Long-Term Quality-of-Life Outcomes After Body Contouring Surgery: Phase IV Results for the Body-QoL® Cohort

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Abstract

Background: Body contouring surgery (BCS) is becoming increasing popular for aesthetic and reconstructive purposes, particularly among patients with massive weight loss (MWL). However, data on quality of life (QoL) following the surgery are limited, especially long-term QoL.
Objectives: The authors evaluated the effect of BCS on QoL and the durability of this effect over time.
Methods: QoL was measured with the Body-QoL® instrument at 3 time points among consecutively treated patients: the day before BCS, 1 to 9 months postoperatively (short term), and 1 to 2.7 years postoperatively (long term). Total Body-QoL scores were compiled, as were scores for the instrument's main domains: body satisfaction, sex life, self-esteem and social performance, and physical symptoms. Scores were examined for the entire study population and separately for the cosmetic and MWL cohorts.
Results: Fifty-seven of the 112 patients participated in the short-term assessment and 84 in the long-term assessment. Total Body-QoL scores increased significantly ($P < 0.0001$), from 44.0 ± 14.1 preoperatively to 85.5 ± 17.5 short-term postoperatively and to 84.4 ± 12.7 long-term postoperatively. Scores for the 2 postoperative assessments did not differ significantly. Similar results were observed for scores on each separate domain. Although preoperative scores were lower for the MWL cohort than the cosmetic cohort (33.9 ± 15.6 vs 46.1 ± 12.8; $P = 0.0002$), they improved substantially after BCS, approaching scores for the cosmetic cohort.
Conclusions: QoL increases significantly after BCS. This favorable outcome remained stable throughout long-term follow-up and was true for the cosmetic and MWL cohorts.

Level of Evidence: 4

4

Therapeutic

Body contouring surgery (BCS) is growing in popularity, as are aesthetic procedures in general. Between 2011 and 2015, aesthetic surgeries in the United States increased by 17%, and cosmetic medicine procedures by 44%.[1] BCS is increasingly desired by patients who have experienced massive weight loss (MWL), defined as loss of at least 50% of excess body weight, resulting from bariatric surgery or lifestyle changes.[2] BCS procedures range from liposuction[3-5] to complete lower or upper body lift, in which substantial amounts of tissue are resected.[6-8]

Motivations to undergo BCS may be physical and/or nonphysical concerns. Physical dissatisfaction arises from

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ptosis of redundant skin, which often leads to a rash in body folds; this may be accompanied by fungal infection and undesirable body odor.[10] In severe cases, mobility can be impaired.[10] Nonphysical complaints include low self-esteem, low self-image, sexual impairment, and others. All such factors affect the patient's body-related quality of life (QoL).[9-13]

Outcomes of BCS can be categorized as surgical (eg, procedure-related complications) and QoL/psychosocial.[14] Complications of BCS have been well documented. A systematic review by Staalesen et al[15] showed that complication rates after abdominoplasty range from 22% to 52%. In a recent study of 30 000 patients who underwent BCS, the risk of major complications was 2.7%.[16]

Previous research also has demonstrated that the primary motivation to undergo BCS is decreased QoL, relating to physical complaints or dissatisfaction with body image, which in turn may lead to low self-esteem, impairment of sex life, social isolation, and the feeling of being rejected by peers.[10-13] Although patient-related outcome measures (PROMs) that address these specific concerns should be utilized to measure the impact of BCS on QoL, this has not been common practice. Jabir et al[14] and Staalesen et al[15] noted that even though QoL appears to improve after BCS, most studies have had small sample sizes or employed nonvalidated PROMs. These investigators concluded that there is need for larger studies in which validated PROMs are utilized to assess QoL after BCS.[14,15]

Many studies in which QoL was measured after BCS have provided short-term findings (less than a year postoperatively), and the reliability of short-term QoL data is questionable.[14] A major reason for the questionable reliability is that the final aesthetic result takes longer than 6 months to achieve because additional time is required for scar healing.[17] Moreover, factors such as cognitive dissonance (eg, scoring according to preoperative expectations rather than according to the result of the procedure) may result in patients scoring higher in the short term than they would longer term.[18] Van der Beek et al[19] observed satisfactory QoL results 4 and 7 years after BCS in patients with MWL from bariatric surgery, which emphasizes the importance of the long-term effect of BCS. However, both 4 and 7 years would be considered long-term results. It would be prudent to compare short-term and long-term findings to ascertain differences in QoL perspectives over time.

