

The PreFACE

A Preoperative Psychosocial Screen for Elective Facial Cosmetic Surgery and Cosmetic Dentistry Patients

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Background: Currently no brief and objective screening protocol exists to assist surgeons and dentists in the identification of patients who are likely to report unsatisfactory outcomes after cosmetic surgery interventions. The aims of this study were to (1) investigate the relationship between postoperative dissatisfaction and preoperative characteristics (psychiatric disturbance, anxiety, depression, self-esteem, dysmorphic concern, and body image), and (2) empirically derive a preoperative psychosocial screening instrument to identify patients who may require preoperative assessment or counseling.

Methods: The sample composed of 84 patients (69 women and 15 men) undergoing elective cosmetic facial surgery or cosmetic dentistry. Before surgery, a self-report questionnaire was administered to the patients, which comprised questions designed to evaluate many of the psychosocial characteristics thought to be associated with unsatisfactory outcomes. Six months after surgery, a questionnaire was administered to the patients, which included items evaluating postoperative satisfaction.

Results: The findings revealed that preoperative psychiatric disturbance, anxiety, depression, low appearance evaluation, and body areas dissatisfaction are psychosocial risk factors that indicate an increased likelihood of patient dissatisfaction with surgical outcomes. The PreFACE (*Pre-operative FACial Cosmetic surgery Evaluation*), a brief objective preoperative screening questionnaire that can be easily and efficiently administered to elective facial cosmetic surgery and cosmetic dentistry patients, was empirically derived. It is able to identify most patients who are likely to express dissatisfaction and minimizes the selection of those who will express satisfaction. The PreFACE is recommended for validation using other cosmetic surgery populations.

Conclusions: The routine use of PreFACE is recommended for identification of patients who may benefit from preoperative counseling.

Key Words: plastic surgery, cosmetic surgery, screening, assessment

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Although most individuals who seek cosmetic surgical and dental procedures appear psychologically healthy, some patients will experience a poor subjective outcome despite a technically good result. The literature has consistently revealed that ~10% to 20% of patients undergoing cosmetic interventions report postoperative dissatisfaction.^{1,2} Poor perceived patient outcomes can create problems for both practitioner and patient because they can result in depression, anxiety,

social isolation, self-injurious behaviors, including suicide, workplace absenteeism, familial dysfunction, poor general health, demands for further surgery, increased litigation, complaints to Health Regulatory bodies, and even violence towards the treating physician.^{3–7}

Selecting appropriate patients for cosmetic surgery can not only decrease the proportion of patients who are dissatisfied with the surgical outcome, but can also reduce patient management difficulties.^{7,8} Surgeons and dentists performing cosmetic procedures can improve the quality of care for patients and enhance the perception of the ultimate outcome of surgery by evaluating psychosocial risk factors^{9–12} and referring the small proportion of patients with risk factors for more extensive preoperative psychologic assessment and intervention.¹²

Despite its apparent importance, there is little data available to assist practitioners in the selection of inappropriate patients for surgery. Preoperative characteristics of patients who are dissatisfied with the result of cosmetic interventions are generally derived from clinical experience and almost no methodologically robust empirical research has been conducted. An exception was Napoleon's study¹³ of the impact of personality disorders in elective cosmetic surgery patients, which found that personality type was significantly related to satisfaction, with borderline and narcissistic personality types being less likely to report being satisfied with the surgical outcome. Despite the paucity of empirical investigation, it is generally agreed that factors associated with unsatisfactory outcomes include male sex, young age, preoperative depression and anxiety, body dysmorphic disorder or concern, dissatisfaction with previous surgeries, low self-esteem and body image, and unrealistic patient expectations of the outcome.^{2,6,7,9,12–21} In an attempt to provide a framework for evaluation, Lavell and Lewis⁸ derived the SAFE guide from their analysis of 55 patients undergoing facial regenerative surgical procedures. They suggested that 4 patient characteristics need to be considered in determining suitability of candidates for surgery: Self evaluation of attractiveness (positive self-image), Anxiety (conscious awareness of generalized distress), Fear (excessive involvement in detailed preparation for surgery), and Expectation (unrealistic anticipation of postsurgical life changes). Honigman et al⁶ reviewed the factors identified in the literature that may indicate a need for preoperative counseling for elective cosmetic surgery patients.

