Psychiatric Assessment and Management of Clients Undergoing Cosmetic Surgery: Overview and Need for an Integrated Approach

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Abstract

Background  Psychiatric disorders are more common among people undergoing cosmetic procedures than the general population and evaluating mental health can be cumbersome for plastic surgeons. We aim to summarize the available literature in this regard and propose an integrated approach to psychiatric assessment and management of mental health issues among this group.

Methods  Electronic search of MEDLINE, Google Scholar, and PsycINFO databases was done to identify relevant peer-reviewed English language articles from inception till April 2020. Generated abstracts were screened for their eligibility. Included articles were grouped according to their thematic focus under the following headings; prevalence of psychiatric morbidity among clients posted for cosmetic surgery, assessment tools, and management of psychiatric morbidity in relation to undergoing cosmetic surgery.

Results  A total of 120 articles were reviewed. The prevalence of psychiatric disorder in patients undergoing cosmetic surgery was 4 to 57% for body dysmorphic disorder (BDD); the corresponding figures for depression, anxiety, and personality disorder were 4.8 to 25.8, 10.8 to 22, and 0 to 53%, respectively. A range of tools have been used to assess these disorders and specific measures are also available to assess clinical outcomes following surgery. Screening for these disorders is essential to prevent unnecessary surgical procedures, as well as to ensure timely management of the psychiatric comorbidity.

Conclusion  Psychiatric morbidity is a common concomitant in cosmetic surgery. A structured and integrated approach to evaluation and management of psychiatric morbidity will help to optimize postsurgical outcomes.

Keywords  ► psychiatry ► cosmetic surgery ► depression ► India ► plastic surgery

Introduction

Cosmetic surgical procedures refer to operations that revise or change the color, texture, appearance, structure, or position of normal bodily features to achieve a more desirable appearance. It is important to understand the interface between cosmetic surgery and psychiatry in the context of a growing demand for cosmetic surgery. The perception

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of physical appearance is known to affect self-esteem and mental health. Sometimes, cosmetic surgeons encounter persons seeking aesthetic surgery for some inappropriate and invalid indications due to psychological issues.

Studies have suggested that psychiatric disorders are more common among people undergoing cosmetic procedures than the general population. Prevalence of psychiatric disorders in this group increases the risk for patient dissatisfaction and poorer outcomes such as patient distress, adjustment problems, social isolation, worsening of preexisting mental health conditions, and risk of self-harm. Hence, identifying the presence of any psychiatric disorder through preoperative screening and conducting a psychological risk assessment (PRA) needs to be an integral aspect during the screening of patients seeking elective appearance-altering procedures.

Evaluating mental health can be cumbersome for plastic surgeons. Furthermore, there are no comprehensive reviews available about the epidemiology, evaluation, and treatment of psychiatric illnesses in persons seeking cosmetic surgery. The current review is intended to address this knowledge gap and to inform clinical practice in the area. The objective of this systematic review is to provide an overview of the prevalence of psychiatric morbidity, assessment, and management of these psychiatric conditions in patients undergoing cosmetic surgery.

Methodology

Search Strategy and Selection of Study
A literature search was performed through electronic databases of MEDLINE via PubMed, PsycINFO, and Google Scholar databases to identify relevant articles using random combination of the following medical subject headings or free text terms, “cosmetic surgery,” “cosmetic procedures,” “psychiatric disorders,” “BDD,” “depression,” “anxiety,” “personality disorders,” “eating disorders,” “co-morbidity” and “management.” An independent search was performed by the two authors in April 2020. The above search strategy was mainly used for PubMed and adapted for other databases as appropriate. Additionally, to ensure a comprehensive search, the reference section of relevant articles was manually screened. Any differences in selection of articles were resolved by mutual discussion till consensus.

We included articles published in English language peer-reviewed journals from inception till April 2020. In case of unavailability of full text articles, attempts were made to contact the authors to seek the same. Unpublished material and conference proceedings were not included in the review. No restriction was imposed on the type of article.

Data Extraction
Data extracted from studies included details such as author names, year, country of study origin, type of cosmetic procedure, psychiatric comorbidity studied and its prevalence, nature of comparator group (if any), and major findings.