In our hospital, the Body-QoL® instrument, published and owned by senior author (S.D.) in Santiago de Chile, was developed to measure QoL among patients who have undergone BCS. To our knowledge, it is the first instrument for this purpose designed in accordance with international guidelines for creation of PROMs.[13,20,21] It is the only instrument specifically for these patients that is currently available in Spanish; it also has been translated into English (Appendix A, available as Supplementary Material online at www.aestheticsurgeryjournal.com). A preliminary study with the Body-QoL instrument suggested that QoL improves significantly within 3 months of BCS.[13] To investigate whether improvement in QoL is maintained over time, we assessed it both short and long term (>1 year after BCS), utilizing the Body-QoL instrument.

METHODS

The study was approved by the ethics committee of the institutional review board, and was conducted in accordance with guiding principles of the Declaration of Helsinki.[22] Informed consent was obtained before the initial QoL assessment (which occurred in the original study[13]).

Study Design

Consecutive patients who underwent BCS at our institution (Hospital Clínico de la Universidad de Chile, Santiago, Chile) between June 1, 2013 and April 30, 2015 were before the operation asked to participate in this study. There were no exclusion criteria. The BCS procedures were abdominal liposuction, abdominoplasty, lower body lift, or a combination of 2 of these procedures. All patients who responded to the preoperative (initial) Body-QoL assessment were included and represent the total study population.

Patients

All patients underwent BCS by 1 of 5 surgeons at the Hospital Clínico de la Universidad de Chile, a tertiary university hospital. All male and female patients undergoing BCS were eligible to participate. All patients were ASA physical status I or II, with body mass index (BMI) <32 kg/m². Only patients with these criteria are eligible for BCS at our hospital.

Baseline Measurements

Baseline data were obtained for all patients during preoperative visits. Height and weight were measured; comorbidity data were based on anamnesis. MWL was defined as a history of weight loss after bariatric surgery or lifestyle changes resulting in loss of at least 50% of excess weight. Excess weight was defined as all weight above BMI of 25 kg/m². For anxiety or depression to be considered a comorbidity, a current or recent diagnosis by another medical professional was required. History of smoking was defined as regular smoking at the time of preoperative evaluation. Any such patient was strongly advised to stop smoking at least 1 month before the surgery.

Primary Outcome

The primary outcome measure was QoL score according to the Body-QoL instrument, a PROM developed earlier by the senior author of this article (S.D.).[12] (Therefore, no additional permission for its use was required.) The Body-QoL questionnaire is designed specifically for patients requesting contouring of the abdominal region. Four domains are included: body satisfaction, sex life, self-esteem and social performance, and physical symptoms (Appendix A). Each domain contains 5 items that are scored by patients on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). Higher scores denote better QoL. For patients unable to address items pertaining to sex life because they had not been sexually active since the operation, the mean value for the rest of the domains was substituted.

The Body-QoL score was obtained 3 times: the day before surgery, approximately 3 months after surgery (short-term postoperatively), and at least 1 year following surgery (long-term postoperatively).

Secondary Outcomes

Secondary outcomes were associations between QoL score and demographic/anthropometric characteristics (eg, change in BMI over time), type of surgery performed, concomitant procedures (eg, rhinoplasty, augmentation mammoplasty), and history of MWL.

Statistical Analyses

Data analysis was performed with Stata 13.0 (Stata Statistical Software, College Station, TX) The Body-QoL score was converted from the original scale of 20 to 100 to a centigrade scale of 0 to 100 to simplify analysis and interpretation of the results. The converted score is known as the adjusted Body-QoL score.

Descriptive statistics were utilized to summarize and explain the variables. Continuous variables with normal distribution were expressed as mean ± standard deviation, accompanied by range and 95% confidence intervals (CIs). Continuous variables with non-normal distribution were expressed as median and interquartile range (IQR). The normality of variables was confirmed by the Shapiro-Wilk test. Categoric variables were expressed as frequency and percentage.