The literature is also not particularly useful in guiding the practitioner in how to identify patients who will report poor outcomes. Current techniques for preoperatively evaluating patient characteristics include observation of the patient and conducting a patient interview, inclusive of personality assessment by an attending psychologist.^{6–8,13,14,12,22} For example, Lavell and Lewis⁸ suggested that assessment of the SAFE patient characteristics can be accomplished by patient observation and the use of open-ended questioning techniques. Others have identified several reliable and valid patient self-administered questionnaires, such as the Hospital Anxiety and Depression Scale (HADS), which can be used to screen for each psychosocial risk factor.^{6,9,12,19,22} Anderson and Johnson²³ have devised the only presurgical "screening" questionnaire for cosmetic surgery patients. This questionnaire (rather than "screen") comprises 161 nonempirically derived items evaluating surgical history and motiva-

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tion, medication and general medical history, and psychologic states. Although these can facilitate a comprehensive evaluation, a common obstacle to conducting a preoperative assessment is limited time.^{8,12} Currently, there exists no brief and objective screening protocol to help identify patients who are contraindicated for surgery or who require more detailed preoperative psychosocial assessment or more intensive pre and postoperative psychologic support. It is important to note this distinction between a “screen” and an “assessment.” A screening protocol should be short, able to be administered by a nonspecialist in psychosocial assessment, and should serve to raise red flags, which may then be explored in a more thorough psychosocial assessment. Such screening should not replace clinical judgment, but is a time-efficient aid to such judgment.

Study Aims

This study aimed to investigate the preoperative characteristics of patients who were dissatisfied with the result of elective cosmetic facial surgery and cosmetic dentistry. Specifically, it was hypothesized that postoperative dissatisfaction would be associated with higher levels of preoperative psychiatric disturbance, anxiety, depression, low self-esteem, dysmorphic concern, and low body image. This study also aimed to empirically derive a presurgery screening instrument to identify elective cosmetic facial surgery and cosmetic dentistry patients who may require preoperative counseling.

METHODS

Participants

Facial surgery and cosmetic dentistry were selected as the focus for the study because the face tends to attract more attention than any other feature and because physical appeal is determined largely by the face.^{24,25} Patients undergoing elective facial cosmetic surgery or cosmetic dentistry were administered a questionnaire before surgery and at 6 months after surgery. Overall, 84 (43%) of 194 patients completing the preoperative survey also completed the postoperative survey. These 84 patients (69 women and 15 men) aged between 19 and 71 years ($M = 42.4$, $SD = 12.2$). The patients who completed the postoperative questionnaire were compared on preoperative demographic information and psychologic functioning measures using a series of independent sample t tests and χ^2 analyses. No significant differences between those who did or did not complete the preoperative questionnaire on any demographic characteristic or type of surgical procedure were found. The type of procedure undertaken by these patients is reported in Table 1.

TABLE 1. Procedures Undertaken by the Cosmetic Surgery and Cosmetic Dentistry Sample

Procedure Classification	n	%
Rhinoplasty only	40	47.6
Cosmetic dentistry	16	19.0
Facial surgery only (eg, facelift, cheek and chin implants)	8	9.5
Facial surgery and blepharoplasty	8	9.5
Blepharoplasty only	6	7.1
Facial surgery and rhinoplasty	2	2.4
Rhinoplasty and blepharoplasty	2	2.4
Otoplasty	1	1.2
Facial surgery, blepharoplasty, and rhinoplasty	1	1.2

Measures

The self-report preoperative questionnaire comprised several well-validated standardized measures of psychosocial dysfunction to evaluate many of the psychosocial characteristics thought to be associated with dissatisfactory outcomes after cosmetic surgery (Table 2). These measures have been extensively used in research and clinical practice, and there is substantial evidence to support their psychometric properties. They have also been used in a number of studies evaluating psychologic factors in cosmetic surgery (eg, Refs. 18, 26–29). Cronbach's α , or the scale reliability coefficient for the measures is provided in the right-hand column. Several other questions evaluating other psychosocial characteristics thought to be associated with poor outcomes were included in the preoperative questionnaire to develop the screening instrument (Fig. 1). The postoperative survey included 4 different items evaluating postoperative satisfaction, linked to preoperative expectations (Fig. 2).

