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Persistent cosmetic dissatisfaction in rhinoplasty & management of the difficult patient

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Abstract

The rhinoplasty surgeon will undoubtedly encounter a cosmetic patient who is persistently dissatisfied with their results, no matter the objective outcome achieved. This article seeks to describe risk factors for postoperative dissatisfaction and highlight effective management strategies for the "difficult patient." A literature search was performed using PubMed and Embase databases during September and October of 2023 to identify articles that analyzed factors related to dissatisfaction in rhinoplasty. Forty unique references were identified. The majority of structural aesthetic complaints related to dissatisfaction after rhinoplasty were residual dorsal hump (20%) or persistent tip dissatisfaction (19%-37%). Demographic factors including younger age, male sex, self-referral, history of body dysmorphic disorder or abuse/neglect were risk factors for postoperative dissatisfaction. Ineffective patient-provider communication, litigation due to inadequate informed consent, and surgeon inattentiveness were contributing factors to postoperative dissatisfaction. Revision rhinoplasty rates ranged from 5%-15%, where most patients sought revision surgery due to the development of a new deformity or failure to correct the original deformity, with the greatest complaints at the nasal bridge and nasal tip. Validated patient-reported outcome measures including Rhinoplasty Outcome Evaluation (ROE) and FACE-Q can be effective questionnaires to assess satisfaction. Appropriate patient selection, adequate preoperative counseling and consent, effective communication, and reaching a consensus about surgical goals are all effective strategies in the management of a dissatisfied patient.

Keywords: Complaints, dissatisfaction, rhinoplasty, perception, revision rhinoplasty

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INTRODUCTION

Rhinoplasty is one of the most commonly performed facial cosmetic procedures, and it is generally considered a technically challenging and intricate operation[1,2]. A diverse spectrum of patients across ages and ethnicities pursue rhinoplasty for purely aesthetic concerns, purely functional, or a combination of both[1]. From a cosmetic standpoint, patients might seek to correct a crooked nose, a nose with a bump on it, a nose that is "too large" or "too small," and various other concerns. The goals of rhinoplasty are commonly understood to restore or establish normal symmetry, structure, and function to maximize aesthetic balance and proportions of the face[3]. Several studies have reported how impactful rhinoplasty can be in improving one's self-esteem, self-confidence, and quality of life[4,5]. No matter the objective outcome achieved, the rhinoplasty surgeon will undoubtedly encounter a cosmetic patient who is persistently dissatisfied with their results. Understanding common risk factors for postoperative dissatisfaction, practicing proper patient selection, and performing effective preoperative counseling are essential. With revision rhinoplasty rates reported to range from 5%-15% in the literature[3,6-8], and with a number of those instances related to non-objective patient concerns, it is imperative to understand the interplay of psychosocial factors, personality characteristics, chief complaints, proper communication, and motivations for seeking revision rhinoplasty in the management of "difficult patients."

Patient satisfaction is critical for a rhinoplasty to be considered successful[9]. Patient satisfaction ratings after rhinoplasty are relatively low compared to other cosmetic surgeries, reported to be 72%-89%[3,10,11]. Multiple studies comparing surgeon and patient ratings of rhinoplasty results show that their determinations of a good aesthetic outcome are not always the same[12], indicating that perhaps there are patient factors that cause them to "see" themselves differently, recalling the old adage that beauty may truly be "in the eye of the beholder". What concerns are present in the beholder's mind? How do they perceive themselves and these deformities? What do they hope rhinoplasty can accomplish? With this in mind, during the rhinoplasty consultation, the surgeon makes an assessment of both the patient's physical condition and psychological condition, motivations, hopes, and expectations from the procedure[1,13].

Complications occur despite the best efforts of experienced surgeons, and a certain percentage of patients will be dissatisfied. As reflected in the assigned title of this chapter, the persistently dissatisfied patient is commonly called the "difficult" patient, and it is important to understand what this term means. The simple goal of aesthetic rhinoplasty is to make a patient happy about their nasal appearance. Some patients are more easily satisfied for technical reasons, for psychological reasons, or both. Some patients require more effort, either in or outside of the operating room, and the surgeon commits to doing what they can to try to help the patient achieve this goal. Nothing works all the time, and from time to time, a surgeon will fall short of this task. Nevertheless, the surgeon strives to make all of their patients happy to the extent that it is feasible.