The 2-sample Kolmogorov-Smirnov test was applied to ascertain equality of distribution and the Kruskal-Wallis rank test to test equality of the populations. Generalized estimating equations were applied to compare overall scores and domains with possible determinant-of-outcome variables. Outcomes were adjusted for BMI because we observed a significant negative correlation between BMI and Body-QoL score in a previous study.[12]

For all tests, significance was defined as $P < 0.05$.

RESULTS

Participation in Postoperative QoL Assessments

During the study period, 202 patients underwent abdominal BCS, 112 of whom completed the questionnaire preoperatively; this latter group constituted the overall study population. Fifty-seven (50.9%) of the 112 patients responded to the questionnaire at the short-term postoperative assessment (4.3 months; IQR, 3.0-6.8 months). Eighty-four (75.0%) patients responded to the long-term postoperative assessment (27.2 months; IQR, 16.6-31.3 [2.3 years; IQR, 1.4-2.6 years]).

Patient Characteristics and Surgical Procedures

The study population was entirely female. Mean age was 39.6 ± 8.1 years (range, 22-63 years), mean height was 159.6 ± 6.1 cm, and mean weight was 63.9 ± 6.7 kg. Mean BMI was 25.1 ± 2.2 kg/m² (range, 19.3-32.0 kg/m²) at the time of surgery and 24.7 ± 2.5 kg/m² at the long-term postoperative assessment. Twenty (17.9%) patients had MWL, with 100.7% ± 17.1% of excess weight lost (ie, weight above BMI of 25). Seven (6.3%) of them underwent gastric bypass, 11 (9.8%) had a sleeve gastrectomy, and 2 (1.8%) lost weight by lifestyle changes.

Baseline characteristics of patients who participated in both postoperative assessments did not differ significantly from those of the entire study population (Table 1).

Most patients with ptosis grading had moderate or severe ptosis (91.4%) according to Matarasso's classification system (Table 2).[23]

The procedures performed were lipo-abdominoplasty (n = 95; 84.8%), abdominoplasty without liposuction (n = 5; 4.5%) liposuction alone (n = 9; 8.0%), and lower body lift (n = 5; 4.5%) (Table 2). Thirteen (11.6%) patients underwent a concomitant aesthetic surgery procedure (mainly breast surgery or rhinoplasty) (Table 2).

A major difference between the MWL and cosmetic cohorts pertained to the type of procedure: all lower body lifts and nearly all circumferential procedures were in patients with MWL (Table 3). Mean age was lower in the MWL cohort (38.3 ± 10.4 vs 39.9 ± 7.6; $P = 0.0277$).

Primary Outcome: Total Body-QoL Score Over Time

The mean adjusted Body-QoL score was 44.0 ± 14.1 (95% CI, 41.3-46.6) preoperatively, 85.5 ± 17.5 (95% CI,

Table 1. General Characteristics of the Entire Study Population and the Subgroup That Responded to All 3 QoL Assessments

Characteristic	Entire study population (*n* = 112)	Responders to all assessments (*n* = 44)	*P* value
Age, mean ± SD, y (range)	39.6 ± 8.1 (22-63)	40.9 ± 8.4 (22-63)	0.1627
Height, mean ± SD, cm (range)	159.6 ± 6.1 (149-176)	160.0 ± 6.0 (149-172)	0.6900
Weight, mean ± SD, kg (range)	63.9 ± 6.7 (47.5-82)	65.0 ± 6.5 (53-81)	0.1969
BMI (preoperative), mean ± SD, kg/m^2 (range)	25.1 ± 2.2 (19.3-32.0)	25.4 ± 2.3 (19.8-32.0)	0.2025
Massive weight loss, n (%)	20 (17.9)	9 (20.5)	0.5883
Comorbidity, n (%) Tobacco use	30 (28.3)	14 (31.8)	0.4984
Depression	6 (5.5)	3 (6.8)	0.6208
Anxiety	5 (4.6)	3 (6.8)	0.3695
Hypertension	4 (3.7)	2 (4.6)	0.6891
Diabetes mellitus	1 (0.9)	0 (0)	0.4085
Insulin resistance	5 (4.5)	2 (4.6)	0.9733
Hypothyroidism	7 (6.4)	2 (4.6)	0.5108

SD, standard deviation.

80.9-90.2) short-term postoperatively, and 84.4 ± 12.7 (95% CI, 81.7-87.2) long-term postoperatively (Figure 1). The differences between the preoperative score and each postoperative score were significant (*P* < 0.0001). However, differences between the short-term and long-term postoperative scores were not significant (*P* = 0.8104).