Procedure

The study was approved by the University of Melbourne Health Sciences Human Ethics Sub-Committee (project 050782.1). Recruitment of participants was undertaken initially by approaching surgeons who specialized in elective facial cosmetic procedures and dentists (including general dentists, specialist prosthodontists, and prosthetists) who provide elective cosmetic dental procedures in Melbourne and Sydney, Australia. Cosmetic dental procedures included procedures intended to modify or improve appearance rather than function and included noninvasive procedures, such as bleaching, veneers, restoration of crowns, and bridge work. Chair-based procedures only were included. Medicare-rebateable orthognathic procedures performed in hospital and orthodontic procedures were excluded.

Preoperative questionnaires were distributed to a sample of prospective patients aged 18 years and over, presenting with requests for elective facial cosmetic surgery or dentistry to a variety of practitioners operating in Victoria and New South Wales, Australia (30 sites). These were supplied to patients on booking in for surgery or dental procedures and were returned in a self-addressed envelope to the investigators after completion. Postoperative questionnaires were completed 6 months after completion of the surgical or dental procedure. Consistent with ethical approval, participants were provided with plain language statements and return of the questionnaire was taken to imply consent.

RESULTS

Association Between Preoperative Psychosocial Dysfunction and Postoperative Dissatisfaction

There was some variation in the response of patients on the different measures of postoperative dissatisfaction. Overall, 24.1% of patients reported worse than expected outcomes on item 1, 25.3% scored 1 to 6 on item 2, 16.9% reported dissatisfaction with the outcome of surgery on item 3, and 12.0% reported worse than expected experience of surgery and recovery on item 4. Because of this variability, the association between the preoperative scores on the standardized psychosocial measures and postoperative dissatisfaction was evaluated for all 4 items. Each variable was checked for violations of the assumption of normal distribution. Variables that were normally distributed were analyzed using parametric statistical tests (independent samples t tests), whereas variables that violated the assumption of normality were analyzed using nonparametric statistical tests (Mann-Whitney U tests, Spearman bivariate correlations). Bonferroni adjustments were used to control for multiple comparisons. Trends were also reported at the significance level of 0.05 and effect sizes were reported.

TABLE 2. Standardized Measures of Psychosocial Dysfunction Used in the Study

Name	Description	Item Response Scale	α for This Study
General Health Questionnaire-30 (GHQ-30: 32, 33)	30-item self-report measure of psychiatric disturbance often used in general practice and other community-based clinical settings	4-point response scale (from 0 to 3)	0.91
Hospital Anxiety and Depression Scale (HADS: 34)	Measure of generalized anxiety and depression.	4-point response scale (from 0 to 3)	
	Subscales: Anxiety (7 items)		0.87
	Depression (7 items)		0.77
Rosenberg Self-Esteem Scale (RSE: 35)	10-item measure of global self-esteem	4-point response scale (from 0 to 3)	0.85
Dysmorphic Concerns Questionnaire (DCQ: 36, 37)	7-item measure of the extent of concern with physical appearance	4-point response scale (from 0 to 3)	0.85
Multidimensional Body-Self Relations Questionnaire (MBSRQ: 38)	Measure of body image	5-point response scale (from 1 to 5)	
	Subscales used in the current study: Appearance evaluation: feelings of physical attractiveness and satisfaction with one's looks (7 items)		0.87
	Appearance orientation: extent of investment in one's appearance (12 items)		0.84
	Body areas satisfaction: satisfaction with discrete aspects of one's appearance (9 items)		0.79

