Chapter 12
Therapeutic Interventions for Body Dysmorphic Disorder

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Introduction

Patients with body dysmorphic disorder (BDD) often seek nonpsychiatric treatment. Many will attempt to receive cosmetic treatments for appearance enhancement, the most common being dermatologic and surgical [1]. If unable to find a cosmetic surgeon to perform the treatment, some may become so desperate that they perform surgery on themselves [2]. BDD responds poorly to such treatments and can even become worse. The expeditious recognition of BDD and commencement of treatment can have a positive impact on BDD patients' lives [3]. With adequate treatment, patients may experience full or substantial remission of symptoms and have an improved quality of life [4]. The most effective and validated treatment options will be discussed in this chapter, including psychotherapeutic and pharmacologic interventions.

Psychological and pharmacological treatments for BDD both have significant utility [5]. No head-to-head studies exist comparing the efficacy of psychotherapy and pharmacotherapy directly. A meta-analysis suggests that psychotherapy may be the more impactful of the two [5]; however, the effect of psychotherapy may be overestimated in the literature due to lack of blinding in control groups. The utilization of both treatment options in conjunction may have synergistic effects. Medication can make it easier for patients to realize the positive effects of psychotherapy and should certainly be considered in patients with severe cases of BDD [6].

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When evaluating BDD patients for treatment, it is important to evaluate for psychiatric comorbidities. There is overlap in the symptoms, response to treatments, and even a genetic link between obsessive–compulsive disorder (OCD) and BDD. Anxiety, major depressive disorder, and social phobias are very commonly comorbid with BDD as well [7]. Furthermore, BDD patients may or may not be delusional (36% of BDD patients were delusional in one study) [6]. The consideration of comorbidities, classification, and severity should be incorporated in the decision-making process when making a treatment regimen for BDD.

There are many barriers to overcome when treating BDD, and successful treatment will be contingent upon the acceptance, cooperation, and motivation of the patient. While some patients may feel relieved with the diagnosis of BDD, most BDD patients will be reluctant to accept their diagnosis. In addition, mental illness can, unfortunately, be stigmatized, which may make some reluctant to seek treatment. The clinician should not attempt to convince the patient that his or her beliefs are incorrect but should also avoid validating them. It is important to establish an alliance with the patient, to be empathic for the patient's suffering, and to focus on discussing the potential for improvement with proper psychotherapeutic and/or pharmacologic treatment.

Psychotherapeutic Treatment

Cognitive behavioral therapy (CBT) that specifically focuses on BDD symptoms is the first-line of psychotherapeutic treatment for BDD [8]. Both individual and group sessions of CBT are effective in treating BDD [9, 10]. CBT has also been shown to be safe and effective in children and adolescents [11]. The use of inference-based therapy (IBT), where the therapy revolves around the patient's misguided inferences about their body image, may be a beneficial therapeutic approach as well [12]. There is very limited evidence evaluating other forms of psychotherapy for the treatment of BDD [8].

Therapeutic techniques for BDD are developed around the understanding of thought processes prevalent in BDD. For patients with BDD, appearance is believed to be highly important, and individuals tend to see themselves as unattractive [13]. Patients with BDD are thought to have enhanced aesthetic sensitivity [14]. Compared to a control group, functional magnetic resonance imaging (fMRI) studies revealed that BDD patients are much more focused on recognizing facial details than on processing facial information holistically [15]. Individuals with BDD tend to have high levels of perfectionism and compare themselves extensively with others. Perceived teasing may also have a significant role in BDD [16]. Maladaptive appearance-related behaviors, values, and beliefs perpetuate the disorder [13].

CBT entails using cognitive and behavioral therapeutic strategies in conjunction over the course of treatment. In the treatment of BDD, cognitive methods have focused on recognizing maladaptive thoughts, helping the patient realize overvalued beliefs about physical appearance, and instituting cognitive restructuring regarding

body dissatisfaction. Behavioral components of therapy for BDD have entailed methods such as exposure therapy, response prevention, and relapse prevention [10]. These methods are detailed below.

