

The Impact of Facial Aesthetic and Reconstructive Surgeries on Patients' Quality of Life

Tülin Yıldız · Deniz Selimen

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Abstract The aim of the present prospective and descriptive study was to assess the impact of facial aesthetic and reconstructive surgeries on quality of life. Ninety-one patients, of whom 43 had aesthetic surgery and 48 had reconstructive surgery, were analysed. The data were collected using the patient information form, body cathexis scale, and short form (SF)-36 quality of life scale. There were significant differences between before and after the surgery in both groups in terms of body cathexis scale and quality of life ($p < 0.05$ for both). It was observed that problems regarding the body image perception were encountered more, and the quality of life was poorer in both aesthetic and reconstructive surgery patients before the surgery. However, the problems were decreased, and the quality of life was enhanced after the surgery. Among the parameters of SF-36 quality of life scale, particularly the mean scores of social functioning, physical role functioning, emotional role functioning, mental health, and vitality/fatigue were found low before the surgery, whereas the mean scores were significantly improved after the surgery. The results revealed that facial aesthetic and reconstructive surgical interventions favourably affected the body image perception and self-esteem and that positive reflections in emotional, social, and mental aspects were effective in enhancing self-confidence and quality of life of the individual.

Keywords Aesthetic surgery · Reconstructive surgery · Body image perception · Quality of life

T. Yıldız (✉)
School of Health, Namık Kemal University, Değirmenaltı, Tekirdağ,
Turkey
e-mail: tyildiz70@hotmail.com

D. Selimen
School of Nursing, Maltepe University, Maltepe, Turkey

Introduction

Beauty and its social reflections have remained on the agenda of the populations from past to present and succeeded to stay on the top [1]. Physical appearance is quite effective on the lives of many people [2]. For this reason, any change in body image perception may cause social losses, such as job, status, and role losses, along with the loss in beauty and attractiveness [1–4]. Body image perception is a picture of the body and all body-related senses in mind. When an individual has any deformity in his/her appearance or any dysfunction, he/she experiences an inner conflict between the perceived body image at that moment and the image envisioned. Thought processes, performance, and self-concept response of the individual are changed, and self-confidence is lost along with the change in the body image perception. Thus, it is important to improve body image perception and deformity and dysfunction of the body in shaping the body image perception and self-esteem. The surgical treatment enhances self-confidence of the individual and influences the quality of life [1, 2, 4–6].

The face has a symbolic importance in public and personal relationships and is a window of an individual to the world. In this regard, any dysfunction or deformity in the face unfavourably influences the appearance and psychology of the individual and leads to aesthetic concern [1, 7–11]. Facial interventions in plastic, aesthetic, and reconstructive surgery are the procedures in which aesthetic concern is high, particularly due to their impact on appearance [1, 12, 13].

The aim of our study was to investigate whether facial aesthetic and reconstructive surgeries, which are important at first sight, affect the quality of life and to determine whether there are differences between patients who underwent aesthetic or reconstructive surgery in terms of gender, socioeconomic status, and education.

Materials and Methods

The study population comprised 108 cases admitted to the Plastic, Reconstructive, and Aesthetic Surgery Clinic of the Marmara University Hospital between March 2008 and August 2008 for facial aesthetic and reconstructive surgical interventions. After 6 months of follow-up period, 84 % ($n=91$) of the patients who were able to be reached constituted the study sample; of the patients, 43 had undergone aesthetic surgery and 48 had undergone reconstructive surgery.

After obtaining the ethics committee and the hospital approvals, the patients were informed about the objective of the study. The study was initiated after obtaining the written informed consents of the patients.

The study was conducted using the patient information form to assess the demographic characteristics of the cases as well as the reasons of need for aesthetic and reconstructive surgical intervention, the body cathexis scale (BCS) to assess the level of body image satisfaction, and the short form (SF)-36 quality of life scale for general health inquiry. The questionnaires were applied both before the surgery (just after the admission) and 3 months after the surgery.

Data were analysed using the Stata: Data Analysis and Statistical Software version 9.0 (Stata Corporation LP, TX, USA). A p value of <0.05 was considered significant.