- Demographic characteristics (gender, age, employment status, relationship status)
- Length of time concerned about the problem; length of time considered consulting a cosmetic surgeon or dental specialist; length of time thought about procedure after consultation before making decision
- Anticipated physical support during recovery period; anticipated emotional support during recovery period
- Degree to which condition bothered patient
- History of appearance-related teasing or bullying
- Degree to which appearance affected sexual attractiveness; effect of condition on quality of sexual relationship
- Previous cosmetic surgical or dentistry procedures; number of previous surgeries; satisfaction with outcome of previous surgeries
- Identified concurrent stressors or stressor in the past six months
- Likelihood of achieving their desired outcome, using a visual analogue scale (1-10); potential of procedure to be a life-changing event

FIGURE 1. Other variables included in preoperative questionnaire to derive screening instrument.**Item 1**

A series of independent *t* tests and Mann-Whitney analyses with Bonferroni adjustments for multiple comparisons ($P \leq 0.006$) revealed that none of the variables were significantly related to item 1 dissatisfaction (Table 3). There were, however, trends ($P < 0.05$) for the

patients reporting worse than expected outcomes to report higher General Health Questionnaire (GHQ)-30, HADS anxiety, and HADS depression scores, and lower Multidimensional Body-Self Relations Questionnaire (MBSRQ) Appearance Evaluation scores before surgery. These variables display small to moderate effect sizes.³⁰

Item number	Item wording	Item responses
Item 1	Compared to your expectations, what was the overall result of your surgery?	Collapsed into two categories (<i>Better than or as expected</i> and <i>Worse than expected</i>)
Item 2	On a scale of 1 to 10, how likely do you now think it is, that you have achieved, or will achieve what you were looking for, in having this procedure?	Analysed as a continuous variable (scores of 1-10). Also analysed as a categorical variable in development of screening instrument (arbitrary selection of scores of 1 to 6 representing dissatisfaction and scores of 7 to 10 representing satisfaction)
Item 3	Overall, would you say that you were satisfied with the outcome of this surgery?	Dichotomous outcome variable (<i>satisfied</i> and <i>dissatisfied</i>)
Item 4	Compared to your expectations, what was your experience of surgery and recovery?	Collapsed into two categories (<i>Better than or as expected</i> and <i>Worse than expected</i>)

FIGURE 2. Four items evaluating postoperative dissatisfaction.

TABLE 3. Comparison of Preoperative Psychologic Variables for Satisfaction and Dissatisfaction on Item 4

Variable	Better Than or as Expected (n = 73)		Worse Than Expected (n = 10)		Mean Difference (95% CI)	Statistic	P	Effect Size (η_p^2)
	M	SD	M	SD				
GHQ-30	22.1	8.1	29.0	11.0	6.9 (1.2 to 12.5)	$t(81) = -2.42$	0.02	0.07*
HADS anxiety	4.8	3.9	7.1	4.7	2.3 (-0.4 to 5.0)	$t(81) = -1.72$	0.09	0.04
HADS depression	2.0	2.4	3.8	2.7	1.8 (0.1 to 3.5)	$U = 210.0$	0.07	0.05
RSE	22.3	4.2	20.8	6.1	1.6 (-1.6 to 4.7)	$t(79) = 1.00$	0.32	0.01
DCQ	5.6	4.0	7.9	3.6	2.3 (-0.3 to 5.0)	$t(81) = -1.75$	0.08	0.04
MBSRQ appearance evaluation	3.4	0.7	2.9	0.5	0.5 (0.0 to 0.9)	$U = 170.0$	0.02	0.04*
MBSRQ appearance orientation	3.7	0.5	3.8	0.5	0.1 (-0.3 to 0.5)	$t(77) = -0.45$	0.66	0.003
Body areas satisfaction	3.4	0.5	2.8	0.5	0.6 (0.2 to 1.0)	$t(80) = 0.52$	0.002	0.11†

* $P < 0.05$.

† $P \leq 0.006$.

Item 2

A series of Spearman bivariate correlations revealed significant weak positive correlations between item 2 dissatisfaction analyzed as a continuous variable and GHQ-30 scores, $r(N = 83) = 0.23, P = 0.04$ and HADS anxiety scores, $r(N = 83) = 0.38, P < 0.001$, and significant weak negative correlations between item 2 dissatisfaction and MBSRQ Appearance Evaluation scores, $r(N = 81) = -0.25, P =$

0.02 , and MBSRQ Body Areas Satisfaction scores, $r(N = 82) = -0.26, P = 0.02$. They also revealed a significant moderate correlation between item 2 dissatisfaction and HADS depression scores, $r(N = 82) = 0.43, P < 0.001$. There were no significant correlations between item 2 dissatisfaction and DCQ scores, $r(N = 83) = 0.16, P = 0.15$, RSE scores, $r(N = 81) = -0.14, P = 0.23$, and Appearance Orientation scores, $r(N = 79) = -0.11, P = 0.32$.