When comparing outcomes between the entire study population (*n* = 112) and the subgroup that participated in all 3 assessments (*n* = 44), no significant differences in Body-QoL scores were observed (Table 4), denoting strong positive correlation between these groups.

Domains of the Body-QoL Tool
The scores for all 4 domains were significantly better after BCS, both short and long term, than preoperatively (*P* < 0.0001 for each domain vs preoperative score) (Figure 2). The differences between short-term and long-term postoperative scores for each domain were not significant (Figure 2).

MWL vs Cosmetic Patients
Preoperatively, the adjusted Body-QoL score was significantly lower (*P* = 0.0028) for patients with MWL (MWL cohort: 33.9 ± 15.6; 95% CI, 26.6-41.2; cosmetic cohort: 46.1 ± 12.8; 95% CI, 43.5-48.8). Short-term and long-term postoperative scores were slightly lower for the MWL cohort, but the differences in scores between these cohorts were not significant (*P* = 0.2231 short term; *P* = 0.1133 long term). Significant improvement in scores from preoperative values was noted for both cohorts at both postoperative assessments. However, the differences between

short-term and long-term postoperative scores for each cohort were not significant (MWL: *P* = 1.0; cosmetic: *P* = 0.5114) (Figure 3).

Analysis by domain showed that the MWL cohort experienced significant improvement postoperatively in every domain, both short and long term. Results were comparable to those for the cosmetic cohort.

Body-QoL Score Over Time
The mean total Body-QoL score improved significantly from the preoperative assessment to the short-term postoperative assessment, and the improvement was maintained long term (Figure 4). A 3-parameter Gompertz function was the model that after testing different models (including sigmoid and exponential functions) did best represent the evolution of the body-QoL scores over time, since it had the highest R-squared. The Gompertz model predicted an adjusted Body-QoL score of 84.9 for women after BCS (R-squared, 0.9999). For the MWL cohort, the Gompertz model predicted a postoperative score of 80.1 (R-squared, 1.0). For the cosmetic cohort, the model predicted a postoperative score of 85.9 (R-squared, 0.9998). Therefore, according to this model, the difference in predicted postoperative scores between the MWL and cosmetic cohorts was significant (*P* < 0.0001).

Association Between Body-QoL Score and Patients Characteristics
Comparing preoperative scores with both postoperative scores using generalized estimating equations different associations were seen. Older age was associated

Table 2. Ptosis Grades and Surgical Characteristics of the Study Population (*N* = 112)

Characteristic	n (%)
Matarasso ptosis grade	
I	2 (1.8)
II	4 (3.6)
III	34 (30.4)
IV	30 (26.8)
Not specified	42 (35.7)
Type of procedure	
Abdominoplasty	5 (4.5)
Lipo-abdominoplasty	95 (84.8)
Liposuction	9 (8.0)
Lower body lift	5 (4.5)
Skin resection pattern	
Extended	3 (2.7)
Circumferential	7 (6.3)
Fleur-de-lis	5 (4.5)
Lockwood	21 (18.8)
Standard (fusiform)	38 (33.9)
Reverse	1 (0.9)
Not specified	37 (33.0)
Concomitant procedure (same session)	
Breast augmentation	12 (10.7)
Rhinoplasty	1 (0.9)

with greater gains in total Body-QoL score after surgery (*P* < 0.0001). An increase in BMI during postoperative follow-up was associated with less improvement in the total Body-QoL score (*P* = 0.001). A current diagnosis of anxiety or depression also were associated with lower improvement (*P* = 0.014). Having a concomitant aesthetic surgery procedure at the time of BCS had a favorable impact on the improvement in Body-QoL score postoperatively (*P* = 0.034).

DISCUSSION

QoL is one of the most relevant clinical outcomes in medical practice. It should be measured with a properly designed and validated PROM instrument to effectively ascertain the patient's perspective.[11,20,21,24] Evidence suggests that BCS improves QoL by enhancing self-image, increasing self-esteem, reducing physical symptoms, and providing other favorable effects.[9-13] However, the postoperative follow-up in studies that address QoL outcomes following BCS are either short, less than a year,[25,26] long,[19,27,28] or not provided.[29-31] Therefore, insight into the comparability of short-term and long-term effects of BCS on QoL is lacking.

