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# Diagnosis and Management of Body Dysmorphic Disorder

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## **Learning Objectives:**

Clinicians will review defining aspects of body dysmorphic disorder, including its etiology, biological and psychosocial associations, epidemiology, prognosis, risk factors, diagnosis, differential diagnosis, and psychological/biological management.

## **Abstract:**

Body dysmorphic disorder is a frequently underdiagnosed psychiatric disorder causing significant morbidity and distress, with patients often presenting to non-psychiatrists. Furthermore, patients often undergo unsafe treatments, which usually fail to alleviate this morbidity and distress. This lesson conveys characteristics of body dysmorphic disorder through a presentation of relevant details from the literature, including surveys of research studies, analysis of case reports, and a review of current treatment modalities. The knowledge provided will allow the clinician to make informed decisions regarding diagnosis and optimal treatment of this disorder, based on the most current information available.

## **Editor's Note**

Body dysmorphic disorder or BDD has only recently entered DSM-IV. The authors begin their review by giving a brief history of BDD (which was originally described in 1891) and providing definitions and clinical characteristics of the disorder. The lesson continues by reviewing the etiology, epidemiology, and risk factors of BDD. They then focus on diagnostic criteria and differential diagnosis and provide a practical list of screening questions for BDD. They conclude with a discussion of two modalities of treatment: cognitive behavioral therapy and antidepressant pharmacotherapy. Of note is the paucity of large sample size studies that examine the efficacy of treatment. However, this lesson does provide a concise summary of BDD that is a particularly useful diagnostic guide to clinicians. —P.H.

## Introduction

*Body Dysmorphic Disorder* (BDD) is an underdiagnosed psychiatric disorder, which causes significant morbidity and mortality. **Patients often present to dermatologists and cosmetic surgeons and may undergo unnecessary procedures, which usually fail to alleviate the distress and disability experienced by the individual.** The disorder can respond to treatment with *Cognitive Behavioral Therapy* (CBT) or *Selective Serotonin Reuptake Inhibitors* (SSRIs).

## Definition

BDD was first described, as a disorder, in 1891 by Morselli.<sup>1</sup> It has also been described by Janet<sup>2</sup> and Kraepelin.<sup>3</sup> It has previously been referred to by a number of terms,<sup>4</sup> including dysmorphophobia, dermatologic hypochondriasis, Schönheitshypochondrie (beauty hypochondria) and Hässlichkeitskummerer (someone who is concerned about ugliness).

BDD is defined in the DSM-IV as "an excessive preoccupation with an imagined defect in one's physical appearance which causes clinically significant distress/impairment in functioning and is not accounted for by another mental disorder." The disorder may frequently present with psychiatric comorbidity, especially depression, obsessive-compulsive disorder, social anxiety, and substance use disorders.<sup>5</sup>

A number of authors have described disorders thought to be variants of BDD; these include Adonis Complex, also termed "bigorexia," "reverse anorexia" and "muscle dysmorphia," a condition usually affecting males who wish to be more muscular and who go to great lengths to try to achieve their ideal,<sup>6</sup> and Olfactory Reference Syndrome, a persistent preoccupation with body odor accompanied by negative emotions and adverse social functioning.<sup>7</sup>

Individuals with BDD tend to focus on specific body areas rather than on their whole appearance, although any aspect of their appearance may come under excessive scrutiny, especially visible parts of the body such as the head, face, and skin and its adnexae. In some cases, organs not normally visible, such as genitalia, may be the focus. It is possible for several areas to be involved, and both the extent of the preoc-

cupation as well as the degree of the perceived defect(s) may shift over time. There appears to be gender differences in the body parts under scrutiny, with females more preoccupied with their skin and hips and males with their genitalia and thinning hair.<sup>8</sup>

The effects on individuals with BDD can vary significantly, and many engage in time-consuming behaviors, which may seriously affect their functioning; some patients may actively avoid certain situations in which they may see themselves (such as avoiding looking in mirrors or other reflective surfaces) or be observed by others (such as actively avoiding social situations). Most engage in excess "mirror gazing," which can confirm the negative cognitions and thus perpetuate or worsen the condition. Additional behaviors may include use of camouflage (involving specific hair styling, make-up, articles of clothing), reassurance-seeking, skin-picking or seeking dermatological or cosmetic surgery intervention. Table 1 (adapted from Neziroglu and Khemlani-Patel)<sup>9</sup> summarises the commonly observed behaviors in BDD.