Results

Logistic regression model, which was performed for multivariable analysis of the cases that underwent aesthetic surgical intervention as compared with the cases that underwent reconstructive surgical intervention, revealed that the ratio of female patients was five times higher, the ratio of university graduates was 4.5 times higher, and the ratio of those with high economic level was 15.6 times higher in the aesthetic surgery group as compared with those in the reconstructive surgery group (Table 1).

When the groups were evaluated in terms of the reasons for undergoing aesthetic and reconstructive surgeries, 74 % ($n=$

32) of the patients undergoing aesthetic surgery and 84 % ($n=40$) of the patients undergoing reconstructive surgery responded as ‘being uncomfortable with my physical appearance’. Among the patients responding as ‘other’, three patients responded as ‘my self-confidence is enhanced’, one patient responded as ‘at the insistence of my relatives’ in the aesthetic surgery group and two patients undergoing reconstructive surgery responded as ‘to look more beautiful to my spouse’ (Table 2).

The mean BCS scores before and after the surgery were 153.44 ± 15.36 and 166.81 ± 16.91 , respectively, in the aesthetic surgery group, whereas it was 148.48 ± 18.54 and 168.38 ± 13.59 , respectively, in the reconstructive surgery group. There was a significant difference between the BCS scores before and after the surgery both in the aesthetic and reconstructive surgery patients ($p<0.001$ for both). However, no significant difference was obtained between the aesthetic and reconstructive surgery patients in terms of the mean BCS scores before and after the surgery before intervention ($t=-1.38$, $p=0.17$) and after intervention ($t=0.49$, $p=0.62$; Table 3).

With regard to the distribution and comparison of the mean SF-36 quality of life scale scores among aesthetic and reconstructive surgery patients before and after the intervention, ‘emotional role functioning’ was found to be affected much more negatively in the reconstructive surgery patients as compared with that of the aesthetic surgery patients. While the mean emotional role functioning score of the aesthetic surgery patients was 44.96 ± 43.57 before the surgery, it was 11.81 ± 27.06 in the reconstructive surgery patients; the difference was statistically significant ($t=-4.41$, $p<0.001$; Table 4).

Discussion

As a result of prolonged lifespan and increased value of physical appearance, individuals attempt to slow down physical aging through aesthetic surgery and expect to remove deformity and dysfunction formed due to congenital diseases, trauma or tumour through reconstructive surgery [14]. Preserving body integrity and admiration of the body has brought forward the importance of having a positive body image perception and the issue of a life of good quality. The facial region accounts for the majority of aesthetic and reconstructive surgical interventions, which have been gradually increasing in the recent years. In this sense, the power and multidimensional impact of the facial region on physical appearance is undeniable [4, 6, 11, 14].

In this study, we aimed to investigate the effect of facial aesthetic and reconstructive surgeries on the quality of life and to determine whether there are sociodemographic differences between the patients who underwent aesthetic or reconstructive surgery. Logistic regression model performed for multivariable analysis demonstrated that the ratio of female patients

Table 1 Multivariable analysis of aesthetic surgery cases versus reconstructive surgery cases

	Odds ratio	Confidence interval	p^*
Age	0.95	0.89–1.08	0.086
Gender (female)	5.4	1.56–18.86	0.008
Education level (university)	4.5	1.10–18.27	0.030
Economic level (high)	15.6	2.22–111.17	0.006
Marital status (married)	0.47	0.09–2.43	0.360
Living area (metropolis)	1.51	0.30–7.60	0.610

*Data were interpreted at a significance level of $p<0.05$

Table 2 Distribution of reasons for undergoing aesthetic or reconstructive surgery

Reasons	Aesthetic surgery group <i>n</i> =43	Reconstructive surgery group <i>n</i> =48
Being uncomfortable with my physical appearance ^a	32 (74)	40 (84)
My disease/disorder makes me introverted/pessimistic ^a	3 (7)	13 (27)
My family's solicitousness due to my disease/disorder ^a	0 (0)	4 (8)
My family's insouciance because of my disease/disorder	0 (0)	0 (0)
Reaction of the people around me ^a	12 (28)	25 (52)
My disease/disorder negatively affects my social relations ^a	19 (44)	19 (40)
Thinking that I would feel myself better after reconstructive surgery ^a	23 (53)	17 (35)
Other ^a (self-confidence is enhanced)	4 (9)	2 (5)