Item 3

A series of independent *t* tests and Mann-Whitney analyses with Bonferroni adjustments for multiple comparisons ($P \leq 0.006$) revealed that none of the variables were significantly related to item 3 dissatisfaction.

Item 4

A series of independent *t* tests and Mann-Whitney analyses with Bonferroni adjustments for multiple comparisons ($P \leq 0.006$) revealed that patients reporting that their experience of surgery and recovery was worse than expected reported lower MBSRQ Body Areas Satisfaction scores than patients reporting better than or as expected experiences (Table 3). None of the remaining variables were significantly related to item 4 postoperative dissatisfaction. There were, however, trends ($P < 0.05$) for patients reporting worse than expected experiences to report higher GHQ-30 and lower MBSRQ Appearance Evaluation scores before surgery. These variables display small to moderate effect sizes.³⁰

Development of the PreFACE

The screening tool was developed using item 1 of postoperative dissatisfaction ("Compared with your expectations, what was the overall result of the surgery?") because it was one of the most inclusive measures of dissatisfaction and evaluated outcome satisfaction within the context of patient expectations. The screening was then validated using the remaining items of postoperative dissatisfaction. The screening instrument was named the PreFACE: *Preoperative F*acial *C*osmetic surgery *E*valuation.

Selection of PreFACE Items

The patients reporting better than or as expected and worse than expected results on item 1 were compared on each item in the preoperative questionnaire (including the items of the standardized measures). Each item was checked for violations of the assumption of normal distribution and the appropriate statistical analyses (independent samples *t* tests, Mann-Whitney *U* tests, and χ^2 analyses) were used. Table 4 displays the 9 items displaying statistical significance ($P \leq 0.01$) that were selected for inclusion in the screening tool.

Entering these variables into a binary logistic regression revealed that they significantly predicted group membership on item 1 postoperative dissatisfaction, $\chi^2 (23, N = 73) = 65.62, P < 0.001$. The model was able to correctly classify 92% of those who reported worse than expected outcomes and 100% of those who reported better than or as expected outcomes, for an overall success rate of 99%.

The 9 items were then validated on the remaining items of postoperative dissatisfaction. A multiple linear regression revealed that the 9 items significantly predicted scores on the item 2 (scores

of 1 to 10), adjusted $R^2 = 0.27, F(9,63) = 3.98, P < 0.001$, and a series of binary logistic regressions revealed that they also significantly predicted group membership on item 2 (scores of 1–6 and scores of 7–10), $\chi^2 (23, N = 73) = 54.84, P < 0.001$, item 3, $\chi^2 (23, N = 73) = 35.13, P = 0.05$, and item 4, $\chi^2 (23, N = 73) = 41.48, P = 0.01$.

Deriving PreFACE Scores

The original scoring procedures for some of the 9 items were transformed so that higher scores represented higher levels of the construct being measured. Minor changes were made to the wording of some questions to make them uniform across the screening instrument. The items of the PreFACE are displayed in the Appendix (Supplementary Digital Content; available at ●●●).

Scores for the PreFACE were derived from adding the scores of the items listed in the Appendix. These scores were significantly higher for those patients reporting worse than expected results on item 1 than those reporting better than or as expected results. PreFACE scores were validated on the remaining items of postoperative dissatisfaction. Independent samples *t* tests revealed that scores were significantly higher for patients who reported dissatisfaction on the remaining items of postoperative dissatisfaction (Table 5). The scores were also highly correlated with scores on item 2, Spearman $r (N = 73) = -0.36, P = 0.002$.