## Cosmetic Surgery and Dermatological Intervention

A significant proportion of individuals with BDD seek nonpsychological treatment for their condition and may seek input from cosmetic surgeons, dermatologists, dental surgeons, or others.<sup>10</sup> Of note, the literature contains retrospective studies evaluating the outcome of cosmetic surgery in patients with BDD, and found that levels of dissatisfaction following the procedure were high: One study<sup>11</sup> found increased levels of dissatisfaction in 25 patients with BDD who had undergone a total of 46 cosmetic procedures. In a subsequent study,<sup>12</sup> 82.6% of the patients reported similar or worsened symptoms of BDD. In a study comparing patients without BDD who had undergone rhinoplasty with BDD patients who wanted this procedure but had not obtained it, nor undergone rhinoplasty, it was found that patients with BDD had higher levels of anxiety and depression.<sup>13</sup> Furthermore, they reported more interference in social and occupational activities and were more likely to check their nose (using their fingers or mirrors). They were also more likely to have attempted "Do It Yourself" surgery.

## Etiology

Although the precise etiology of BDD remains unclear, a number of possible biological and psychosocial associations have been proposed. The literature contains sparse references to biological correlates of BDD and most studies are small, and provide inconsistent findings. Thus, the following reports cannot be considered definitive. Based on the observation that BDD occurred in approximately 6% of first-degree relatives of individuals with BDD, a possible genetic contribution has been proposed.<sup>5</sup> In addition, it has been reported that BDD (as well as OCD spectrum disorders) occurred more frequently in relatives of affected patients.<sup>14</sup>

Neuroimaging studies of body dysmorphic disorder suggest that individuals with BDD may show cau-

date nucleus asymmetry and increased white matter volume on MRI<sup>15</sup> or, using SPECT, non-specific changes in frontal, temporal, and parieto-occipital areas.<sup>16</sup> Two cases in which BDD followed medical illnesses (Bell's Palsy in a 17-year-old male and ulcerative colitis in a 22-year-old male) have been reported,<sup>17</sup> as has a case of BDD following encephalitis in a 24-year-old male whose MRI showed fronto-temporal atrophy.<sup>18</sup> It is thus possible that certain acute medical disorders may trigger BDD in susceptible individuals; however, definitive evidence for any specific biological factor or factors in BDD remains elusive.

## Aesthetic Sensitivity

Individuals with BDD may be more aesthetically sensitive than the rest of the population.<sup>19</sup> It could be that BDD patients are more aware of subtle differences in facial asymmetry or features of secondary sexual facial characteristics or are better at evaluating harmony and balance in appearance. Thus, they are more likely to have training or a background in art and education.<sup>20</sup> They may also have lost the "rose-tinted glasses" of healthy controls and may therefore be more realistic about their body image, similar to patients with eating disorders.

## Psychosocial Associations with BDD

A high incidence (38%) of comorbid personality disorders in individuals with BDD has been reported,<sup>21</sup> although the precise meaning of this remains uncertain. Relevant psychological factors may include childhood trauma, with a recent study suggesting that up to 80% of individuals with BDD report some form of abuse or neglect during childhood.<sup>22</sup> Some attention has focussed on cognitive processing in BDD, with work suggesting that individuals with BDD may exhibit selective information processing<sup>23</sup> or experience adverse effects on perceptual organization and memory.<sup>24</sup>

## Epidemiology

Although it is generally felt that BDD is under-diagnosed, a number of studies have investigated the preva-

**Table 1**  
**Common Behaviors in BDD**

Note that multiple overt and covert behaviors may co-exist, and there may also be marked avoidance behaviors (e.g., of certain activities, people, places or situations) which may mimic agoraphobia, depression, social phobia and other psychiatric disorders.

<b>Overt Behaviors</b>	Being late for work or activities
	Comparing one's body parts with those of other people
	Excessive grooming
	Mirror checking
	Camouflaging (via altering body posture, excessive clothing, hair styles, use of cosmetics or other beauty products)
	Seeking cosmetics, dermatological, other medical or surgical advice /intervention
	Seeking reassurance from others about external appearance
<b>Avoidance Behaviors</b>	Skin picking/trichotillomania
	Avoiding wearing certain types of clothing
	Avoiding crowded places
	Avoiding social situations
	Mirror avoidance

lence of BDD in community settings and reported values ranging from 0.7%<sup>25</sup> to 1.7%.<sup>26</sup> In specialist settings, higher prevalence rates have been reported, including a figure of 11.9% in dermatology patients<sup>27</sup> and 6% in one study of 100 cosmetic surgery patients.<sup>28</sup> In psychiatric outpatients, a prevalence rate of 3.2%<sup>29</sup> has been reported, as has a much higher figure of 13.1% reported for psychiatric inpatients.<sup>30</sup>

BDD is thought to affect males and females equally,<sup>8</sup> with onset usually in adolescence; although the condition may manifest in childhood or at later ages.<sup>31,32</sup> Attempts to determine possible cultural differences have found that clinical presentations are largely similar, with only some minor variations reported in some cultures.<sup>4</sup>