More importantly, in most studies, the PROMs utilized to assess QoL after BCS were either not validated,[31,32] or not designed specifically for patients who undergo BCS.[25,29,30,33] Our group is the first to design and validate a PROM (the Body-QoL) specifically to measure the effect of BCS on QoL[13]; therefore, the Body-QoL instrument does not have the disadvantages of other PROMs. Since implementation of the Body-QoL tool in our practice approximately 3 years ago, we have been evaluating QoL results after BCS in a more profound and systematic manner. To our knowledge, our group is the first to provide both short-term and long-term QoL data post-BCS that are based on a systematic and rigorously designed PROM. Our research represents a substantial contribution to the field particularly because knowledge of long-term QoL outcomes after BCS had been lacking. Another strength of our study is the inclusion and independent assessment of MWL and cosmetic cohorts.

Our study population was recruited during a 3-year period, and more than 55% of patients who underwent BCS in our hospital participated in the study. Moreover, 75% of the study population completed the long-term QoL assessment.

Overall, the demographic characteristics of patients who participated in all 3 assessments were similar to those of the entire study population. The short-term and long-term postoperative assessments were performed at different times, and all long-term assessments occurred at least 1 year after BCS.

We observed stability of the QoL effect of BCS over time, and there was no significant difference between short-term and long-term scores. Moreover, we noted that the scores over time were characteristic of a Gompertz model, reaching a stable plateau 3 months after BCS, indicative of true stability. Although the strength of the findings may be questioned due to the fact that some patients who participated in 1 postoperative assessment did not participate in the other, we believe that this issue is irrelevant because the baseline characteristics of patients who participated in all 3 assessments were comparable to those of the entire study population.

The observed stability of the Body-QoL scores makes it unlikely that cognitive dissonance (eg, scoring higher at short-term postoperative assessments due to positive preoperative expectations) played a major role in our results.[18] The similarity of short- and long-term scores may imply that short-term QoL scores are a reliable predictor of final (long-term) QoL outcomes of BCS. This would simplify the monitoring of QoL after surgery,

Table 3. Demographic and Surgical Characteristics of the Cosmetic and MWL Cohorts

	Cosmetic (*n* = 92)	MWL (*n* = 20)	
Characteristic			*P* value
Age, mean ± SD, y (range)	39.9 ± 7.6 (22-64)	38.3 ± 10.4 (22-63)	0.4186
Height, mean ± SD, cm (range)	63.6 ± 7.0 (47.5-86)	65.9 ± 7.3 (55-81)	0.4318
Weight, mean ± SD, kg (range)	158.9 ± 6.4 (145-176)	160.3 ± 4.9 (149-168)	0.0722
BMI (preoperative), mean ± SD, kg/m^2 (range)	25.2 ± 2.1 (19.3-30.9)	25.6 ± 2.5 (22.1-32.1)	0.1604
Type of procedure, n (%)			
Abdominoplasty	0 (0.0)	3 (15.0)	0.0002
Lipo-abdominoplasty	83 (90.2)	12 (60.0)	0.0003
Liposuction	9 (9.8)	0 (0.0)	0.1687
Lower body lift	0 (0.0)	5 (25.0)	<0.0001
Skin resection pattern, n (%)			
Extended	1 (1.1)	2 (10.0)	0.0632
Circumferential	1 (1.1)	6 (30.0)	<0.0001
Fleur-de-lis	3 (3.3)	2 (10.0)	0.3379
Lockwood	21 (22.8)	0 (0)	0.0035
Standard (fusiform)	31 (33.7)	7 (35.0)	0.3735
Reverse	1 (1.1)	0 (0)	0.5857
Not specified	34 (37.0)	3 (15.0)	

