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REVIEW

Body dysmorphic disorder

D Veale

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Body dysmorphic disorder (BDD) is defined as a preoccupation with an “imagined” defect in one’s appearance. Alternatively, where there is a slight physical anomaly, then the person’s concern is markedly excessive. The preoccupation is associated with many time consuming rituals such as mirror gazing or constant comparing. BDD patients have a distorted body image, which may be associated with bullying or abuse during childhood or adolescence. Such patients have a poor quality of life, are socially isolated, depressed, and at high risk of committing suicide. They often have needless dermatological treatment and cosmetic surgery. The condition is easily trivialised and stigmatised. There is evidence for the benefit of cognitive behaviour therapy and selective serotonin reuptake inhibitors in high doses for at least 12 weeks, as in the treatment of obsessive-compulsive disorder. There is no evidence of any benefit of antipsychotic drugs or other forms of psychotherapy.

powder his nose, put away the mirror, and a moment later begin the process anew”.

There is frequent comorbidity in BDD, especially for depression, social phobia, and obsessive-compulsive disorder (OCD).^{4–6} There is heterogeneity in the presentation of BDD, from individuals with borderline personality disorder and self harming behaviours to those with muscle dysmorphia,⁷ who are less handicapped. All BDD sufferers are preoccupied with the notion that a feature of their appearance, or often more than one, is unattractive, ugly, or deformed. Any part of the body may be involved, though the preoccupation most commonly centres on skin, hair, or facial features—eyes, eyelids, nose, lips or mouth, jaw or chin. The preoccupation is often focused on several parts of the body simultaneously.⁸ The typical complaint involves flaws on the face (whether perceived or actual), asymmetry, body features felt to be out of proportion, incipient baldness, acne, wrinkles, vascular markings, scars, or extremes of complexion, ruddiness or pallor. While some complaints are specific in the extreme, others are vague or amount to no more than a general perception of ugliness. The nature of the preoccupation may change over time, and this may explain why, after cosmetic surgery, the patient’s focus may shift to another area of the body.

Beliefs about defects in appearance usually carry strong personal meanings. A belief that his nose was too big caused one patient to feel that he would end up alone and unloved and that he might look like a crook. Another, excessively aware of the flaws in her skin, found them disgusting and thought of her skin as “dirty”. Patients such as these tend to have little if any insight.⁹ On the contrary, they are likely to display delusions of reference, believing that the people around them notice their “defect” and evaluate them negatively or humiliate them as a consequence of their ugliness.

A further aspect of BDD is the time consuming behaviours adopted by sufferers to examine the “defect” repeatedly or to disguise or improve it. Examples include gazing into the mirror to compare particular features with those of others, excessive grooming, which can be quite deleterious especially where the skin is concerned, camouflaging the “defect” with clothes or make-up, skin picking, reassurance seeking, dieting, and pursuing dermatological treatment or cosmetic surgery.

Body dysmorphic disorder (BDD), previously known as dysmorphophobia*, is a mental disorder characterised by preoccupation with an imagined defect in one’s appearance. Alternatively there may be a minor physical abnormality, but the concern is regarded as grossly excessive. While this element is at the heart of the condition, other factors must also be present for diagnosis: significant distress or handicap in relation to the ability to work or interact socially is essential.¹ One of Freud’s patients² who was subsequently analysed by Brunswick³ was known as the “Wolf Man” and was preoccupied with imagined defects on his nose. Brunswick wrote “He neglected his daily life and work because he was engrossed, to the exclusion of all else to the state of his nose. On the street he looked at himself in every shop window; he carried a pocket mirror, which he took out at every few minutes. First he would powder his nose; a moment later he would inspect it and remove the powder. He would then examine the pores, to see if they were enlarging, to catch the hole, as it were in its moment of growth and development. Then he would again

*An Italian psychiatrist, Morselli, coined the term dysmorphophobia in 1886, but it is used less often nowadays probably because ICD-10 (World Health Organisation 1992 2244/id) has subsumed it under hypochondriacal disorder.