Data were presented as number (%). Percentages were calculated over *n* of the relevant column

^aMore than one response was given

was 5.4 times higher, the ratio of university graduates was 4.5 times higher and the ratio of those with high economic level was 15.6 times higher in the aesthetic surgery patients as compared with those in the reconstructive surgery patients. Similarly, it has been reported that women account for the majority of the cases undergoing aesthetic surgical intervention in the literature. It is a known fact that women pay more attention to their physical appearance than men. In our study, the mean age of the aesthetic surgery cases was 32.7 ± 12.25 years while the mean age of reconstructive surgery cases was 42.1 ± 17.00 years. For the patients who were over 60 years, the number of the patients who underwent aesthetic surgery operation (*n*=1) was quite less compared with the ones who were at the same age and had reconstructive surgery (*n*=9). In fact, older women usually avoid aesthetic surgery due to social pressure despite of the fact that the desire for aesthetic surgery rises with increasing age. Furthermore, education and economic levels of the aesthetic surgery cases were higher than the reconstructive surgery cases. However, there was no significant difference between the aesthetic surgery and reconstructive surgery groups in terms of their marital status and living areas.

It is a well-known fact that women place importance to physical appearance much more than men [14]. The ratio of cosmetic surgery has increased among the women in China

during 2000s [15]. Findıkçioğlu et al. [12] reported that 81 % of the cases undergoing aesthetic surgery were women, and 71 % were university graduates. Jones and Vesely [16] reported that 40 of 54 patients undergoing facial aesthetic surgery were women. In their study, Bradbury et al. [3] determined that 70 % of the cases undergoing facial reconstructive surgery were women and paid more attention to their physical appearance. Findıkçioğlu et al. [12] conducted a study on patient profiles and consisted of subjects of different sociocultural levels and found that 71 % of the aesthetic surgery patients had higher education level, whereas reconstructive surgery patients were distributed in all education groups, being more common (approximately 50 %) in primary and secondary school levels [12]. In the present study, higher percentage of women, as well as higher education and higher economic levels, in the cases undergoing aesthetic surgery as compared with those undergoing reconstructive surgery suggests that aesthetic surgeries are more commonly performed in the populations with high sociocultural and high socioeconomic statuses. Results are consistent with the literature and the results of previous studies.

Considering the reasons for having aesthetic/reconstructive surgery, the item 'being uncomfortable with my physical appearance' had almost the same value for both groups. In addition to this, 'reaction of the people around me' was nearly

Table 3 Distribution and comparison of the mean body cathexis scale scores of the aesthetic and reconstructive surgery patients

BCS Scores	Before the surgery group	After the surgery group	<i>t</i> test	<i>p</i> *
Reconstructive surgery	148.48±18.54	168.38±13.59	-9.22	0.00
Aesthetic surgery	153.44±15.36	166.81±16.91	-8.11	0.00
<i>t</i> test	-1.38	0.49		
<i>p</i> *	0.17	0.62		

Data were analysed by paired *t* test and presented as mean±standard deviation

BCS body cathexis scale

*Data were interpreted at the significance level of *p*<0.05

Table 4 Distribution and comparison of the mean short form-36 quality of life scale scores of the reconstructive and aesthetic surgery patients before and after the surgery