With that in mind, this article reviews the current literature regarding factors related to persistent cosmetic dissatisfaction after rhinoplasty and approaches to management. Furthermore, an examination of patients' motivations for pursuing revision surgery may provide insights into the management of this patient population.

LITERATURE SCREENING

A literature search was performed using Medline (PubMed) and Embase databases during September and October of 2023. Keywords included "rhinoplasty", "dissatisfaction", "complaints", "perception", "body dysmorphic disorder", "narcissistic personality disorder", "malpractice or negligence", and "revision rhinoplasty". Results were not limited by geographical region or date of publication. Non-English language

studies were excluded.

Articles were included if they analyzed patient and/or surgical outcome factors related to dissatisfaction in rhinoplasty, discussed objective measures of satisfaction in rhinoplasty, or described general strategies for managing the dissatisfied patient after rhinoplasty. The reference lists of included articles were reviewed to identify additional articles for inclusion. Articles were excluded if they focused on primarily functional rhinoplasty, non-surgical rhinoplasty, rhinoplasty in cleft lip or palate patients, or did not examine factors or management as pertains to the cosmetically dissatisfied patient. The evidence was organized into themes that emerged during the review.

A total of 40 unique references were identified for inclusion in this review. Several factors that may affect patient satisfaction following cosmetic rhinoplasty were identified, with the following themes emerging from the literature: anatomic and structural concerns, demographic factors, history of psychopathology (e.g., body dysmorphic disorder), and psychosocial factors, personality traits, and satisfaction with healthcare.

STRUCTURAL AESTHETIC COMPLAINTS

The most obvious explanation for patient dissatisfaction after rhinoplasty is the case where objective cosmetic irregularity or deformity exists. In a retrospective review of 369 patients who underwent cosmetic rhinoplasty, Neaman *et al.* found that the most common reasons for dissatisfaction were residual dorsal hump (20% of patients) and persistent tip fullness or wideness (17% of patients)[6]. They saw that revision rates were closely related to preoperative findings of tip fullness, asymmetry, and increased width. Consequently, they found that persistent tip deformities were significantly associated with dissatisfaction and correlated with obtaining a revision rhinoplasty in their cohort[6].

Other cohort studies have demonstrated similar common aesthetic complaints. Ghorbani *et al.* reported data on 117 patients, where the most common aesthetic complaints included gross nasal deviation (17.9%), dissatisfaction with overall nasal shape (34.2%), nostril asymmetry (29%), nasal tip irregularity (23.9%), and skin deformity due to scarring (23%)[14]. Citron *et al.* administered the FACE-Q rhinoplasty satisfaction questionnaire to 165 patients, and found that the nasal tip had the lowest postoperative satisfaction rates, with 19% of patients reporting dissatisfaction with the tip[15], similar to findings by Wang *et al.* with 707 patients assessed using FACE-Q[16]. Haddady *et al.* administered the rhinoplasty outcome evaluation (ROE) questionnaire to 60 patients and found that "bulbous tip" and "nose too wide" were the most common factors related to dissatisfaction (25%, 25%)[17]. Similarly, De Souza *et al.* analyzed 19 patients with low satisfaction scores (ROE ≤ 50) and found that a history of previous rhinoplasty and a "crooked nose" had a significant risk of presenting with a lower postoperative ROE score[18]. These findings were corroborated by Khansa *et al.*, who analyzed over 2,000 real-patient reviews for common complaints after rhinoplasty on a website called Realself.com[10]. Realself.com is a free website with thousands of patient reviews of their cosmetic procedures, including approximately 18,000 ratings listed under rhinoplasty. Overall, 89% of patients rated undergoing rhinoplasty as "worth it". Based on these reviews, overall shape was cited as a common reason for dissatisfaction after rhinoplasty ("too large", "too small", "too wide", or "too deviated"). Once again, the most common complaints were residual dorsal hump (69% females, 46% males), excessive scarring (34.9% females, 17.8% males), and tip dissatisfaction (too bulbous [46%, 21%], too pinched [37.7%, 20.2%], too under-rotated [56.4%, 29.5%])[10] [Table 1]. Finally, among dissatisfied patients, significantly more females than males complained that they now looked like a different person[10]. This study also revealed that male patients' reviews were less likely to articulate specifically which deformities bothered them[10].