Results

The initial search yielded 1,813 results, of which 120 articles were included for review as per the aforementioned selection criteria (Fig. 1). Included studies were grouped into studies providing evidence for psychiatric morbidity, disorder wise among patients posted for cosmetic surgery for cosmetic surgery. Next, we outline the tools used to supplement psychiatric evaluation and discuss the management of psychiatric morbidity in relation to undergoing cosmetic surgery. Finally, we propose an integrated approach for evaluation and management of psychiatric comorbidity among clients undergoing cosmetic surgery.

Psychiatric Morbidity in Clients Undergoing Cosmetic Surgery
A case control study found that approximately 26% of the cases seeking rhinoplasty had at least one psychiatric diagnosis; of whom 18% had somatoform disorder, 12% had body dysmorphic disorder (BDD), 6% narcissistic personality disorder, and 6% avoidant personality disorder. A large retrospective chart review of patients attending elective plastic surgery revealed that 44% had a psychiatric illness, with 50% of them having major depressive disorder and 32% having generalized anxiety disorder.

Below, we summarize studies reporting the prevalence of specific psychiatric illnesses among clients undergoing cosmetic surgery.

Body Dysmorphic Disorder
The most frequently recorded psychiatric illness among patients undergoing cosmetic surgery is BDD. A meta-analysis of 33 studies noted that the prevalence of BDD was greater in patients seeking plastic surgery (15.04%) compared with those seeking dermatologist consultation (12.65%) and was more common in women in both the groups. The prevalence of BDD ranged from 4 to 57% in reviewed studies when compared with 1% in the general population in the United States.
Few authors have also assessed body image dissatisfaction. Monpellier et al reported that dissatisfaction with body image in patients who underwent bariatric surgery was associated with greater depressive symptoms. The details regarding studies assessing BDD among cosmetic surgery patients are given in Table 1.

Depression, Anxiety Disorders, and Comorbidity
Majority of the studies were conducted on patients receiving aesthetic breast surgeries. Of these, four studies reported on depression and anxiety. Point prevalence of symptoms of depression and anxiety preoperatively ranged from 4.8 to 25.8, and 10.8 to 22%, respectively. Depression, Anxiety Disorders, and Comorbidity

| Sl. No. | Study (year) and country | Procedure | Sample size | Tools of assessment | Prevalence of BDD |
|--------|--------------------------|-----------|-------------|---------------------|------------------|
| 1      | De Brito et al (2016) and Brazil | Abdominoplasty | n = 90 | 1. BDDE (clinician rated) 2. BSQ | 57% |
| 2      | Ramos et al (2019) and Brazil | Rhinoplasty | n = 80 | 1. (BD-BOCS) 2. (BDSS)-clinician rated | 48%: BDD symptoms 54%: appearance related OC symptoms |
| 3      | Joseph et al (2017) and USA | Facial plastic and oculoplastic surgery | n = 597 | 1. BDDQ 2. FACE-Q | 9.7%: BDD, 4.0%: clinically suspected of BDD by surgeons |
| 4      | Joseph et al (2017) and UK | Septo rhinoplasty | n = 84 (34 cases and 50 controls) | 1. BDDQ 2. SNOT:23 | 32%: high risk for BDD |
| 5      | Brito et al (2016) and Brazil | Abdominoplasty (n = 90) | Rhytidectomy (n = 59) | BDDE | BDD symptoms: Abdominoplasty: 57% Rhinoplasty: 52% Rhytidectomy group: 42% |
| 6      | Woolley et al (2015) and USA | Oculofacial plastic surgery | n = 728 | DCQ (cut-off 19) | 6.9% |
| 7      | Bender et al (2014) and Germany | Functional rhinosurgery | n = 186 | 1. BDI 2. PISA body dysmorphic symptom scale | 33.9%: mild or strong indication for BDD 1.7%: depression |
| 8      | Dey et al (2015) and USA | Facial plastic and reconstructive surgery | n = 234 | 1. BDDQ 2. BDSS-SCID | Reconstructive surgery: 1.8% Cosmetic surgery: 13.1% |
| 9      | Metcalfe et al (2014) and USA | Breast reconstruction | n = 188 | DCQ | 17% |
| 10     | Dogruk Kacar et al (2014) and Turkey | Dermatology and cosmetic dermatology | n = 318 | Brief self-report BDD screening questionnaire | 6.3% Higher prevalence in cosmetic dermatology (8.6%) than general dermatology (4.2%) |
| 11     | Mr et al (2013) and Iran | Aesthetic rhinoplasty | n = 130 | 1. BDDQ 2. HADS | 31.5% |
| 12     | Vargel et al (2001) and Turkey | Cosmetic surgery | n = 20 cases and 20 controls | 1. SCL-90 2. BDI 3. MBSRQ | 20% |
| 13     | Sarwer et al (1998) and USA | Cosmetic surgery | n = 100 | 1. MBSRQ 2. BDDE-SR | 7% |