MWL, massive weight loss; SD, standard deviation.
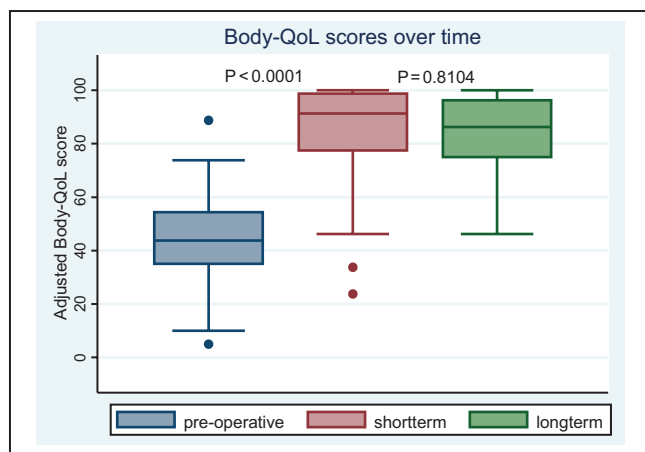
Figure 1. Adjusted Body-QoL scores preoperatively, short-term postoperatively (median, 4.3 months), and long-term postoperatively (median, 2.3 years).

particularly because follow-up typically does not last more than a year. If similarity of short- and long-term QoL results is confirmed by other BCS studies, short-term results may be a better indicator of final results than previously believed. However, further research is required to draw meaningful conclusions regarding this matter.

The greatest difference between the MWL and cosmetic cohorts in our study pertained to preoperative Body-QoL scores, which were much lower for the MWL cohort. Both cohorts experienced significant and sustained improvement in QoL following BCS, and postoperative scores did not differ significantly between these cohorts. However, the cohorts differed in age; on average, patients with MWL were 4 years younger. If age had been comparable, mean preoperative scores might have been different. Our previous study showed that higher age was associated with lower preoperative QoL scores.[13] Although our current findings imply that postoperative scores are comparable for MWL and cosmetic cohorts, the Gompertz model predicted a statistically significant difference in long-term scores, which were nearly 6% lower for the MWL cohort. Therefore, we do not know if the long-term scores for MWL and cosmetic subpopulations are comparable or slightly different. Further investigation is warranted.

Greater improvement in QoL was associated with older age and concomitant cosmetic procedures. A diagnosis of anxiety was associated with less improvement in QoL. We believe that these factors should be examined more thoroughly in future research. Changes in body weight over time had a significant impact on QoL in our study. This

Table 4. Comparison of Outcomes: Entire Study Population vs Subgroup That Responded to All 3 QoL Assessments (Per Protocol Group)

| Population	Basal Body-QoL Score n = 112	Short-Term Body-QoL Score n = 57	Long-Term Body-QoL Score n = 84	P value		
				Basal vs Short-Term n = 57	Basal vs Long-Term n = 84	Short vs Long-Term n = 50
Study Population n = 112	44.0 ± 14.1 (5.0-88.8)	85.5 ± 17.5 (23.8-100)	84.4 ± 12.7 (46.3-100)	$P < 0.0001$	$P < 0.0001$	0.8104
Per protocol n = 44	43.5 ± 16.0 (15.0-88.8)	85.5 ± 18.4 (23.8-100)	84.8 ± 13.9 (46.3-100)	$P < 0.0001$	$P < 0.0001$	0.7852
P value comparing 2 populations	$P = 0.8482$	$P = 0.9999$	$P = 0.8634$			

