and theoretical review of self-worth. *Current Approaches in Psychiatry* 2024;16:327-46.
25. Isserow J. Self-esteem: on the form of self-worth worth having. *Pac Philos Q*. 2023;104:686-719.
26. Asimakopoulou E, Zavrides H, Askitis T. The impact of aesthetic plastic surgery on body image, body satisfaction and self-esteem. *Acta Chir Plast*. 2019;61:3-9.
27. Murphy DK, Beckstrand M, Sarwer DB. A prospective, multi-center study of psychosocial outcomes after augmentation with natrelle silicone-filled breast implants. *Ann Plast Surg*. 2009;62:118-21.
28. Sarwer DB, Gibbons LM, Magee L, et al. A prospective, multi-site investigation of patient satisfaction and psychosocial status following cosmetic surgery. *Aesthet Surg J*. 2005;25:263-9.
29. Park AJ, Chetty U, Watson ACH. Patient satisfaction following insertion of silicone breast implants. *Br J Plast Surg*. 1996;49:515-8.
30. Banbury J, Yetman R, Lucas A, et al. Prospective analysis of the outcome of subpectoral breast augmentation: sensory changes, muscle function, and body image. *Plast Reconstr Surg*. 2004;113:701-7.
31. Young VL, Nemecek JR, Nemecek DA. The efficacy of breast augmentation: Breast size increase, patient satisfaction, and psychological effects. *Plast Reconstr Surg*. 1994;94:958-69.
32. von Soest T, Kvalem IL, Skolleborg KC, Roald HE. Psychosocial changes after cosmetic surgery: a 5-year follow-up study. *Plast Reconstr Surg*. 2011;128:765-72.
33. Dayan SH, Arkins JP, Patel AB, Gal TJ. A double-blind, randomized, placebo-controlled health-outcomes survey of the effect of botulinum toxin type A injections on quality of life and self-esteem. *Dermatol Surg*. 2010;36:2088-97.