Abbreviations: BDDE, body dysmorphic disorder examination; BDDE-SR, BDDQ, body dysmorphic disorder questionnaire; body dysmorphic disorder examination self-report; BDD-BOCS, body dysmorphic disorder Yale–Brown obsessive–compulsive scale; BDI, beck depression inventory; BDSS, body dysmorphic symptoms scale; BSQ, body shape questionnaire; DCQ, dysmorphic concern questionnaire; HADS, hospital anxiety and depression; MBSRQ, multidimensional body self-relations questionnaire-appearance scales; SCL-90, scale symptom check list-90; SNOT 23, sinonasal outcome test-23.
dissatisfaction, litigations, and self-harm. The details about personality and associated dimensions are given in – Table 3.

Assessments
The aim of psychological assessment is to evaluate the client’s suitability to undergo the proposed cosmetic procedure, so as to reduce the incidence of adverse outcomes and provide psychological support and treatment to those who need it. It is important to assess each patient prior to cosmetic treatment to identify those with unrealistic expectations, extrinsic motivations, and psychological disorders or vulnerabilities. This assessment also aims to evaluate and address any identified risk of suicide, self-harm or harm to others, and determine if such a risk may be a contraindication for the intended procedure.

Psychological Risk Assessment
A comprehensive assessment generally involves a thorough assessment of the client’s psychological and social functioning, developmental history, educational history, relationship history, current mental state, and mental health, including evaluation and identification of any possible mental health disorders. This involves not only obtaining information from the client but also from family members and significant others.

Assessment Tools
Both client self-report and clinician-administered scales are available for the evaluation of the client. These can be broadly divided into the following:

- Tools for broad assessment of psychiatric disorders
- Tools for assessment of specific psychiatric disorders
- Tools for assessment of clinical outcomes

Table 2
Depression and anxiety symptoms in clients seeking cosmetic surgery

| Sl. no. | Study (year) and country | Cosmetic procedure Sample size | Scales | Prevalence |
|--------|--------------------------|--------------------------------|--------|------------|
| 1      | Saariniemi et al (2012) and Finland | Aesthetic augmentation mammoplasty n=79 | 1. Eating disorder inventory 2. Raitasalo’s modification of the BDI 3. 15D general QOL questionnaire | Anxiety: Baseline (22%) and 6 months postoperatively (14%) Depression: Baseline (11%) and 6 months postoperatively (8%) Disordered eating: Same rate at baseline and postoperatively (8%) |
| 2      | Paula et al (2018) and Brazil | Cosmetic breast Surgery n=185 | BDI (≥15 points) | Depression: Public institutions: 25.8% Private institutions: 11.4% |
| 3      | Wei et al (2018) and China | Aesthetic plastic surgery n=315 | HADS | Anxiety: 10.8% Depression: 4.8% Anxiety and depression: 1.9% |
| 4      | Clarke et al (2012) and UK | Cosmetic surgery n=500 | 1. DAS59 2. HADS 3. Structured clinical interview | Severe anxiety: 18% Severe depression: 7% |
| 5      | Chahraoui et al (2006) and France | Reduction mammoplasty n=20 | 1. SQLP 2. STAI 3. GHQ | Trait anxiety, state anxiety, and quality of life(pain, physical appearance, social life, and inner life) were significantly better at 4 months postoperatively |
| 6      | Beraldo et al (2016) and Brazil | Reduction mammoplasty n=30 cases and 30 controls | 1. Female sexual function index 2. BDI | Depression and sexual function scores were significantly better than the control group at 6 months postoperatively |
| 7      | Pavan et al (2013) and Italy | Overweight/obese patients referring to plastic surgery n=35 cases and 30 controls | 1. BSQ 2. TPQ 3. NEO-FFI 4. MINI 5. YBOCS 6. BDI | Cases: Ongoing major depression: 8.6% Lifetime major depression: 57.1% Controls: Ongoing major depression: 3.7% Lifetime major depression: 14.8% Patients had higher scores for TPQ Reward Dependence factor (RD4), BSQ and on all obsessive and compulsive aspects in YBOCS Also, higher scores in openness to experience was found in controls on NEO-FFI |