Cognitive Behavioral Therapy

CBT is a practical treatment approach that teaches skills and includes cognitive restructuring, behavioral experiments, exposure, and response prevention. It focuses on changing and substituting, both, beliefs and thoughts (cognitive aspect) and behaviors (behavioral aspect) such as skin picking and mirror checking. CBT should be tailored to the individual person and performed by a trained therapist who is familiar in treating BDD. It is typically administered as weekly, hourly sessions. Wilhelm et al. developed a treatment manual for CBT for BDD. The CBT-BDD methods include the following facets as outlined below [17]:

- Psychoeducation and cognitive-behavioral case formulation begins the process of CBT-BDD by educating the patient about BDD and developing a cognitive-behavioral model for the patient's specific symptoms.
- Cognitive restructuring entails evaluating maladaptive thoughts with Socratic questioning and identifying cognitive errors with the goal of developing more accurate and helpful beliefs.
- Exposure identification provides insight on situations that provoke anxiety. Patients should gradually practice confronting these situations with the goal of eventually no longer needing to avoid these stressors.
- Ritual prevention identifies situations in which rituals are performed and strategies are developed to reform them to stop compulsive behaviors.
- Mindfulness/perceptual retraining helps the patient's mind focus on the body as a whole. Patients use objective, nonjudgmental language to describe the *entire* body in the mirror with avoidance of excessively focusing on details.
- Advanced cognitive strategies identify and challenge deeply rooted negative beliefs to broaden the basis for self-worth.
- Relapse prevention strategies may entail scheduling healthy activities to replace and distract from time spent on compulsive BDD-related repetitive behaviors.
- Targeted modular interventions may focus on specific patients needs such as: (1) skin picking and hair plucking, (2) muscularity and weight, (3) cosmetic treatments, and (4) mood management.

A randomized waitlist-control study evaluated the efficacy of CBT-BDD [18]. Efficacy was evaluated using the body dysmorphic disorder-Yale Brown Obsessive Compulsive Scale (BDD-YBOCS), the most frequently used scale for BDD treatment response. Responders were defined as having greater than 30% improvement at the end of the treatment period. After 12 weeks of weekly 60-min sessions, 50% (8 of 16) of participants in the treatment group were BDD-YBOCS responders compared to 12% (2 of 17) in the waitlist control group ($p = 0.026$). After 12 weeks, all study participants were crossed over into the treatment group, and by the end of the

22-week study, 81 % (26 of 32) of all participants were responders. Patient satisfaction in this study also was high (client satisfaction inventory with score of 87.3 %), and treatment gains were maintained when evaluated at a 6-month follow-up.

Traditional CBT methods (not according to the BDD-CBT protocol) have also been efficacious in the treatment of BDD in a number of controlled trials and case series. A randomized waitlist-controlled study evaluated the efficacy of 12 weeks of CBT in BDD patients. They found that the treatment group had a mean 50 % reduction in symptoms on the BDD-YBOCS with a significant difference compared to the control group (treatment group 22.00 pre-, 10.75 posttreatment; waitlist group 21.18 pre-, 24.33 posttreatment, $p < 0.01$) [9]. A higher score corresponds to more severe symptoms on the BDD-YBOCS. Evidence has repeatedly supported the efficacy of individual CBT in the treatment of BDD, and it is considered as the first-line psychotherapeutic technique. In fact, CBT was found to be the best-established treatment for a variety of somatoform disorders, including BDD, in a review of 34 randomized controlled trials involving 3922 patients [19].

Group CBT has also been studied and found to be useful in the treatment of BDD. One randomized waitlist-controlled study ($n = 54$) demonstrated significantly improved scores on the body dysmorphic disorder examination (BDDE) (treatment group 93.9 pre-, 41.4 posttreatment; waitlist group 89.9 pre-, 83.2 posttreatment, $p < 0.001$) [10]. A higher score corresponded to more severe symptoms. Not only was the treatment effective, but also the patients reported a positive impression of the therapy. During the weekly 2-h sessions of 8 weeks, attendance was 100 %, and 80 % of the participants said they would recommend the program. Another case series demonstrated the efficacy of group CBT (BDD-YBOCS pretreatment 28.5, posttreatment 21.3); however, this study lacked a control group [20]. The demonstrated efficacy of group CBT may have the added benefits of increased social support and decreased cost. Direct comparisons of efficacy and compliance between individual and group CBT for BDD are needed.