Table 1. Structural aesthetic factors associated with patient dissatisfaction

Structural aesthetic factors associated with increased patient dissatisfaction after rhinoplasty	Structural reasons for pursuing revision rhinoplasty
Residual dorsal hump	Elevated nasal bridge
Insufficient size reduction	Crooked nose
Persistently bulbous tip	Tip asymmetry
Tip irregularity	Broad nasal base; wide or large nostrils
Scarring	Dropped nasal tip

ANALYSIS OF DEMOGRAPHIC VARIABLES COMPARED TO RATES OF DISSATISFACTION

Several demographic characteristics have been explored to identify risk factors for dissatisfaction after rhinoplasty. In general, younger patients complain more about aesthetics, while older patients complain more about nasal function or obstruction[14,19]. A retrospective review of 117 patients by Ghorbani *et al.* found that adults aged 25-34 most frequently reported dissatisfaction with the general shape of their nose whereas those older than 35 reported dissatisfaction mainly due to breathing problems[14] [Table 2]. Similarly, Arima *et al.* administered the ROE questionnaire to 61 patients and they found that patients < 30 years had significantly lower satisfaction ratings of their appearance compared to patients in the 30-50 year old group[19].

Male gender is frequently labeled as a risk factor for dissatisfaction after cosmetic surgery[2,13,20,21]. Consequently, the SIMON (single, immature, male, obsessive, and narcissistic) characteristics have been correlated with higher revision rates[6,22] and some have suggested that cosmetic operations should be avoided in patients who have these risk factors[22] [Table 2]. A survey-based study involving 468 patients asked them to rate their appearance and whether they felt surgery was worthwhile[21]. They found that males were three times more dissatisfied than females (12.8% *vs.* 4.6% dissatisfaction). Dissatisfied males were younger (mean age 29.4) compared to dissatisfied females (age 43.3 years)[21]. Additionally, when analyzing whether gender influenced the appreciation of aesthetic improvements after surgery, they found that a larger number of males failed to appreciate such improvements compared to females[21]. Other studies have also reported greater dissatisfaction ratings by male patients based on FACE-Q outcomes[23]; however, these trends were not reproduced in other cohorts who found no difference in satisfaction between males and females[19,24,25].

Other demographic factors have also been explored. McKinney *et al.* performed a retrospective review of 200 patients undergoing rhinoplasty, and found that patients who were self-referred were more than twice as likely to be dissatisfied compared to those referred by a physician[26]. Ghorbani *et al.* additionally stratified patients by level of education, including high school and university education. A higher level of education (specifically university education) was associated with greater dissatisfaction with overall nasal shape, whereas patients who had up to a high school education or less had the highest rate of dissatisfaction with respect to breathing[14] [Table 2].

PATIENT PSYCHOSOCIAL & PSYCHIATRIC FACTORS

Several elements of the patient's psychosocial and psychiatric profiles have been shown to affect both motivation for seeking rhinoplasty as well as postoperative satisfaction[13]. Many patients simply have unrealistic or unachievable expectations, which may reflect a lack of understanding or even self-deception in some cases. Minor red flags can include if the patient cannot understand that the goal is improvement, not perfection, and that a specific result cannot be guaranteed. A patient might be unrealistic, such as expecting "no scar" or requesting changes that would result in an altered appearance contrary to the patient's race or

Table 2. Demographic factors associated with increased patient dissatisfaction after rhinoplasty

Younger age
Male sex
Self-referral
Higher levels of education
SIMON characteristics (single, immature, male, obsessive, narcissistic)

sex[13]. Additionally, some patients might believe that undergoing rhinoplasty can alter their external life circumstances. One study reported that patients who believe that rhinoplasty will solve problems related to their social, domestic, or occupational life are more likely to be dissatisfied[13]. However, in a study analyzing Realself.com reviews, they found no significant difference in the proportion of patients who were dissatisfied because they expected their life circumstances (i.e., their professional or romantic situation) to improve after rhinoplasty (29.5% *vs.* 23.3%)[10].