Abbreviations: DAS59, Derriford appearance scale; GHQ, general health questionnaire; MINI, mini international neuropsychiatric interview; NEO-FFI, neuroticism-extraversion-openness five-factor inventory; SQLP, Subjective Quality of Life Profile; STAI, state–trait anxiety inventory; TPQ, tri dimensional personality questionnaire (TPQ); YBOCS, Yale–brown obsessive–compulsive scale.
Tools for a Broader Assessment of Psychiatric Disorders

1. MINI-Plus (Mini-International Neuropsychiatric Interview-Plus)\(^{31}\)
   It is a widely used structured diagnostic interview instrument to diagnose psychiatric disorders according to International Classification of Diseases (ICD)-10 and Diagnostic and Statistical Manual of Mental Disorders (DSM)-5. It includes 23 disorders, including BDD.

2. SCID (Structured Clinical Interview for DSM Disorders)\(^{32}\)
   The Structured Clinical Interview for DSM-5 Disorders (SCID-5) is a semistructured interview guide for making diagnoses according to DSM-5, administered by a trained mental health professional or clinician who is familiar with the diagnostic criteria of various mental health disorders. It has been published in various forms, including a version for clinicians (SCID-CV).

Tools for Assessment of Outcomes following Cosmetic Procedures

1. Derriford Appearance Scale\(^{33}\)
   The Derriford Appearance Scale 59 (DASS9), comprises of 59 questions measuring the general, social, facial, sexual, and bodily self-consciousness of appearance, as well as negative self-concept and general feelings of hostility and irritability. Among the 59 items, 57 of them assessed psychological distress and dysfunction, and two items assessed physical distress and dysfunction. It has a 24-item shorter version called the DASS24, which measures distress in living with problems of appearance in reconstructive plastic surgery patients and in patients distressed by facial aging. It also has good psychometric properties.

2. PreFACE (PREoperative FAcial Cosmetic Surgery Evaluation)\(^{30}\)
   This is a brief, objective, self-reported psychological screening questionnaire that can be easily administered by cosmetic surgeons and dentists. It is comprised of a subset of items from the following validated questionnaires: general health questionnaires-30, hospital anxiety and depression scale, Rosenberg’s self-esteem scale, dysmorphic concerns...
questionnaire, and multidimensional body-self relations questionnaire. These measures were included because they all evaluate many of the psychosocial characteristics of patients who were thought to be dissatisfied with the cosmetic procedure outcome. It uses a scoring system that ranges from 0 to 28, with higher scores indicating increased potential for postoperative dissatisfaction. Authors recommend preoperative psychological counselling for those scoring 11 or more.

Management
Management of Psychiatric Illnesses in Relation to Cosmetic Surgery
Screening of psychiatric illnesses in patients opting for cosmetic surgery is essential to prevent unnecessary surgical procedures, as well as timely management of the psychiatric comorbidity, if present. The management principles of affective disorders and psychosis in these patients are similar to those not undergoing cosmetic surgery. It is advised that these patients with comorbid depression and anxiety disorders must be evaluated carefully post surgery for the worsening of symptoms and suicidal ideation. The management of BDD, which is the most common psychiatric comorbidity is discussed below.34,35