SD, standard deviation.
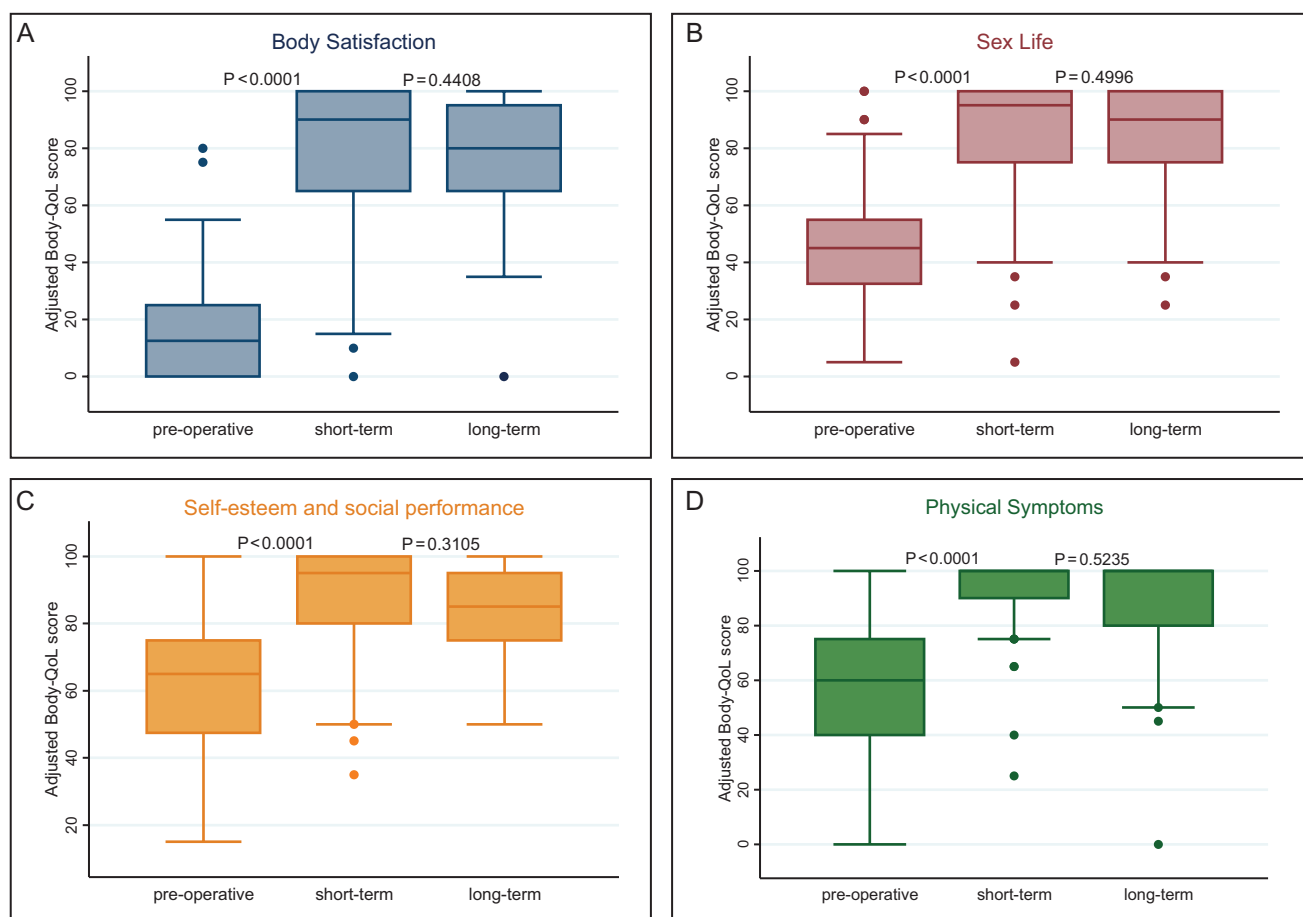
Figure 2. Adjusted Body-QoL scores preoperatively, short-term postoperatively (median, 4.3 months), and long-term postoperatively (median, 2.3 years) for the domains of (A) body satisfaction, (B) sex life, (C) self-esteem and social performance, and (D) physical symptoms.

is concordant with findings of Van der Beek et al[19] among patients who underwent BCS after bariatric surgery; in their study, weight regain was found to be the main contributor to a decline in QoL between 3 and 7 years post-BCS.[19]

Because our long-term data for body weight are merely anamnestic, potential bias exists; for example, patients with high QoL might estimate their weight as lower than actual, and vice versa. Therefore, conclusions about the effect of body weight cannot be drawn from our study, but it would

be interesting to explore this further in well-designed research.

The primary limitation of the present study is its lack of male participants, which prevents extrapolation of the results to men. Although men were not excluded from participation, only 2 men underwent BCS during the study period, and those men did not consent to participate. The limited interest of men in BCS is not surprising, considering that 90% of cosmetic procedures are performed in
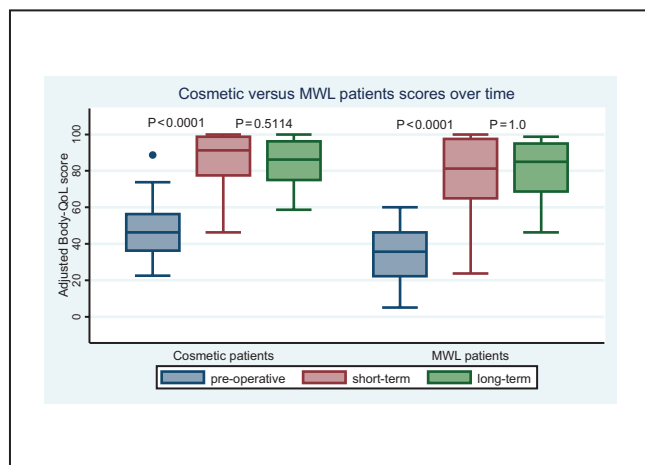
Figure 3. Total adjusted Body-QoL scores preoperatively, short-term postoperatively (median, 4.3 months), and long-term postoperatively (median, 2.3 years) for cosmetic and MWL patients.