Short form-36 quality of life scale	Before surgery		Statistical significance		After surgery		Statistical significance	
	Aesthetic surgery <i>n</i> =43 Mean±SD	Reconstructive surgery <i>n</i> =48 Mean±SD	<i>t</i>	<i>p</i>	Aesthetic surgery <i>n</i> =43 Mean±SD	Reconstructive surgery <i>n</i> =48 Mean±SD	<i>t</i>	<i>p</i>
Physical functioning	95.12±11.36	87.60±23.09	-2.00	0.049	97.91±6.75	92.50±17.69	-1.96	0.06
Social functioning	55.04±25.65	36.81±22.12	-3.64	<0.001	81.40±10.77	82.64±10.48	0.56	0.6
Physical role functioning	77.33±40.76	44.79±46.11	-3.55	<0.001	95.93±12.11	89.58±21.78	-1.74	0.08
Emotional role functioning	44.96±43.57	11.81±27.06	-4.41	<0.001	86.05±24.38	80.56±32.13	-0.91	0.4
Mental health	64.56±20.16	48.83±22.22	-3.52	<0.001	77.40±15.39	76.25±14.54	-0.36	0.7
Vitality/fatigue	65.35±21.34	49.06±25.02	-3.32	<0.001	81.98±13.85	76.77±12.40	-1.89	0.06
Bodily pain	89.92±18.59	62.96±33.16	-4.71	<0.001	99.48±2.37	98.84±5.25	-0.74	0.5
General health	78.14±18.97	59.00±21.67	-4.46	<0.001	82.33±13.30	73.02±14.63	-3.16	0.002
Change as compared with the last year	55.23±11.65	50.52±21.57	-1.31	0.193	63.95±23.97	79.69±16.03	3.72	<0.001

Data were analysed by paired *t* test

SD standard deviation

*Data were interpreted at the significance level of $p < 0.05$

two times as high in the reconstructive surgery cases than the aesthetic surgery cases. However, it was unexpectedly interesting that the ratio of ‘my disease/disorder negatively affects my social relations’ was almost the same in both groups. This makes us think that aesthetic surgery patients are uncomfortable with their body images, and this perception forces them to social isolation and shows that the cases are needed to be assessed also in terms of body dysmorphic disorder. Another interesting finding was that the response ‘thinking that I would feel myself better after reconstructive surgery’ before operation was around 53 % in aesthetic surgery cases, but it was around 35 % in the reconstructive surgery patients, which is lower than expected. Furthermore, the reconstructive surgery cases displayed higher level of after-surgery body image perception than the aesthetic surgery cases, showing that the expectations before operation were lower in the reconstructive surgery cases than in the aesthetic surgery cases, but after operation, the reconstructive surgery patients were more satisfied with the changes in their bodies than the aesthetic surgery patients. It should be noted that the possibility of higher satisfaction level with surgery may be due to the fact that the cases in our study did not include severe deformities.

Physical beauty is a subjective concept and is affected by some criteria accepted by society. Each individual, female or male, goes into the effort of beautification in accordance with the current beauty perception of his/her own population [1, 14, 15]. Findikçioğlu et al. [12] reported that the reason for surgical intervention was dissatisfaction with their own appearance (56 %) and health issue (38 %) in the cases undergoing aesthetic surgery, whereas it was mostly the health issue (58 %) or recommendation of the physician (24 %) in the

cases undergoing reconstructive surgery [12]. In the present study, the fact that both aesthetic surgery and reconstructive surgery patients mostly enounced ‘being uncomfortable with my physical appearance’ as the reason for surgical intervention may suggest that physical appearance is a very important factor for an individual in terms of physical, social and mental aspects. The results of the present study are in line with the literature and previous studies.

Humans, who have used cosmetic products for ages for beautification and to look more attractive, now adopt surgical methods [2, 14, 17, 18]. Today, the importance of body image perception in considering someone attractive or not is conspicuous. Castle et al. [10] reported that 56 % of women and 43 % of men were presented for aesthetic surgery in 1997. They observed that the cases were satisfied with their body image perceptions after surgery, and their self-esteem and self-confidence were enhanced. The fact that the cases had realistic expectations enhanced their satisfaction with surgical intervention [10]. Many studies have revealed that aesthetic surgery leads to favourable outcomes in terms of psychosocial aspect [19–21].