Management of Body Dysmorphic Disorder
Cognitive behavioral therapy (CBT) and selective serotonin reuptake inhibitors (SSRIs) have been proven to be efficacious. Exposure and response prevention, psychoeducation, motivation enhancement, attention retraining, perception retraining, mindfulness-based interventions, and mirror retraining are the various evidence-based components of CBT for BDD. Out of these, ERP is the mainstay of treatment.36 CBT aims to identify and replace dysfunctional
| **Table 5** Tools to assess other psychiatric disorders |
|-------------------------------------------------------|
| **Depression**                                        | **References to studies that have used the tool in cosmetic surgery patients** |
| Hospital anxiety and depression scale[^98]            | Mr et al (2013)[^16]  
Wei et al (2018)[^14]  
Clarke et al (2012)[^19] |
| Beck’s depression inventory (BDI)[^101,102]           | Monpelli et al (2018)[^12]  
Bender et al (2014)[^12]  
Vargel et al (2001)[^17]  
Paula et al (2018)[^14]  
Pavan et al (2017)[^104]  
Belli et al (2013)[^7]  
Pavan et al (2013)[^17]  
Beraldo et al (2016)[^106] |
| Hamilton depression rating scales (HDRS)[^105]        | Bellino et al (2006)[^23] |
| **Anxiety**                                           |                          |
| State–trait anxiety inventory (STAI)[^105]            | Chahraoui et al (2006)[^15] |
| Hamilton anxiety rating scales (HARS)[^108]           | Del Aguila et al (2019)[^22]  
Bellino et al (2006)[^23] |
| Beck anxiety inventory (BAI)[^111]                    | Belli et al (2013)[^7] |
| **Personality disorders**                             |                          |
| Tri dimensional personality questionnaire (TPQ)[^115] | Pavan et al (2017)[^104]  
Pavan et al (2013)[^17] |
| Neuroticism-extraversion-openness five-factor inventory (NEO-FFI)[^114] | Golshani et al (2016)[^79]  
Pavan et al (2013)[^17] |
| **Eating disorders**                                  |                          |
| Eating disorder inventory (EDI)[^115]                 | Saariniemi et al (2012)[^13] |
| Binge eating scale[^116]                               | Pavan et al (2017)[^104] |

[^98]: Reliable and valid instrument divided into an anxiety subscale (HADS-A) and a depression subscale (HADS-D). Sensitivity and specificity for both HADS-A and HADS-D was ~0.80[^100].

[^101]: Self-rated, 21 item scale. Second edition represents a revision that is more consistent with current diagnostic criteria for depression[^103].

[^105]: Clinician administered. Many versions of the scale exist with the number of items usually varying between 17 and 24 and can be applied in ~15 minutes.

[^106]: 1. It comprises of 2 subscales namely the State Anxiety Scale (S-Anxiety) which evaluates the current state of anxiety and the trait anxiety scale (T-anxiety)  
2. 40 item, self-report scale and the internal consistency coefficients for the scale have ranged from 0.86 to 0.95 with test-retest reliability coefficients ranging from 0.65 to 0.75[^106,107].

[^108]: Clinician-based questionnaire consisting of 14 items. It has acceptable reliability and validity in adults and has shown good interrater reliability[^108–110].

[^111]: 1. 21 item, self-reported Likert’s scale  
2. It has excellent internal consistency in clinical (0.91) and nonclinical sample (0.91) and a good test–retest reliability in clinical (0.66) and non-clinical (0.65)[^112].

[^115]: 1. 100-item, self-administered instrument.  
2. It measures three dimensions, namely, novelty seeking (NS), harm avoidance (HA), and reward dependence (RD).

[^116]: Self-rated questionnaire comprising of 16 items: eight items that describe behavioral manifestations and eight items associated with feelings and cognitions[^113].
beliefs; it has also been found to decrease the severity of BDD symptoms, as well as associated symptoms of depression, delusions, and improve insight.

CBT can be tailored as per the specific symptom profile of the patient. Habit reversal techniques can be employed for patients with symptoms of skin picking or hair pulling. Long-term monitoring of patients with BDD is advised after cosmetic surgery as they have been found to have an increased risk of self-harm behavior, even a decade after the procedure.\textsuperscript{37,38}

SSRI are the treatment of choice in pharmacological management. Clomipramine (serotonin reuptake inhibitor) has also been tried. Higher doses and longer duration of the trial (up to 12 weeks), than used for depression, have been recommended for BDD. In the case of treatment-resistant BDD with comorbid depression, switching to another SSRI or clomipramine and augmentation with CBT or atypical antipsychotics are the treatment options available.\textsuperscript{37}

Management of Other Psychiatric Illnesses

The management of depression and anxiety disorders is similar to that of the general population, through SSRI and behavioral therapy. It is advisable to start benzodiazepines, such as lorazepam or alprazolam, for about 1 to 3 days before surgery for preoperative anxiety, and these can be stopped postoperatively. Guided imagery, music, and relaxation exercises are some of the common nonpharmacological means of management. Also, these patients must be closely followed-up for the worsening of symptoms and the emergence of suicidal ideation following surgery. Psychotic symptoms must be managed by administering antipsychotics. It is imperative to check for drug interactions when psychotropic medication is prescribed.