Patients with psychopathology ranging from personality disorders, including narcissistic personality disorder (NPD), to posttraumatic stress conditions, to obsessive-compulsive type disorders, such as body dysmorphic disorder (BDD), have been shown to potentially have a lower rate of satisfaction after surgery[11,27,28]. According to a study by Constantian and Lin, a history of psychological trauma including abuse or neglect was the most significant factor influencing patient satisfaction and a number of operations, and the most prominent factor driving surgery in patients with milder deformities[29]. In fact, some authors have suggested that potentially causative links exist between trauma (abuse/neglect), body image disorders, and obsessive plastic surgery[29]. Body dysmorphic disorder may be a model of the disordered adaptation to abuse or neglect, a variant of posttraumatic stress disorder.

BDD might present with the preoccupation of an imagined or minor defect in appearance, but one that results in significant distress and impairment in social and occupational functioning. In the DSM-5, BDD is classified under "obsessive-compulsive and related disorders", and has been shown to predict a poor psychological outcome, produce a high risk of dissatisfaction with the result, and lead to requests for recurrent surgical interventions[20]. A recent systematic review and meta-analysis of 2,132 patients estimated the prevalence of BDD in patients seeking rhinoplasty to be 32.7%[30], leading to the suggestion of routine implementation of screening tools available to assist in preoperative determination of BDD[31]. In a prospective study with 166 adults undergoing cosmetic rhinoplasty, the authors assessed the presence of BDD symptoms using the Yale-Brown Obsessive-Compulsive Scale, and postoperative satisfaction was evaluated using a visual analog scale to rate their overall nasal shape and by using the Rhinoplasty Outcome Evaluation (ROE) questionnaire. They found that preoperative body dysmorphic disorder symptom scores inversely correlated with postoperative satisfaction at 3 months using both VAS and ROE[28].

Finally, Neaman *et al.* found that on an analysis of the number of preoperative visits, patients who required more frequent preoperative visits reported higher levels of postoperative dissatisfaction compared to those who had fewer appointments with the surgeon prior to undergoing surgery[6]. Perhaps patients with anxious or obsessive-compulsive tendencies are more likely to schedule frequent preoperative visits and are thus more likely to be fastidious with their postoperative self-assessment or self-image. Taking these things

together, a careful psychologic assessment might reveal various traits that should be considered relative contraindications to surgery or, at the very least, signs to proceed very cautiously. Additionally, psychiatric consultation should be offered when indicated[13].

PHYSICIAN-PATIENT RAPPORT

Several articles cite the provider-patient relationship as being a cause for patient complaints relating to rhinoplasty surgery[32]. Adamson emphasizes that mitigating such issues begins immediately during the initial consultation encounter, when the surgeon should seek to provide a space that allows the patient to freely express their fears, desires, hopes, and expectations[13]. If the surgeon exhibits inattentiveness, callousness, or appears cold, arrogant, insensitive, or critical of others during evaluation, patients are more likely to feel dissatisfaction with their overall surgical care[32]. Gorney *et al.* report that regardless of technical ability, providers who exhibit these characteristics or who do not communicate effectively are far more likely to be the target of a malpractice claim[32]. According to the study by Khansa *et al.* analyzing real-patient reviews after rhinoplasty, among dissatisfied patients, nearly a quarter of female patients complained that their surgeon had poor communication skills[10]. Overall, patients might perceive satisfaction as not just from surgical result, but from the overall care that was delivered[13].

IMPORTANCE OF PRE-OP COUNSELING AND CONSENT

During the initial evaluation, the surgeon should ask the patient to describe what they do not like about their nose and assess their motivation for undergoing surgery. A handheld or three-way mirror might be helpful to allow the patient to outline their concerns. The surgeon can then determine whether the patient's physical and psychological expectations can be met, the limitations of the surgical procedure must be clearly discussed, and the patient and surgeon should arrive at an agreement about the surgical goal[1,13].

Computer imaging and simulation can be a valuable adjunctive tool to enhance patient comprehension of expected outcomes from rhinoplasty, allowing the surgeon and patient to arrive at a visual agreement on the goal of surgery[1,7]. Regardless of which tools are used, fostering effective communication at this stage has a paramount impact on postoperative patient satisfaction[1]. A study by Abbas *et al.* utilizing the ROE questionnaire to assess satisfaction in a cohort of 54 revision rhinoplasty patients found that the mean improvement in ROE satisfaction scores for patients who were satisfied with the given information provided preoperatively was significantly higher than in patients who were dissatisfied[2]. They also had two independent plastic surgeons rate the severity of each patient's nasal deformity preoperatively and found no correlation between the severity of preoperative nasal deformity and improvement in patient-reported ROE satisfaction scores. Due to this, the authors highlight the intuitive finding that even objectively minor nasal deformities should be taken seriously and addressed.