BDD is commonly seen in adolescents, but the treatment in this population has not been well studied. From the limited data available, CBT has been successful in the pediatric population. One case series found that 4 of 6 patients were responders by the BDD-YBOCS, and that all of these patients also experienced a concomitant decrease in depressive symptoms [11]. CBT has been demonstrated to be effective in adults and data suggest this is true in pediatrics as well; however, more studies in this population are warranted. When working with a younger population, it is important to adjust the technique by using appropriate language and interaction approach for the age group. Emphasizing behavioral strategies over cognitive strategies may be beneficial for younger patients as well [11].

Inference-Based Therapy

Inference-based therapy (IBT) is a technique that was originally developed for patients with OCD with particularly fixed beliefs or obsessions. BDD shares features with OCD including obsessions, fixed ideations, and repetitive behaviors. Many

BDD patients have *overvalued ideation* (*OVI*), which is a very strong conviction in the objective reality of their belief without the level of certainty to qualify as a delusion. Patients with OVI may be less likely to respond to CBT [21].

In IBT, BDD obsessions are conceptualized as a two-step process where the establishment of a faulty inference is used as the basis for a secondary inference with negative anticipated consequences. For example, the belief that "I am not big enough to get noticed" (faulty inference) may be followed by the inference "if I never get noticed, I will never find a girlfriend" (negative consequence). In this case, the patient was 90% convinced that if he did not perform his rituals (working out), he would suffer the negative consequence (never getting a girlfriend) [12]. In IBT, the therapist first tries to explore the patient's fear or believed negative consequence and then works backward to help identify the initially held obsessional belief [12]. These faulty inferences are the primary target for therapeutic intervention with IBT. One case series demonstrated the efficacy of IBT for patients with BDD [12]. IBT may be especially useful in patients with firmly held ideations contributing to their BDD. More studies are needed on the emerging topic of IBT for BDD.

Pharmacologic Treatment

Selective-serotonin reuptake inhibitors (SSRIs) are the first-line agents in the pharmacologic treatment of BDD [22, 23]. These are antidepressants that have also been shown to have efficacy in diminishing OCD-type symptoms. By inhibiting the reuptake of serotonin, SSRIs increase the availability of this neurotransmitter at cell–cell junctions. While there are currently no medications approved by the FDA for the treatment of BDD, SSRIs are the most studied and efficacious medications in the treatment of BDD. SSRIs have been shown to be more effective in treating BDD compared to non-SSRI medications [24, 25]. They also appear to help people with delusional BDD as much as those with non-delusional BDD [2]. Modification of SSRI treatment by adding a non-SSRI psychotropic medication can be beneficial in recalcitrant cases. Some non-SSRI medications may be effective in the treatment of BDD as monotherapy as well.

Selective-Serotonin Reuptake Inhibitors (SSRIs)

SSRIs are useful for the medical management of many psychiatric conditions including: major depressive disorder, OCD, generalized anxiety disorder, panic disorder, phobias, bulimia, posttraumatic stress disorder, and a number of off-label uses, including BDD. They are generally well tolerated, but common mild–moderate side effects include: gastrointestinal disturbances, agitation, anxiety, insomnia, and sexual dysfunction. SSRI medications currently available include: fluvoxamine (Luvox®) 50–300 mg/day, fluoxetine (Prozac®) 20–80 mg/day, paroxetine (Paxil®) 20–50 mg/day, sertraline (Zoloft®) 50–200 mg/day, citalopram (Celexa®)

20–40 mg/day, and escitalopram (Lexapro®) 10–20 mg/day. Clomipramine (Anafranil®) 150–250 mg/day is a nonselective serotonin reuptake inhibitor (SRI) that has also been used as treatment for BDD. Clomipramine is generally not used first-line as it is more likely to cause side effects and can be toxic at very high doses.