Clarification of Expectation/Motivation

Several authors have opined that the most common motivation for cosmetic surgery is improving the perception of body image leading to better psychological well-being.\textsuperscript{39,40} The motivation for improving their body image by changing external appearance was found to be associated with better patient satisfaction postsurgery. In contrast, unrealistic expectations, poor preoperative understanding of risks and outcomes, subjectively reported defects in appearance without objective corroboration, history of repeated cosmetic surgeries, and history of stressful life events were noted to be associated with poor outcomes.\textsuperscript{26}

A vast body of literature exists on discussing the patient’s expectations for the procedure. They have been divided into psychological, physical, and interpersonal expectations.\textsuperscript{51} Psychological expectations refer to improvement in mood, self-esteem, body image, confidence, or overall psychological well-being. Physical expectation means the correction of the perceived physical defects. Interpersonal expectation denotes the social connotation of being in tandem with the existing social norms and ideals and getting accepted. Out of these, psychological expectations that are based on improving body image are the most difficult to assess by the surgeons. Examples of unrealistic expectations include a disproportionate increase in self-esteem, better relationships, jobs and reversal/ stopping of the aging process.\textsuperscript{42,43}

Postsurgical Outcomes

Aesthetic surgery has been associated with changes in self-esteem, body image, confidence, and quality of life across several cosmetic surgical procedures.\textsuperscript{44} A systematic review noted that certain types of cosmetic surgeries had specific outcomes.\textsuperscript{45} The majority of cosmetic surgeries had a positive effect on body image and self-esteem compared with other domains.\textsuperscript{46}

Breast augmentation surgery was consistently associated with better self-esteem, quality of life, satisfaction, lesser anxiety, or depression with varying effects on body image. In contrast, breast reduction surgery was noted to have an improvement in all the parameters with a better effect on health-related quality of life (HRQoL).

Facelift procedure was found to be associated with higher self-esteem and better quality of life but with a negative effect on emotional health with worsening of depression and anxiety symptoms. Rhinoplasty surprisingly, was noted to have no effect on body image, with varying improvements in self-esteem, quality of life, anxiety, and depression.\textsuperscript{47}

Several studies have noted increased rates of suicides in patients receiving breast augmentation surgery compared with the general population. The rates of suicide ranged from 0.24 to 0.68% across the studies.\textsuperscript{48} Further, the elevated risk for suicide continued in the long-term following cosmetic procedure such as breast implants.\textsuperscript{49,50}

Patient-Reported Postsurgical Outcomes

There is increasing research on patient-reported outcomes (PRO), postsurgery. BREAST-Q, FACE-Q, are some of the popularly used PRO measures.\textsuperscript{50} BREAST-Q consists of specific modules for surgeries such as breast reduction, breast augmentation, and breast cancer–related surgery.\textsuperscript{51} FACE-Q comprises scales assessing appraisal of facial appearance, quality of life, adverse effects, and process of care.\textsuperscript{52} Recently, an Indian study was published using FACE-Q that reported greater patient satisfaction, social functioning, and lesser psychosocial distress in patients who underwent rhinoplasty.\textsuperscript{53}

PROs act as a measure of the quality of life/HRQoL. Impairment in specific domains of HRQoL entails referral to the appropriate specialty. Patient satisfaction can be used to assess problems and improve communication.\textsuperscript{54} They are not only useful in carrying out research but also in improving clinical care and generating data. One example is the BREAST-Q, which was used to assess the quality of care in the United Kingdom, and feedback and targets were given accordingly.\textsuperscript{55,56}

A synthesized approach toward assessment of patients for cosmetic surgery: “when, where, what, and how?”

The current consensus is that those with psychological issues found at screening can be referred to a mental health professional. However, few advocate the role of mental health professionals in the screening process. Involving a mental health professional at this step might not be feasible due to the wide mental health gap. Screening for psychological
morbidity must be done prior to the surgery and periodically afterward to assess for any emergent mental health conditions.

Several screening tools are available, which can be used by the surgeon for screening, which facilitates referring the patients appropriately. Psychiatric history exploring for mood, anxiety, psychotic symptoms, psychoactive substance use, personality disorders, self-harm attempts, along with mental status examination, must be inquired into. In addition, life stressors must also be assessed. The motivation and the expectation of the patient to seek cosmetic surgery must be clarified.