Additionally, a study analyzing malpractice claims related to facial plastic surgery revealed that many complaints arose due to issues regarding informed consent and poor patient selection rather than technical errors[33]; the most common complaints contributing to litigation were poor aesthetic outcome or disfigurement, with lack of informed consent contributing to legal action in approximately 22% of cases[33]. Another study that included the investigation of claims related to blepharoplasty, rhinoplasty, and rhytidectomy showed that 38.6% of cases alleged a lack of informed consent[34]. In a literature review evaluating 24 different consent forms used for rhinoplasty, the authors found that "unsatisfactory results" and "need for revision" were only covered in 83.3% and 75.0% of consent forms, respectively[35]. Despite this, they reported that these complications were among the top 5 cited in literature. Every consent process should include these complications in both discussions with the patient and written documentation.

PATIENTS SEEKING REVISION RHINOPLASTY

The incidence of revision rhinoplasty ranges from 5%-15%[3,6-8]. Dissatisfaction with previous rhinoplasty often stems from the failure to correct a pre-existing deformity, or the creation of a new deformity[36]. Chauhan *et al.* performed a retrospective review of 400 patients and compared complaints between patients receiving primary (n = 308) versus secondary rhinoplasty (n = 92); patients seeking revision rhinoplasty were far more likely to report "crooked nose" (38%), "tip asymmetry" (22%), "wide or large nostrils" (19%) compared to primary rhinoplasty patients[37] [Table 1]. It has also been reported that in some cases, the need for revision rhinoplasty can be related to poorly performed preoperative evaluation, improper patient selection, or failure to adequately explain the limitations of surgery, or intraoperative technical limitations encountered[38].

Managing the patient who is dissatisfied with their previous rhinoplasty involves careful assessment of the reasons for their prior unhappiness[39]. As described by Ambro *et al.*, the motivation for patients seeking revision rhinoplasty can be grouped into three general categories: (1) Poor technical outcome; (2) Patients dissatisfied with an acceptable but not perfect outcome; or (3) Patients dissatisfied with an objectively very good technical outcome[40].

In a retrospective review of 150 patients who underwent revision rhinoplasty, the most common reason for undergoing revision was development of a new deformity due to the previous rhinoplasty (44%), followed by failure to correct the original deformity (33%)[41]. Knowing which features are most likely to lead to a patient seeking revision rhinoplasty can be invaluable during the preoperative planning process[36]. According to a retrospective study of 170 revision rhinoplasties, the lower third of the nose had the greatest number of deformities including the drooped tip, the underprojected tip, tips with an undesirable shape (pinched, bulbous, bossae), and retracted ala. Pollybeak deformity was most common in the middle third of the nose[8]. In a prospective study utilizing a questionnaire regarding motivation for revision rhinoplasty, the most common cosmetic complaints reported by patients were dropped nasal tip (39.5%), elevated nasal bridge (32.5%), and broad nasal base (20.9%)[38]. Similarly, in a retrospective review with 183 patients who completed the FACE-Q questionnaire, the most common cause for seeking revision rhinoplasty was due to tip dissatisfaction (43.4%) and hump dissatisfaction (21.7%)[23].

Alternative sources of cartilage or grafting material might be required to reshape the nose in revision rhinoplasty. A few studies have analyzed the effect of graft material on satisfaction rates, with no significant difference in postoperative dissatisfaction between patients who received rib or auricular cartilage grafting based on ROE satisfaction scores[2,36] and a subgroup analysis of a survey study[36]. Therefore, when grafting is necessary to reconstruct severe nasal deformities, surgeons should continue to employ them if needed.

Vian *et al.* reported that 11 out of 43 patients went to a different surgeon for their revision; the majority reported seeking a different surgeon because they did not feel the first result was satisfactory and they did not trust the surgeon[38]. Similarly, in another study, nearly half of patients chose a different surgeon to perform their revision, and about 23% of them stated they felt their first surgeon was not receptive to their concerns[7]. This could be reflected in the fact that over one-third of patients who reported their prior rhinoplasty failed to correct the original deformity[41].