Deriving the PreFACE Cut-off Score

An attempt was made to derive an appropriate cut-off score on the PreFACE to identify those patients who may benefit from preoperative counseling. The score distributions for patients reporting better than or as expected and worse than expected outcomes on dissatisfaction item 1 were examined. The cut-off score of 11 was selected because it maximized the identification of patients reporting worse than expected results (85%) and minimized the selection of patients reporting better than or as expected results (22%) (Table 6). Examination of Table 6 reveals that the cut-off score also maximized the identification of patients reporting dissatisfaction (70%–83%) and minimized the selection of patients reporting satisfaction (25%–28%) on the remaining items of postoperative dissatisfaction.

Scoring of the PreFACE

Scores on the PreFACE can range from 0 to 28. Higher scores indicate a higher potential for postoperative dissatisfaction. Preoperative counseling is recommended for facial cosmetic surgery or cosmetic dentistry patients scoring 11 or more on the PreFACE. The PreFACE may be used without permission. Please notify the authors of any studies using the PreFACE by e-mailing prefacescreen@bigpond.com.

TABLE 4. Items Selected for Inclusion in the PreFACE

No.	Measure	Item No.	Question	Statistic	<i>P</i>	Effect Size (η_p^2)
1	GHQ-30	1	General health	$t(81) = -2.75$	0.007	0.09
2	GHQ-30	16	Feeling constantly under strain	$t(81) = -2.93$	0.004	0.10
3	GHQ-30	23	Finding everything getting on top of oneself	$t(81) = -3.22$	0.002	0.11
4	GHQ-30	25	Losing confidence in oneself	$t(81) = -2.69$	0.009	0.08
5	HADS-Depression	2	Lack of anhedonia	$U = 385.0, z = -2.94$	0.003	0.11
6	DCQ	6	Worrying about appearance defect	$t(81) = -2.91$	0.005	0.10
7	MBSRQ Appearance Orientation	7	Time spent getting ready	$t(81) = 2.63$	0.01	0.08
8	MBSRQ Body Areas Satisfaction	26	Face (facial features, complexion) satisfaction	$t(40.20) = 4.40$	<0.001	0.15
9	—	—	Dissatisfaction with previous cosmetic surgical procedures	$\chi^2 (1, N = 77) = 10.86$	0.001	—

TABLE 5. Comparison of PreFACE Scores for Patients Reporting Satisfaction and Dissatisfaction on the Postoperative Dissatisfaction Items

	Satisfied		Dissatisfied		Mean Difference (95% CI)	Statistic	P	Effect Size (η_p^2)
	M	SD	M	SD				
Item 1	8.8	3.3	13.3	3.5	4.5 (2.5–6.5)	$t(71) = -4.48$	<0.001	0.22
Item 2	8.9	3.3	12.7	4.0	3.8 (1.7–5.9)	$t(71) = 3.59$	0.001	0.15
Item 3	9.2	3.6	12.7	3.5	3.4 (0.9–6.0)	$t(71) = 2.69$	0.009	0.09
Item 4	9.1	3.4	14.5	3.3	5.4 (2.4–8.3)	$t(71) = -3.66$	<0.001	0.16

TABLE 6. Proportion of Patients Reporting Dissatisfaction and Satisfaction on the Postoperative Dissatisfaction Items Identified Using the PreFACE Cut-off Score

	Dissatisfied (%)	Satisfied (%)
Item 1	85	22
Item 2	70	25
Item 3	78	28
Item 4	83	28

DISCUSSION

The first aim of this study was to determine the relationship between preoperative psychosocial dysfunction and postoperative dissatisfaction. The findings revealed that postoperative dissatisfaction was associated with higher levels (significantly or trend) of preoperative psychiatric disturbance and lower levels of appearance evaluation on 3 of the 4 dissatisfaction items. In addition, postoperative dissatisfaction was associated with higher levels (significantly or trend) of preoperative anxiety and depression and lower levels of body areas satisfaction on 2 of the 4 dissatisfaction items. The effect size and correlation coefficients, which revealed small to moderate relationships,³⁰ suggest that the use of larger samples with larger numbers of individuals reporting dissatisfaction would increase the likelihood of identifying statistically significant relationships between these psychosocial characteristics and postoperative dissatisfaction.