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Abbreviations: BDD, body dysmorphic disorder; OCD, obsessive-compulsive disorder; SSRI, selective serotonin reuptake inhibitor

COSMETIC SURGERY OR DERMATOLOGICAL TREATMENT

Veale *et al* reported that, in a series of 50 BDD patients seen in a psychiatric clinic in the UK, 26% had managed to obtain one or more cosmetic operations, but no outcome data were collected.⁶ There are two retrospective surveys that have reported the outcome of cosmetic surgery in BDD patients seen in a psychiatric clinic. Phillips *et al* reported the outcomes of 58 BDD patients seeking cosmetic surgery.¹⁰ A large majority (82.6%) reported that symptoms of BDD were the same or worse after cosmetic surgery. Veale reported 25 BDD patients in a psychiatric clinic in the UK who had had a total of 46 procedures.¹¹ Repeated surgery tended to lead to increasing dissatisfaction. Some operations, such as rhinoplasty, appear to be associated with higher degrees of dissatisfaction. Mammoplasty and pinnaplasty tended to have relatively higher satisfaction ratings. These operations tend to be unambiguous in that the patient can usually describe the problem that concerns them and their desired outcome, and the cosmetic surgeon can understand their expectations. Most of the patients in the study had multiple concerns about their appearance and, after 50% of the procedures, reported that the preoccupation and other symptoms of BDD transferred to another area of the body. When patients were dissatisfied with their operation, they often felt guilty or angry with themselves or the surgeon at having made their appearance worse, thus further fuelling their depression at a failure to achieve their ideal. This in turn tended to increase mirror gazing and a craving for more surgery. The main weakness of studies in psychiatric clinics is that the data is retrospective, and there will be a selection bias of patients in favour of treatment failures. Mental health practitioners are unlikely to be consulted if patients are satisfied with their cosmetic surgery and their symptoms of BDD improve.

BDD is not uncommon in cosmetic surgery clinics. Studies have found that between 5% and 15% of patients in cosmetic surgery clinics have BDD,^{12–13} and an incidence of 14% was reported from a dermatology clinic in the USA.¹⁴

The major unanswered questions are what predicts satisfaction with cosmetic surgery and can patients with mild BDD be satisfied? In the absence of prospective data, a recent study examined the differences between 23 individuals without BDD in a cosmetic surgery clinic who were satisfied with their rhinoplasties and 16 patients in a psychiatric clinic diagnosed with BDD.¹⁵ The BDD patients were selected because they craved rhinoplasty but for various reasons had not obtained it—for example they could not afford it or had a fear of the operation failing.

The BDD patients were significantly younger than the rhinoplasty patients, but there was no significant difference in sex. As expected, the BDD patients had greater psychological morbidity than the rhinoplasty patients. The BDD patients had higher scores on the Yale-Brown obsessive-compulsive scale modified for BDD¹⁶ and for anxiety and depression on the hospital anxiety and depression scales.¹⁷ The mean scores of the BDD patients were all in the clinical range, while those of the rhinoplasty patients were not. BDD patients were more distressed and reported much greater interference in their social and occupational functioning and in intimate relationships because of their nose. They were more socially anxious and more likely to avoid situations because of their nose. They were more likely to check their nose in mirrors or to feel it with their fingers. BDD patients were more likely to believe that cosmetic surgery would significantly change their life (for example help them to obtain a new partner or job). BDD patients were significantly more likely to be dissatisfied with other areas of their body. They were likely to have attempted “DIY” surgery in the past.

(Examples of “DIY” surgery included using a pair of pliers in an attempt to make the nose thinner, using Sellotape to flatten the nose, and placing tissue up one side of the nose to try to make it looked more curved.) In summary, BDD patients who desire cosmetic rhinoplasty are a quite different population from those patients who obtain routine cosmetic rhinoplasty. A number of clues from this study could be used in the development of a short screening questionnaire or structured interview to help cosmetic surgeons to identify individuals with BDD who are unsuitable for cosmetic surgery. The diagnosis of BDD may not, by itself, be a contraindication to surgery, and additional factors such as an unrealistic psychosocial outcome may be more important.

Table 1 summarises some of the key issues to explore with patients who are being assessed for cosmetic surgery. However good the interview, patients may be economical with the truth, and, even when a surgeon identifies possible symptoms of BDD, the patient may not agree to a referral to a mental health practitioner and may merely take themselves to another surgeon. More research, in the form of a prospective outcome study, is required into identifying BDD patients and when, if ever, cosmetic surgery is indicated in BDD.

BDD is associated with a high rate of depression and suicide and with “DIY” cosmetic surgery,¹¹ and, in comparison with all other body image disorders, these patients are the most distressed and handicapped by their condition. Phillips *et al* used a quality of life measure and found a degree of distress worse than that of depression, diabetes, or bipolar disorder.¹⁸ Almost all patients with BDD suffer social handicap, avoiding social situations where they may feel self conscious or that may lead to dating or intimacy. Strategies for enduring such situations include the use of alcohol, illegal substances, or safety behaviours similar to those seen in social phobia. BDD can disrupt study and employment. It very often deprives patients of friends and the freedom to come and go—they may become effectively housebound. All these factors can and frequently do lead to discord within the family if other members cannot empathise with the sufferer’s situation.