Since reconstructive surgery is performed for medical requirements, the expectations may be different. Papadopulos et al. [22] compared levels of body image perception and self-esteem before and after surgery in the patients and found body image perception and self-esteem to be higher after the surgery as compared with those before surgery. Bradbury et al. [3] pointed out that body image perception was very important for the reconstructive surgery patients, and there was a relationship between depression and dissatisfaction with their body images. However, they found a remarkable decrease in

these feelings after surgery. Fındıkçioğlu et al. [12] suggested that patients of various countries having different sociocultural characteristics perceived surgeries and outcomes in different ways. However, the fact that 38 % of aesthetic surgery patients have undergone surgery for health issues and 18 % of reconstructive surgery patients have undergone surgery for aesthetic issues is an important indicator that the health expectation from aesthetic surgeries and aesthetic concern in reconstructive surgery patients should not be ignored [12].

There are sociocultural differences worldwide between the patients undergoing surgery because of aesthetic problems and the patients undergoing surgery because of reconstructive problems. The facial region is considered as an important aesthetic concern for both aesthetic and reconstructive surgery cases [1]. In the present study, it was considered that a young and healthy appearance, as well as an acceptable body image perception, was important for all patients both in the aesthetic and reconstructive surgery groups. The results of our study agree with the findings of previous studies.

When the parameters of SF-36 life quality scale were evaluated before the intervention, it was found that the reconstructive surgery cases were more insufficient in all functions compared with the aesthetic surgery cases ($p < 0.05$). In the reconstructive surgery cases, emotional role functioning was particularly lower than in the aesthetic surgery cases before operation, but it increased to nearly the same level with the aesthetic surgery cases after operation. This finding shows that after reconstructive surgery, life quality of the cases, especially emotional role functioning, increased about eightfold while this ratio was nearly twofold in aesthetic surgery.

Aesthetic surgery deals with the operations and interventions performed for the body image to be perceived more beautiful. Realistic expectations of the individuals from surgery will improve their satisfaction level with aesthetic surgery. Presence of personality disorders or dysmorphic disorders in the cases leads to unfavourable outcomes after aesthetic surgery. Mental health, in this context, is of importance. Satisfaction from surgery is increased after the procedure in the cases having realistic expectations, and their quality of lives as well is enhanced more [2, 14]. On the other hand, reconstructive surgery patients need surgery for congenital disorders, trauma or disease. In the recent studies on quality of life, a considerable number of people especially with the diagnosis of cancer have been reported to have psychological problems [14, 22]. Any change in the body image perception resulting from facial deformity and dysfunction also affects the individuals negatively [23–25]. Cotterill drew attention to the fact that dissatisfaction with body image was a reason for misery or death [10]. We think that the significant differences in the parameters of quality of life between the aesthetic and reconstructive surgery patients are due to the negative effect of disease concept on quality of life among reconstructive surgery patients.

In conclusion, aesthetic and reconstructive surgeries aim to enhance self-esteem and quality of life of the individuals by helping body image to be perceived more beautiful. The results of our study reveal that aesthetic and reconstructive surgeries influence the body image perception and patients' quality of life. It is suggested that further studies should be conducted with larger samples for determining the quality of life and expectations of the individuals who had aesthetic and reconstructive surgeries.

Conflicts of Interest The authors declared no conflicts of interest.