### Prognosis of BDD

In most cases, individuals with BDD experience impaired educational, occupational, and social functioning. The extent of impairment of individuals with BDD was examined in a study,<sup>33</sup> which found that sufferers experienced higher levels of social and occupational disability than the general population, as well as a range of disorders including depression and myocardial infarction. **Individuals with BDD often have increased levels of comorbid psychiatric illness, such as depression, social anxiety and obsessive compulsive disorder,<sup>4,5</sup> and they also experience increased rates of suicidal ideation, with studies suggesting rates of 40%<sup>34</sup> and 45%.<sup>31</sup> Approximately one-third of the patients in an additional study actually attempted suicide.<sup>35</sup>**

A number of studies suggest that sufferers of BDD have impaired occupational histories and relationships,<sup>36</sup> which may serve to perpetuate negative cognitions and thus the disorder. Without treatment, the condition appears to be life-long; however, partial or full remission rates post-treatment of up to 83.8% have been described,<sup>5</sup> although almost 30% of the patients who experienced remission relapsed. A subsequent study found that full remission was achieved in only 9% of the subjects at one-year follow-up with only 21% achieving partial remission of symptoms.<sup>37</sup>

### Risk Factors

Veale<sup>38</sup> has summarized a number of likely risk factors implicated in the development of BDD:

- **A genetic predisposition (BDD reported to occur more frequently in relatives of affected individuals)<sup>5,14</sup>**
- **Specific traits such as shyness, perfectionism, or anxiousness (increased rates of personality disorder found in BDD)<sup>21</sup>**
- **Childhood adversity, neglect, or trauma<sup>22,39</sup>**
- **A history of skin or other physical disfigurement (supported by increased rates of BDD in patients presenting to dermatologists)<sup>27</sup>**
- **Being more aesthetically sensitive than other individuals<sup>40</sup>**

### Diagnosis

The *Diagnostic and Statistical Manual of Mental Disorders*, Fourth Edition (DSM-IV) describes BDD, including it under Somatiform disorders. ICD-10 subsumes it under hypochondriacal disorders (ICD-10 code F45.2) and therefore does not define specific diagnostic criteria.

The DSM-IV Diagnostic Criteria for BDD (DSM-4 code 300.7) and are as follows:

- **Criterion A: Preoccupation with an imagined defect in appearance. If a slight physical anomaly is present, the person's concern is markedly excessive.**
- **Criterion B: The preoccupation causes clinically significant distress or impairment in social, occupational or other important areas of functioning.**

- **Criterion C:** The preoccupation is not better accounted for by another mental disorder (e.g., dissatisfaction with body shape and size in Anorexia Nervosa).

Based on the above, a number of questions may be used for a diagnosis of BDD (Table 2). It should be noted that the diagnosis should be made after excluding organic pathology, the effects of drugs and alcohol, as well as other psychiatric disorders, such as those described in Differential Diagnoses, below.

### Differential Diagnoses:

A number of important differential diagnoses must be considered and excluded before a definitive diagnosis of BDD can be formulated. Organic pathology and effects of drugs/alcohol must not be forgotten, and features of the following psychiatric conditions should be specifically sought, remembering that the presentation may be complicated by comorbidity:

- **Obsessive-compulsive disorder:** patients may have extensive and excessive con-

cern with contamination, cleanliness or injury.

- **Affective disorders:** negative cognition regarding personal appearance may be manifest.
- **Anxiety disorders:** especially social phobia, which may result in marked avoidance of social situations. In social phobia without BDD, the fear of negative evaluation is confined to areas of competence.
- **Delusional and psychotic disorders:** delusions may be related to specific body parts or functions; in rare and severe cases, patients may exhibit features of, for example, Cotard syndrome (possible hypochondriacal delusions) or Koro (belief that external genitalia are being retracted inside the abdomen).
- **Adjustment disorders:** especially in the context of a disfiguring physical condition with a comorbid affective component.
- **Hypochondriasis:** possible increased checking behavior in the context of fear of having a serious illness.
- **Psychogenic excoriation:** may result from excessive concern about one's physical appearance.
- **Eating disorders:** Anorexia nervosa, bulimia nervosa and some eating disorders not otherwise specified (EDNOS) are associated with disturbances in body image.