women,[1] and women may feel more pressure to maintain a lean juvenile figure.[34,35]

Another limitation of our study is that results are based solely on the Chilean population. Although we believe that our findings may indicate favorable long-term QoL outcomes for other BCS populations, the extent of improvement, the differences between MWL and cosmetic patients, and the associations with factors such as age or BMI may differ for those populations. We advocate utilization of the Body-QoL tool in other countries to broaden general knowledge about QoL following BCS.

Another limitation of the study is the relatively low response rate to the short-term assessment; this occurred mainly because the registry system was not fully functional when the Body-QoL instrument was launched. Fortunately, the registry system became fully operational over time, and the response to the long-term assessment was considerable.

We did not collect data relating to the effects of complications on the body-related QoL. This is considered a limitation of the study because complications could substantially impact QoL. It would be prudent to explore this topic in future research.

Regardless of the limitations, our study provides new insight and high-quality data on QoL for patients after BCS. Much additional research is needed, and we will continue assessing body-related QoL in our practice. We hope that similar studies will be conducted in other facilities and countries.

Another recent development in QoL assessment is the PROM designed by Klassen et al,[36] known as the BODY-Q. This instrument demonstrated promising results for assessing QoL among patients who underwent BCS for cosmetic reasons or after MWL. It includes more domains than the Body-QoL, addresses all body regions affected,
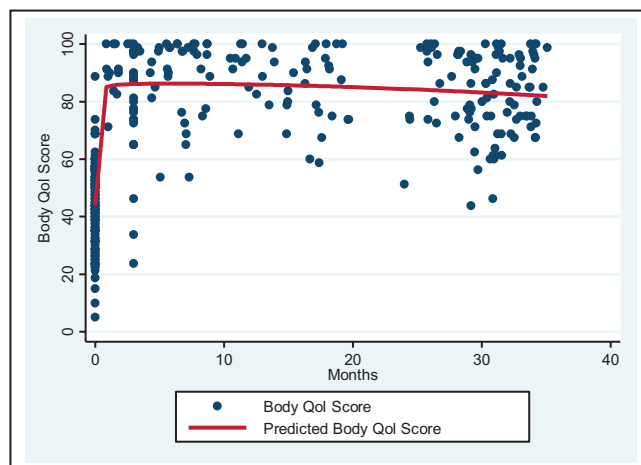
Figure 4. Body-QoL scores over time were best represented by a 3-parameter Gompertz model.

and involves measuring satisfaction with the treatment and the surgeon. We believe that this tool will increase knowledge about QoL after BCS, and look forward to the publication of more data obtained with it. However, we believe that for routine evaluation in medical practice, the Body-QoL tool is a quick and easy, yet strong, tool to monitor QoL outcomes. Moreover, its handiness may result in high response rates. We encourage surgeons and researchers to employ one or both of these PROMs in clinical and research efforts. The Body-QoL can be freely used for academic purposes, by individual researchers (surgeons) and nonprofit institutions, as stated in the initial publication.[12]

CONCLUSIONS

Body-related QoL improves after BCS, whether the surgery is performed because of MWL or specifically for aesthetic concerns. The improvement is significant and remains constant long term (up to 3 years postoperatively in our Chilean population). Although patients with MWL had lower preoperative Body-QoL scores, their postoperative scores approached those of the cosmetic cohort, indicating restored self-confidence and improved physical symptoms. Certain factors contributed to less improvement in QoL, including anxiety, depression, and higher BMI when undergoing BCS. Additional research in more diverse populations is warranted.

Supplementary Material

This article contains supplementary material located online at www.aestheticsurgeryjournal.com.

Disclosures

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