References

- Williams DM, Bentley R, Cobourne MT, Gibilaro A, Good S, Huppa C, Matthews NS, O'Higgins L, Patel S, Newton JT (2008) The impact of idealised facial images on satisfaction with facial appearance: comparing "ideal" and "average" faces. *J Dent* 36:711–717
- Mulkens S, Bos AER, Uleman R, Muris P, Mayer B, Velthuis P (2012) Psychopathology symptoms in a sample of female cosmetic surgery patients. *J Plast Reconstr Aesthet Surg* 65:321–327
- Bradbury ET, Simons W, Sanders R (2006) Psychological and social factors in reconstructive surgery for hemi-facial palsy. *J Plast Reconstr Aesthet Surg* 59:272–278
- Broujerdi JA (2012) Aesthetic surgery of the orbits and eyelids. *Oral Maxillofac Surg Clin North Am* 24:665–695
- Brown BC, McKenna SP, Siddhi K, McGrouther DA, Bayat A (2008) The hidden cost of skin scars: quality of life after skin scarring. *J Plast Reconstr Aesthet Surg* 61:1049–1058
- Cabrera RC, Zide BM (1997) Cheek reconstruction. In: McCarthy JG (ed) *Grabb and Smith's plastic surgery*. Lippincott-Raven, Philadelphia, pp 501–512
- Castle DJ, Honingman RJ, Phillips KA (2002) Does cosmetic surgery improve psychosocial wellbeing? *Med J Aust* 17:601–604
- Çetin E (2009) The changing appearance of the body in working life. *Int J Hum Sci* 6:73–83
- Cook SA, Rosser R, Salmon P (2006) Is cosmetic surgery an effective psychotherapeutic intervention? A systematic review of the evidence. *J Plast Reconstr Aesthet Surg* 59:1133–1151
- Cotterill John A (1996) Body dysmorphic disorder. *Dermatol Clin* 14:457–464
- Davies DM (1985) Cosmetic Surgery I. *BMJ* 290:1421–1424
- Fındıkçioğlu K, Fındıkçioğlu F, Özmen S, Çelebi MC (2005) Kliniğimizde yatarak tedavi gören estetik ve rekonstrüktif hasta profili. *Gazi Med J* 16:70–73
- Friedman DC (2004) Plastic & reconstructive surgery committee: facelift surgery 2004: what works and how to optimize results. *Otolaryngol Head Neck Surg* 131:89
- Zahra F, Dastjerdi R, Shahabizadeh F (2013) Acceptance of cosmetic surgery: body image, self esteem and conformity. *Procedia-Soc Behav Sci* 84:238–242
- Luo W (2013) Aching for the altered body: beauty economy and Chinese women's consumption of cosmetic surgery. *Womens Stud Int Forum* 38:1–10
- Jones BM, Vesely MJ (2006) Osseous genioplasty in facial aesthetic surgery—a personal perspective reviewing 54 patients. *J Plast Reconstr Aesthet Surg* 59:1177–1187
- Kanatas AN, Rogers SN (2010) A systematic review of patient self-completed questionnaires suitable for oral and maxillofacial surgery. *Br J Oral Maxillofac Surg* 48:579–590

18. Lim SY, Lee D, Sung Oh K, Nam B, Bang S, Mun GH, Pyon JK, Kim JH, Yoon SC, Song HS, Jeon HJ (2010) Concealment, depression and poor quality of life in patients with congenital facial anomalies. *J Plast Reconstr Aesthet Surg* 63:1982–1989
19. Meningaud JP, Benadiba L, Servant JM, Herve C, Bertrand JC, Pelicier Y (2003) Depression, anxiety and quality of life: outcome 9 months after facial cosmetic surgery. *J Craniomaxillofac Surg* 31:46–50
20. Murphy C, Keams G, Sleeman D, Cronin M, Allen PF (2011) The clinical relevance of orthognathic surgery on quality of life. *Int J Oral Maxillofac Surg* 40:926–930
21. Rustemeyer J, Gregersen J (2012) Quality of life in orthognathic surgery patients: post-surgical improvements in aesthetics and self-confidence. *J Craniomaxillofac Surg* 40:400–404
22. Papadopoulos NA, Kovacs L, Krammer S, Herschbach P, Henrich G, Biemer E (2007) Quality of life following aesthetic plastic surgery: a prospective study. *J Plast Reconstr Aesthet Surg* 60:915–921
23. Hamilton GS 3rd, Carrithers JS, Karnell LH (2004) Public perception of the terms “cosmetic”, “plastic”, and “reconstructive” surgery. *Arch Facial Plast Surg* 6:315–320
24. Honigman RJ, Phillips KA, Castle DJ (2004) A review of psychosocial outcomes for patients seeking cosmetic surgery. *Plast Reconstr Surg* 113:1229–1237
25. Sharma VP, Bella H, Cadier MM, Pigott RW, Goodacre TEE, Richard BM (2012) Outcomes in facial aesthetics in cleft lip and palate surgery: a systematic review. *J Plast Reconstr Aesthet Surg* 65:1233–1245