The finding that postoperative dissatisfaction is associated with higher levels of preoperative psychiatric disturbance, anxiety, and depression is consistent with recommendations from previous clinically oriented literature that these indicators of psychologic dysfunction are important when considering preoperative counseling.^{2,8,12,13,20,23} Interestingly, although lower levels of appearance evaluation and body areas satisfaction were associated with postoperative dissatisfaction, dysmorphic concerns, self-esteem, and appearance orientation were not. Taken together, these findings suggest that worse postoperative outcomes are associated with a general unhappiness with physical appearance and unhappiness with the size or appearance of several body areas, rather than the extent of concern with physical appearance, global self-esteem, or the extent of investment in appearance. These findings contrast with the more specifically body area-focused facial cosmetic surgery patients identified as poor candidates for surgery in previous literature.^{31,32} It is evident that further empirical investigation is required to investigate the relationship between these appearance-related characteristics and unsatisfactory outcomes for facial cosmetic surgery.

We note that there is no “objective” measure of surgical outcome against which to rate the patient’s perceived unsatisfactory outcome, but suggest that the point of a measure such as this is to identify precisely this population, that is, patients who are likely to

be dissatisfied with the outcome, even if they have objectively achieved the most realistically attainable outcome possible.

This study also aimed to empirically derive a preoperative screening for elective facial cosmetic surgery and cosmetic dentistry patients, rather than relying solely on anecdotal or nonsystematic evidence for determining such items of concern. This screen, named the PreFACE, was validated on 4 separate measures of postoperative dissatisfaction. The PreFACE is able to identify most patients who are likely to express dissatisfaction with the cosmetic procedure and minimizes the selection of those who will express satisfaction. It is a brief objective self-report screening questionnaire that can be easily and efficiently administered to patients. Practitioners can improve the quality of care provided to patients through the routine use of the PreFACE and by referring the small proportion of patients scoring 11 or more to preoperative counseling. They should explain that referral for preoperative counseling is recommended because it may increase the likelihood of increased patient satisfaction after the intervention.¹² It is not, per se, a device for excluding people from consideration as cosmetic surgery patients.

When considering the practical implications of the findings, it is important to note several methodologic limitations. First, a more robust analysis would result from a larger sample of patients expressing postoperative dissatisfaction, although the study incorporated one of the largest samples (194) obtained in this type of study. Second, this study specifically examined elective facial cosmetic surgery and cosmetic dentistry patients, and the characteristics associated with postoperative dissatisfaction may, therefore, not be generalizable to other cosmetic surgery populations. Third, for reasons of practicality, not all possible precursor factors for dissatisfaction were included in the developmental study. Other areas such as preexisting anger and neuroticism may be included in further studies to build on the items contained in the PreFACE. Finally, as a screening tool, the PreFACE does not attempt to measure the existence or extent of other elements that may influence satisfaction, such as the quality of the physician-patient relationship.

We recommend that the PreFACE, having now been developed, be validated using other larger samples, if possible, of elective cosmetic facial surgery patients. Although the PreFACE was developed for use with elective facial cosmetic surgery and cosmetic dentistry patients, attempting to use a screening procedure with other cosmetic surgery populations may also be important, given suggestions that the nature and degree of surgical change are likely to be important predictors of outcome.³³ In adapting the PreFACE for different cosmetic surgery populations, some items, such as item 8, may require modification. For breast augmentation or reduction procedures, it would be appropriate to replace item 8 with question 30 of the MBSRQ (ie, “How dissatisfied or satisfied are you with your upper torso [chest or breasts, shoulders, arms]?”). Similarly, for liposuction and abdominoplasty procedures, it would be appropriate to replace item 8 with question 28 of the MBSRQ (ie, “How dissatisfied or satisfied are you with your lower torso [buttocks, hips, thighs, legs]?”) or question 29 of the MBSRQ (ie, “How dissatisfied

or satisfied are you with your mid torso [waist, stomach]?"). To maintain scoring consistency, however, we recommend maintaining the same rating scale. It is also important for future empirical research in this area to note that there are multiple ways to measure dissatisfaction, all of which produce slightly different cohorts that are more and less inclusive.

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