When a patient presents seeking revision rhinoplasty, the surgeon must carefully select who they will operate on in the context of the surgeon's expertise and the patient's wishes in order to achieve the best result. To understand reasons why a surgeon might decline to perform a revision rhinoplasty, a prospective multicenter study by Greve *et al.* evaluated 186 patients seeking rhinoplasty and documented reasons for

which the surgeon declined to perform a revision, and what advice was given to patients as a result[42]. Multiple reasons for rejection were present in 76% of cases, and the majority of reasons were patient-related factors including unrealistic expectations (37.6%), unreliable for pre-, peri- or postoperative care (24.2%), dissatisfaction with 2D/3D morphed imaging (19.4%), financial reasons (18.3%), unhealthy motivations including poor self-esteem or body shame (14.5%), and comorbid psychiatric conditions including depression or anxiety (14%) with severe BDD identified in 11.3% of cases. Additionally, 30.6% of patients were turned away due to limited or no options for surgical improvement of cosmesis or function, and 18.3% had what the surgeon deemed to be a minimal deformity with too much surgical risk. If patients were declined a revision rhinoplasty at that visit, 41.1% of patients were advised to follow-up at the outpatient clinic after some time passed, and 32.8% were referred to a colleague for a second opinion[42].

ARE THERE WAYS WE CAN OBJECTIVELY MEASURE SATISFACTION?

Of the studies identified, 10 used previously validated patient-reported outcome and quality of life questionnaires to measure satisfaction more objectively after rhinoplasty, including rhinoplasty outcome evaluation (ROE) (n = 5 studies) and FACE-Q (n = 5 studies).

Alsarraf *et al.* first developed the Rhinoplasty Outcome Evaluation (ROE), a brief and easy-to-complete questionnaire, which asks six questions covering three quality of life domains: physical, mental/emotional, and social[43]. Responses are scored 0 (least satisfaction) to 4 (maximum satisfaction) and include items such as "How well do you like the appearance of your nose?" and "Would you like to surgically alter the appearance or function of your nose?" [Table 3]. The ROE has since been shown to have high validity and reliability[24,43]. Scored out of 100 points, Arima *et al.* reported a mean increase in patient satisfaction of 50.2[19]. In five studies, Arima *et al.*, Khan *et al.*, Haddady *et al.*, AlHarethy *et al.*, and Hellings & Trenite used ROE as a tool to measure satisfaction in their patients postoperatively by comparing mean differences between pre- and post-op scores, and all found it easy to use and effective for assessing rhinoplasty outcomes, with average improvements ranging from 30 to 50 points[9,17,19,24,25].

The FACE-Q rhinoplasty scale was developed by Klassen *et al.*[44]. The first part of the questionnaire, "Satisfaction with Nose", consists of 10 questions regarding the patient's satisfaction with the size, shape, and overall nasal appearance. Patients rate their level of satisfaction on a scale of 1 to 4 (1 = very dissatisfied, 4 = very satisfied). The second part, "Adverse Effects", asks patients to rate the extent of how much they were bothered by postoperative problems such as thickness or swollen appearance of skin or tenderness over the nose on a scale of 1 to 4 (1 = not at all, 4 = extremely) [Table 4]. Five studies by Schwitzer *et al*, East *et al.*, Maassarani *et al.*, Citron *et al.*, and Wang *et al.* used FACE-Q to assess factors related to patient dissatisfaction[15,16,23,45,46].

During a consultation, rhinoplasty surgeons have the opportunity to evaluate a patient's goals and motivations and assess the likelihood of a successful outcome. While the surgeon makes a subjective assessment during the course of the consultation, the outcome questionnaires described here warrant consideration as part of the surgeon's armamentarium. Additionally, a novel preoperative assessment classification system for evaluating case complexity proposed by Jiang *et al.* could also potentially assist in decision making in revision rhinoplasty. Implementation of such a system could assist providers in screening patients in a systematic way. Jiang *et al.* suggest that such a system could also inform pricing and even support a conversation with a patient if the surgeon decides that this person is not a surgical candidate in their hands[47].