Randomized controlled studies and open-label studies have been conducted on fluoxetine, fluvoxamine, citalopram, and escitalopram, all demonstrating clinically significant improvements in symptoms. In a randomized placebo-controlled trial, fluoxetine was shown to be effective in 53% of patients compared to 18% in the placebo group. The mean response time was 7.7 weeks in these patients, and the mean dose was 77.7 mg/day [26]. The relative response to fluoxetine compared to the placebo group was 3.07 [23]. Two open-label studies demonstrated the efficacy of fluvoxamine in the treatment of BDD [27, 28]. In one study, 10 of 12 patients were markedly improved after 10 weeks of fluvoxamine therapy [27]. In the other study, 63.3% ($n=30$) of patients responded to fluvoxamine based on the BDD-YBOCS with a mean response time of 6.1 weeks and a mean dose of 238 mg/day [28]. An open-label study evaluated the efficacy of citalopram for the treatment of BDD and found that 73.3% (11 of 15 patients) were responders after 12 weeks [29]. The mean endpoint dose for citalopram was 51.3 mg/day and mean time to response was 4.6 weeks. An open-label study of escitalopram demonstrated an efficacy of 73.3% (11 of 15 patients) with a mean endpoint dose of 28.0 mg/day (starting at 10 mg/day, increasing dose by 10 mg every 2 weeks up to 30 mg/day) and a mean time to response of 4.7 weeks [30]. Although no studies have compared one SSRI to another, one author has noted that escitalopram and citalopram had somewhat higher percentages of patient improvement, had higher percentages of "very much improved" compared to only "much improved," and lastly, many patients in those studies responded earlier (within 2–6 weeks) [2]. More research is needed; however, it may be that escitalopram and citalopram are most efficacious.

SSRIs have been used in the treatment of adolescents with BDD as well. Fewer and less rigorous studies support this, but the literature is promising. In a case series of 33 children and adolescents with BDD, 53% (10 of 19) of patients treated with an SSRI had a substantial improvement in their BDD symptoms [31]. In addition, 7 case reports of the treatment of BDD in adolescents with SSRIs demonstrate overall marked improvement [31–34]. Similarly to adults, high doses were needed to see an improvement in symptoms in many cases. The medications were well tolerated in the cases reported, even at high doses.

There are no studies directly comparing SSRI doses in the treatment of BDD. In order to elicit the desired response in the treatment of BDD, it is typical to require higher doses of SSRIs compared with their use for other indications. Doses needed to improve symptoms are typically at the high end of dosing ranges and, sometimes, even exceed these ranges. Clinicians should start patients on a low dose and titrate up to the maximum dose recommended by the package insert, as tolerated. Titration should be performed gradually over the first 1–2 months. On average, response occurs after several weeks of treatment.

Achieving the optimal therapeutic doses and duration for effective pharmacologic treatment occurs less frequently in actual practice than is described in the literature. Phillips et al. describe a "minimally adequate" trial with an SSRI that entails daily oral medication for 10 weeks at the following daily doses: fluvoxamine 150 mg, fluoxetine 40 mg, paroxetine 40 mg, sertraline 150 mg, citalopram 40 mg, or escitalopram 20 mg. Criteria for an "optimal" trial with SSRIs include using or exceeding the maximum dose recommended by the manufacturer for at least 12 weeks duration [35]. Their retrospective review demonstrated that 34.4% of medications were not optimally prescribed [35]. This study points to an important obstacle in treatment; many clinicians may not be aware of or comfortable with the doses and duration necessary to achieve an optimal response. Similarly, many patients may be impatient while waiting several weeks for their treatment to become effective, which likely compromises compliance. Increased education of clinicians and proper counseling of patients regarding the duration of treatment with an SSRI and common side effects may improve response rates and compliance.

SSRIs are generally relatively safe and well tolerated. Side effects reported in the above studies were infrequent and mild–moderate in nature. They are more likely to occur early in treatment and/or when the dose is raised. They may improve or disappear on their own with time. In addition, a slower up titration or lowering the dose can give the body time to adjust and diminish side effects. The most frequently reported side effects include: fatigue, nausea, and sexual dysfunction. Others include insomnia, decreased appetite, jittery sensations, and sweating. These will resolve upon discontinuation of the medication and none cause life-threatening side effects. Although there are some concerns about whether the use of SSRIs increases suicidality, the evidence in adults is inconsistent and no clear correlation can be drawn [36]. A randomized controlled study in pediatric patients found an increased risk of suicidal ideation but not in attempted or completed acts of suicide [37]. A medication history should be obtained prior to SSRI initiation. For example, MAO inhibitors are antidepressants that should never be given with SSRIs.