Substance use, eating disorders, past history of psychiatric illness, suicide attempts, family history of suicide, access to lethal suicide means, borderline personality disorder, and poor social support are recognized as risk factors for suicide, and warrant referral to a psychiatrist for management. Finally, it is emphasized that patients suspected to be suffering from psychological problems must be referred to a psychiatrist for timely management. It is advisable that psychotropic medication should be prescribed by a psychiatrist, but not by a cosmetic surgeon, given the need for expertise about psychopharmacology and judicious prescription of medication.

Discussion

Patients undergoing cosmetic surgery pose several management-related, as well as ethical and legal, challenges. Hence, there are several issues to be considered while reviewing research on psychiatric issues in these patients.

First, the prevalence of psychiatric illness has been varying. This could be due to methodological differences in the characteristics of the study population, the methods of assessment including administration and type of instrument. It was found that prevalence was greater with interview-based methodology in comparison to standardized tools, which revealed lower rates. Anxiety or depressive symptoms before surgery can be misconstrued as a syndromal disorder. Furthermore, the differences in the type of cosmetic surgery might also affect the rates of psychiatric illness. There have been several studies reporting higher rates of suicides among those receiving breast implants. However, it is imperative to look at several confounding factors, such as comorbid depression, social factors, and family history, before confirming a causal association.

Second, the literature on the management of psychiatric illness in cosmetic surgery patients is limited. BDD has been the most commonly studied psychiatric illness in this group. Though CBT has been the treatment of choice, about half of the patients were found to be nonresponsive to CBT. Relatively longer duration of therapy, skills, and competency of the therapist, time of initiation of therapy is some of the factors which could influence the treatment outcome.

Third, though psychiatric illness is broadly considered as a contraindication to cosmetic surgery, there is an argument that those patients with less-pathological or well-controlled psychiatric illness might actually benefit from surgery by improvement in their quality of life. It is advised that the risk-benefit analysis must be done before planning for surgery. Fourthly, Postsurgery dissatisfaction syndrome (PSDS) is an understudied entity which can be misdiagnosed as a mood disorder in the postoperative period. PSDS refers to dissatisfaction associated with anxiety, low mood, and somatic symptoms despite objective satisfactory surgical outcomes. It has been associated with preoperative depression and anxiety disorder. Hence, it is necessary to differentiate between PSDS and mood disorder, postsurgery for appropriate management.

Finally, surgical treatment without prior psychological treatment, among those who require it, can result in adverse consequences for the surgeon. Dissatisfied patients may attempt retaliation against the surgeon, whom they believe has worsened their defect. This may take the form of lawsuits, physical assaults, or in some cases, murder. One study reported that 2% of plastic surgeons had been physically threatened by a patient with BDD, and 10% have received threats of violence and legal action. In another study, 40% of plastic surgeons reported that they had been threatened by a patient with BDD. Since 1991, three plastic surgeons have been murdered by patients with BDD who were unhappy with their surgical results.

Occasionally patients with BDD undergo several surgeries, with potentially irreversible outcomes. Others, in a desperate attempt to fix their perceived deformity or to ensure that they receive surgery, subject themselves to “self-surgery,” the consequences of which can be life-threatening.

Hence, to carefully select patients who are appropriate for cosmetic procedures, validated preoperative screening tools must be used, and working relationships with mental health colleagues must be established. Once the preoperative assessment identifies a potential psychiatric diagnosis, a multidisciplinary team must be involved in the confirmation of diagnosis, consideration of evidence-based treatments, and appropriateness for the procedure in question. Most importantly, after determining the decisional capacity, informed consent must be taken from the patient giving adequate information about the steps of the procedure and associated complications, costs, as well as alternate options, of treatment in a language comprehensible by the patient to avoid any legal issues.

Conclusion

There is a need for prospective and longitudinal studies as majority of the existing studies on patients undergoing cosmetic surgery have been retrospective chart reviews. Validated and standardized tools are warranted for assessment. The effect of CBT or pharmacotherapy in patients with BDD seeking cosmetic surgery needs to be assessed. As the literature is largely confined to BDD, more studies are needed on management and long-term outcomes of other psychiatric illnesses.
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Authors’ Contributions
S.B. conceptualized the manuscript, did review of literature, and wrote the first draft of the manuscript. P.P.K. coconceptualized the manuscript, contributed to the review of literature, and cowriter of the first draft of the manuscript. V.M. coconceptualized the manuscript, supervised the work at all stages, and revised the manuscript for intellectual content. All authors read and approved the final version of the manuscript.

Conflict of Interest
None declared.

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