Table 3. Rhinoplasty outcome evaluation (roe) questionnaire[42]

(1) How well do you like the appearance of your nose?
(2) How well are you able to breathe through your nose?
(3) How much do you feel your friends and loved ones like your nose?
(4) Do you think your current nasal appearance limits your social or professional activities?
(5) How confident are you that your nasal appearance is the best that it can be?
(6) Would you like to surgically alter the appearance or function of your nose?
Not at all (0) - Somewhat (1) - Moderately (2) - Very Much (3) - Completely (4)
Each item is graded 0 (least satisfaction) to 4 (maximum satisfaction). Add the total for each question, divide by 24, multiply by 100. Results range from 0-100, with 0 = minimum satisfaction to 100 = maximum satisfaction.

Table 4. FACE-Q[44]

I. Satisfaction with Nose
How satisfied are you with i. the overall size of your nose? ii. how straight your nose looks? iii. how well your nose suits your face? iv. the length of your nose? v. the width of your nose at the bottom (from nostril to nostril)? vi. how the bridge of your nose looks (where the glasses sit)? vii. how the tip of your nose looks? viii. the shape of your nose in profile (side view)? ix. how your nose looks in photos? x. how your nose looks from every angle? Very dissatisfied (1) - Somewhat dissatisfied (2) - Somewhat satisfied (3) - Very satisfied (4)
II. Adverse Effects Regarding the Nose
How much have you been bothered by... i. The skin of your nose looking thick or swollen? ii. Tenderness (e.g., when wearing sunglasses)? iii. Difficulty breathing through your nose? iv. Unnatural-appearing bumps or hollows on your nose? Not at all (1) - A little (2) - Moderately (3) - Extremely (4)

Screening tools may be of benefit in the office evaluation. Lekakis *et al.* suggested consideration of routine implementation of screening tools available to assist in preoperative determination of BDD, due to the significant proportion of rhinoplasty patients found to be affected by BDD. Gorney *et al.* created a schema with patient level of concern on the y-axis and degree of deformity on the x-axis, suggesting that patients with a minor deformity but extreme concern are most likely to be dissatisfied with whatever the surgical outcome might be[32].

Overall, PROMs and validated, standardized questionnaires such as ROE and FACE-Q can be useful tools for rhinoplasty surgeons to assess their patients' preoperative and postoperative satisfaction and quality of life more objectively. By reviewing PROM data, surgeons can see with which types of patients and in what domains of success they achieve[45]. The information provides feedback to surgeons and can also be used as a

tool to create a launching point of discussion for patients who might not otherwise know how to articulate their concerns. Additionally, there are many other PROMs that assess both aesthetic and functional outcomes for rhinoplasty that are beyond the scope of this review, including the Functional Rhinoplasty Outcome Inventory 17, Nasal Obstruction Symptom Evaluation (NOSE), and Standardized Cosmesis and Health Nasal Outcomes Survey (SCHNOS)[48,49], each of which measures different dimensions of rhinoplasty satisfaction[50]. Additionally, numerical data from such ratings have enabled standardized measures of success based on patient satisfaction amenable to systematic review and meta-analysis[51,52].

DISCUSSION AND CONCLUSION

The concept of the "decision for surgery" involves the decision by the patient to undergo the procedure and the decision by the surgeon that they are willing to perform an operation. The surgeon should carefully consider the technical, psychological and any other relevant factors as they weigh the decision. If there are factors that limit the chances of success, those should be discussed with the patient in a forthright manner. For example, a patient with multiple prior rhinoplasties may have surgical limitations due to scar tissue, vascular supply, complexity of the deformity, or other technical factors. Additionally, if the surgeon believes that improvement is possible but that the amount of improvement is likely to be far less than the patient seems to be expecting, the surgeon should tell the patient directly. In these circumstances, it is sometimes wise to ask the patient's permission to discuss their case with colleagues to seek other opinions, as colleagues may have different experiences and perspectives. The patient will generally appreciate the surgeon who goes the extra mile in this circumstance.

Similarly, if the patient expresses dissatisfaction greater than the objective findings, this should be discussed in a kind but forthright manner. A conversation in which the surgeon expresses to the patient the factors that might limit the chance for success can lead to an agreement about reasonable expectations, or it might lead to a decision against surgery. In this context, both are reasonable and acceptable outcomes. Whether it is due to anatomic, technical, psychological or other causes, a dissatisfied patient by definition represents a more complex situation that requires additional care, time, and attention. As has been pointed out in this article, a strong doctor-patient relationship creates the best opportunity to provide these patients with the care they need. The goal of the interaction with any patient is for them to be as happy as possible. For this to occur, when the persistently dissatisfied patient presents for evaluation, it is advised that the surgeon take extra time to listen carefully as the patient expresses their concerns or frustrations. The surgeon can then examine the patient's nose for any structural, anatomic findings that could be addressed to mitigate and improve the areas of aesthetic concern and can then provide the patient with options to address their chief complaints.