**Table 2**  
**Suggested Screening Questions**  
**for the Diagnosis of BDD**

1. Do you think a lot about your appearance? What features are you unhappy with? Do you feel your features are ugly or unattractive?
2. How noticeable do you think your features are to other people?
3. On an average day, how many hours do you spend thinking about your feature(s)? Please add up all the time that your features are on your mind and make the best estimate.
4. Do your features currently cause you a lot of distress?
5. How many times a day do you usually check your features? (Include looking in a mirror or other reflective surface, such a shop window, or feeling it with your fingers.)
6. How often do you feel anxious about your features in social situations? Does it/do they lead you to avoid social situations?
7. Have your feature(s) had an effect on dating or an existing relationship?
8. Have your features interfered with your ability to work or study, or your role as a homemaker?

### Management

There are a number of management strategies for BDD, although the mainstays of treatment are Cognitive Behavioral Therapy and the use of SSRIs. Physical treatments involving dermatological or cosmetic surgery are rarely appropriate, and usually result in poor outcomes.<sup>41</sup> To date there are no definitive studies comparing pharmacological treatment with CBT or any combination of the two.

### Cognitive-Behavioral Therapy:

**Research has demonstrated in two RCTs that cognitive-behavior therapy is an effective treatment for BDD.**<sup>19,42</sup> There are also case series,<sup>43</sup> reviews<sup>9,44</sup> and national guidelines (such as the UK NICE [United Kingdom National Institute for Clinical Excellence] guidelines—[www.nice.org.uk/CG031](http://www.nice.org.uk/CG031)) supporting the use of CBT as the main therapeutic modality in BDD. A cognitive-behavioral model of BDD is based on the process of selective attention in front of the mirror, where there is an increased depth of attention on certain features. Patients are told that it is like having a magnifying mirror for certain features and losing their normal, “rose-tinted” spectacles. The issue here is to validate their experience of being more aesthetically sensitive and having an enhanced sense of reality. When they are not in front of the mirror, attention is excessively self-focused on imagery from an observer perspective (e.g., “*I have to know what I look like*”). The “felt” body image becomes fused with reality and this activates idealised values about the importance of appearance in defining the self and assumptions about appearance (“*If I am defective, life is not worth living*”). The person experiences a negative appraisal of their ugliness (e.g., “*I’ll be alone all my life*”). This then begins a process of rumination, self-attacking, and comparing their particular feature or features to others. They then use various safety behaviors to avoid situations, distract attention away from, camouflage or otherwise alter these features, which then need monitoring (e.g., checking in mirror) in a vicious circle. CBT thus involves a formulation of the factors that maintain the symptoms, behavioral experiments, and cognitive challenges on the helpfulness of processes such as ruminations.

### Pharmacotherapy:

Two randomized clinical trials suggest benefits of SSRIs in the treatment of BDD.<sup>45,46</sup> A trial by Phillips et al.<sup>46</sup> monitored 74 individuals and found that *fluoxetine* (Prozac) at doses between 40 mg and 80 mg was significantly better than placebo following eight weeks of treatment based on decreases in YBOCS scores

from baseline. The presence of delusions did not appear to make any difference in response to fluoxetine, and the effect was not affected by comorbid depression or OCD. In a double-blind randomised control trial conducted by Hollander et al.<sup>45</sup> the efficacy of *clomipramine* (Anafranil) and *desipramine* (Norpramin) were compared in 40 individuals. Reduction in symptom severity was greater for clomipramine as measured using changes in *Yale-Brown Obsessive-Compulsive Scale* (YBOCS) scores, and was not affected by comorbid social anxiety, depression, or OCD.

Neuroleptic augmentation is not indicated in BDD<sup>47</sup> (see also UK NICE Guidelines, 2005, [www.nice.org.uk/CG031](http://www.nice.org.uk/CG031)). While an older case series<sup>48</sup> found some response to *pimozide* (Orap) in a mixed group of patients with delusional disorder, a subsequent RCT found no benefit from pimozide augmentation of fluoxetine, even in patients with delusional disorder.<sup>47</sup>

The UK NICE has published clinical guidelines for the treatment of BDD ([www.nice.org.uk/CG031](http://www.nice.org.uk/CG031)), which depend on the level of functional impairment of the individual. In mild impairment, CBT with Exposure-Response Prevention may be considered, with more intensive CBT or an SSRI suggested for moderate impairment. In severe impairment, a combination of CBT and an SSRI is suggested. Treatment-resistant strategies include an alternative SSRI or *clomipramine* (Anafranil); combining clomipramine and *citalopram* (Celexa); or augmentation with *bupirone* (Buspar). CBT is often best done by a specialist multi-disciplinary team with expertise in BDD.

### Conclusions

BDD is a complex and often under-diagnosed psychiatric disorder that presents challenges to the clinician in terms of its presentation, assessment and treatment. Diagnosis may be optimized using specific screening questions and an appropriate rating scale. At present, CBT and SSRIs in high doses are the most beneficial treatments.

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