Due to the efficacy and relative safety of SSRIs, long-term continuation of therapy is recommended. Patients will likely see further improvement in their symptoms with the continuation of SSRI therapy. Patients desiring to discontinue from a successful SSRI therapy regimen should be cautioned about the potential for relapse. As always for SSRI medications, discontinuation should never be done abruptly but rather as a slow taper. Severely ill and previously suicidal patients may require lifelong SSRI treatment. About 85% of people who stop an effective SSRI will have a return of symptoms; however, for some, they may not be as severe [2].

If a particular SSRI is not working, the physician can try switching to another SSRI or adding another medication. No head-to-head trials of SSRIs are available and all appear to, on average, work equally well. If one SSRI appears ineffective after an appropriate trial at the highest recommended or tolerated dose for at least 3–4 months, another SSRI may still be effective. Adding a medication may be the appropriate approach if the SSRI is partially effective.

Adjunct and Monotherapy

Other psychotropic medications may be used in the treatment of BDD as an adjunct to SSRI treatment or as monotherapy. Side effects are more common among many of the other psychotropic medications compared to SSRIs, and their efficacy data has not consistently demonstrated the magnitude of response seen with SSRIs. However, while SSRI medications should be first-line pharmacologic treatment for BDD, the use of other psychotropic medications as an adjunct or as monotherapy is worthy of consideration in recalcitrant cases.

Adjunct therapy to an SSRI with other psychotropic medication may be very effective, especially in difficult to treat cases. Medications used to augment SSRIs include clomipramine, busiprone, levetiracetam, venlafaxine, bupropion, olanzapine, ziprasidone, risperidone, lithium, and methylphenidate to name a few [2]. The temporary use of benzodiazepines during the first few weeks of treatment may be helpful for those unable to sleep or severely anxious. A chart review evaluated SSRI monotherapy and SSRI therapy augmented with another psychotropic medication for patients who had failed SSRI monotherapy. They found that 63.2% of patients responded adequately to SSRI monotherapy, and that augmentation therapy response rates were: 44.4% for clomipramine (Anafranil®), 33.3% for buspirone (BuSpar®), and less than 20% for lithium, methylphenidate (Ritalin®), and antipsychotics [38]. In a case series, 6 of 13 (45%) patients who had failed SSRI monotherapy improved after augmentation with buspirone [25]. One report in a patient with prominently delusional BDD demonstrated the success of using the antipsychotic risperidone (Risperdal®) in conjunction with the serotonin-norepinephrine reuptake inhibitor (SNRI) venlafaxine (Effexor®). The patient noticed marked improvement of symptoms after approximately a month and was symptom-free 6 months later [39]. In a randomized double-blind placebo controlled trial ($n=28$), another antipsychotic, pimozide (Orap®), did not appear to be any more efficacious than placebo as an adjunct to an SSRI (response rates: 18.2% pimozide, 17.6% placebo; $p=0.97$) [40]. Second generation neuroleptics, such as ziprasidone, olanzapine, and risperidone, may be particular helpful in those with delusional thinking and more efficacious than first generation neuroleptics such as pimozide. Certainly, more controlled studies evaluating adjunct therapy to SSRIs are needed to create a more evidence-based approach to BDD adjunct pharmacotherapy.