Especially due to the prevalence of patients with BDD, we believe the above principles undoubtedly still apply. However, while associated with a greater risk of dissatisfaction, this diagnosis can be difficult to make. We believe that awareness of the condition, as well as knowledge of potential symptoms and common patterns or concerns brought on by the affected individual, can be powerful in the surgeon's armamentarium of tools. In cases where severe BDD might be identified, we recommend that psychiatric consultation be offered in the least judgmental way possible. An in-office screening questionnaire adapted from the Yale-Brown Obsessive-Compulsive Scale can be offered within routine pre-appointment paperwork[28]. For those patients who have an objective issue with their nose (e.g., dorsal hump) and a diagnosis of BDD, we emphasize the importance of being ever-vigilant and thorough during preoperative counseling, perhaps scheduling more than one visit prior to proceeding with surgery, taking into account that if the deformity can reasonably be corrected under the surgeon's expertise, there is still the presence of a strong risk factor for dissatisfaction.

Another population to consider are those who are seeking a revision rhinoplasty. Generally, it is advisable to wait for a full year after an initial surgery before undertaking a revision, although there are notable exceptions. Some patients can be offered non-surgical interventions (e.g., filler) to address minor complaints instead of up-front formal revision. For patients who are deemed acceptable candidates for revision surgery, clear communication regarding the surgical plan is paramount. Again, informed consent should emphasize the risks, including the risks of postoperative dissatisfaction and the possible need for further surgery.

Nothing works all the time. In a number of rhinoplasties requiring revision, complications occur not because of, but despite the surgical efforts undertaken. For example, the senior author has seen inverted V deformities in patients who had the middle vault well reconstructed with spreader grafts, and he has seen twisting and distortion of the nasal tip in patients who had no violation or resection of the tip cartilages. The healing forces create a certain amount of unpredictability, so that complications can (and do) still occur despite the best efforts of experienced surgeons. It is important to realize that the existence of an unacceptable cosmetic result does not in and of itself mean that a surgical misadventure took place; that is to say, it does not imply blame. With this in mind, the senior author has found that it is beneficial to acknowledge any plainly visible abnormalities to the patient and express regret for their occurrence. It is not surprising that physicians who apologized were also less likely to be subject to a malpractice claim[53].

The best outcome in rhinoplasty is a happy patient and a happy surgeon. In many cases, this proves to be a straightforward undertaking. However, this chapter addresses the patients for whom this outcome proves to be more difficult. These patients require more than surgical expertise. If one looks at these difficult and challenging situations as an opportunity and leans into the effort to make these patients as happy as they can be, the result can be most rewarding. That being said, when a surgeon occasionally finds that the treatment or guidance they are providing to a particular patient is not working, then it is best to compassionately refer the patient to a colleague who would be willing to provide the kind of care that is required.

In summary, patient satisfaction is critical for a rhinoplasty to be considered successful. Objective structural aesthetic concerns were most often related to residual dorsal hump or tip irregularities. Male sex, younger age, and history of body dysmorphic disorder or abuse/neglect, and overall satisfaction with healthcare were risk factors for dissatisfaction. Patients often sought revision rhinoplasty due to failure to correct the original deformity or the development of a new deformity. Several additional avenues should be explored in future studies, as factors including differences in insurance coverage, sex of the surgeon, patient race/ethnicity, and surgeon expertise might also affect patient satisfaction. Despite all these factors, adequate preoperative counseling and consent, effective communication, and arriving at a consensus on surgical goals are all effective tools in the management of the dissatisfied patient in which a happy surgeon and a happy patient is the ultimate goal.

DECLARATIONS

Authors' contributions

Performed acquisition, analysis, and interpretation for the work, drafted the work, gave final approval of the version to be published, and agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved: Zhang K

Substantially contributed to the conception and design of the work, reviewed it critically for important intellectual content, gave final approval of the version to be published, and agreed to be accountable for all

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All authors declared that there are no conflicts of interest.

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