Other psychotropic medications have demonstrated efficacy in the treatment of BDD as monotherapy. The SNRI, venlafaxine, was evaluated in an open-label study ($n=17$) and resulted in a significant reduction in overall BDD symptoms from baseline ($p=0.012$), including both obsessions ($p=0.034$) and compulsions ($p=0.021$) according to the BDD-YBOCS [41]. A double-blind randomized crossover control study ($n=29$) evaluated the efficacy of tricyclic antidepressants (TCAs), which also have effects inhibiting the reuptake of serotonin and norepinephrine, in treating BDD. Improvement based on a 25% increase on BDD-YBOCS was seen in 65% of patients on clomipramine (a psychotropic medications with qualities of both TCAs

and SRIs) compared to 35% on desipramine (a standard TCA that mainly blocks norepinephrine reuptake) ($p = 0.09$) [42]. However, TCAs are commonly associated with side effects and patients experienced high rates of anticholinergic symptoms (e.g., dry mouth, sedation, constipation) in the trial. Combining clomipramine and venlafaxine should be done with extreme care given the risk of serotonin syndrome.

Practical Approach Considerations for the Dermatologist or Cosmetic Surgeon [43]

- Recognizing and diagnosing BDD is the first step to proper treatment.
- Educate your patient.
  - Education is a crucial component for the treatment of BDD.
  - Explain to the patient that s/he does not have a significant dermatologic or surgical problem but rather a body image problem known as body dysmorphic disorder, characterized by being overly concerned about and affected by one's appearance.
  - Explain to your patient that BDD is treatable but that changing the actual body part of concern is unlikely to help.
  - Recommend appropriate reading material on BDD.
  - Educate family members, friends, and significant others.
- Empathize with your patient.
  - Patients tend to believe that their view of their appearance is correct and realistic.
  - Telling your patient that his/her beliefs are irrational or imagined or that their appearance is normal is unlikely to be accepted by the patient.
  - Focus on the distress that the impairment causes rather than on the physical appearance. This is more likely to facilitate a referral to a mental health professional.
  - Skin pickers may require a combination of psychiatric and dermatologic treatment.
- Avoid any dermatologic treatment and cosmetic procedures or interventions.
  - These treatments are not likely to be helpful and may make the condition worse.
  - Explain to the patient that you think s/he will not likely be happy with the cosmetic treatment but that there are successful treatments available to improve the distress experienced over his/her appearance.
  - The exception is for those who compulsively pick their skin that results in secondary manifestations such as infection.

- Refer the patient to a mental health professional.
  - Focus on discussing the potential to decrease symptoms and to improve daily functioning.
  - Refer to a therapist who is familiar with BDD for patients interested in CBT treatment.
  - Refer to a psychiatrist if the patient is interested in medication. Medical management is likely to be necessary if the patient is depressed or suicidal.
  - For patients resisting the psychiatric component to their problem, rather than discussing their physical appearance, try to focus on the large amount of time they spend obsessing or the amount of distress that it is causing them.
- Familiarize yourself with commonly used SSRIs.
  - For low-risk patients who refuse referral, familiarize yourself with commonly used SSRIs and consider treating the patient with medical management yourself or refer to the patient's general practitioner for this purpose.
  - Effective trials of SSRIs entail 12–16 weeks at the highest recommended dose as indicated by the manufacturer or highest dose that is tolerated by the patient. If that fails, consider a trial with another SSRI or combination therapy with a non-SSRI.

Conclusion

While dermatologists and cosmetic surgeons are likely to encounter BDD patients in consultations for cosmetic treatment, such treatments are inappropriate for patients with BDD and are not likely to yield satisfactory results. Changes in diet and natural remedies are also ineffective treatments for BDD. Some advocate certain foods, such as chicken avocado, corn, and bananas, as they may affect serotonin levels and natural remedies, such as St. John's wort and tryptophan, for BDD treatment [2]. These are not effective treatments.

BDD is best treated with SSRIs, CBT, or a combination of the two. Unfortunately, one study found that only 15 % of dermatologists surveyed thought that they could successively treat BDD [44]. While 72 % of dermatologists never prescribe antidepressants, 68 % never prescribe antipsychotics, and only 11 and 3 % were comfortable starting these medications, respectively [44]. We hope that an increase in awareness of the utility of these medications will improve the comfort level with prescribing them.

No studies directly compare SSRIs, CBT, and combination therapy head-to-head for BDD. They may be equally effective overall, but one may work better than the other for a particular person. A multidisciplinary approach may be very useful. When deciding on a treatment, motivation is an important consideration. CBT requires effort, motivation, and, most importantly, patient participation. For this reason, BDD treatment should be tailored to the individual.

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