DEMOGRAPHICS

The prevalence of BDD in the community has been reported as 0.7% in two studies,^{19–20} with a higher prevalence of milder cases in adolescents and young adults.²¹ Most surveys of BDD patients attending a psychiatric clinic tend to show an equal sex incidence, and sufferers are usually single or separated and unemployed.^{6–8, 22} It is possible that, in the community, more women are affected overall, with a greater proportion experiencing milder symptoms. No cross cultural studies in

Table 1 Issues to explore during assessment for cosmetic surgery

1. How noticeable do you think your feature(s) is to other people?
2. Have your family or friends discouraged you from having a cosmetic procedure?
3. When you describe what it is that you dislike about your feature(s) to others (family, friends), do you feel they understand exactly what you mean?
4. What is your main motivation for altering your feature?
5. To what degree do you believe that having a cosmetic procedure will improve your social life?
6. To what degree do you believe that having a cosmetic procedure will improve dating or an existing intimate relationship?
7. To what degree do you believe that having a cosmetic procedure will improve your ability to work or study?
8. To what extent are you also worried about other areas of your body?
9. Have you ever tried to alter the appearance of your feature(s) by yourself?

BDD have been done except for a small survey of German and American students.²³ However, case studies suggest that the clinical presentation of BDD is similar across all cultures. Some cultures may, however, place more emphasis on the importance of appearance, resulting in higher rates of BDD and cosmetic surgery.

PRESENTATION

Although the age of onset of BDD is during adolescence, patients are most likely to present to cosmetic surgeons, dermatologists, ear, nose, and throat surgeons, or their GPs. They are usually not formally diagnosed by mental health professionals until 10–15 years after the onset.^{6, 24} BDD may also present in children with symptoms of refusing to attend school and planning suicide.²⁵ BDD patients generally feel misunderstood and are secretive about their symptoms because they think they will be viewed as vain or narcissistic. They may indeed be stigmatised by health professionals who view only true disfigurement as worthy of their attention or who confuse BDD with body dissatisfaction.²⁶ Therefore, when they do present to health professionals, patients are more likely to complain of depression or social anxiety unless they are specifically questioned about symptoms of BDD. Table 2 lists suitable screening questions to make the diagnosis. Even when BDD is finally diagnosed, patients are often treated inappropriately with antipsychotic medication²⁷ or by a therapist who has little experience in treating BDD patients or lacks an effective treatment model. There is, therefore, an unmet need for the diagnosis and effective treatment of BDD. However, promising results have been obtained by cognitive behaviour therapy and the use of serotonin reuptake inhibitors, which will be discussed below.

RISK FACTORS

As yet, only limited data are available on risk factors for the development of BDD. The research agenda is to distinguish between risk factors that are specific to BDD and those that predispose to other disorders. Various risk factors are hypothesised for the development of BDD.²⁸ These include:

- A genetic predisposition.
- Shyness, perfectionism, or an anxious temperament, which may be partly genetically determined.
- Childhood adversity, such as teasing or bullying (about either appearance or competence), poor peer relationships, social isolation, lack of support in the family, or sexual abuse, which all may be non-specific factors.
- A history of dermatological or other physical stigmata (for example, acne) as an adolescent, since resolved.

Table 2 Screening questions for the diagnosis of BDD

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

- Being more aesthetically sensitive than average. This results in a greater emotional response to more attractive individuals and places a greater value on the importance of appearance in their identity. Alternatively, some BDD patients may have greater aesthetic perceptual skills, manifested in their education or training in art and design.^{29–31}

The onset of BDD is in adolescence, and, therefore, particular attention will need to be given in research to risk factors preceding the onset. For example, teasing about appearance is commonplace among children, yet comparatively few go on to develop BDD. One aim of future research is to determine which factors (or combination of factors) predict future persistence of extreme self consciousness so that interventions may be devised for those at risk. BDD is greatly under-researched compared with other body image disorders, such as eating disorders, and is only now beginning to attract interest. Many of the suggested risk factors remain speculative.

A cognitive behavioural model has been described that emphasises the maintenance of symptoms.^{28, 29} It is proposed that the cycle begins when an external representation of the person's appearance (for example, looking in a mirror) activates a distorted mental image. The process of selective attention increases awareness of the image and of specific features within the image. The image is used to construct how the person looks in the mirror and provides information about how he or she appears to others. The evidence for imagery in BDD so far comes from a descriptive study that compared 18 BDD patients with 18 healthy controls using a semistructured interview and questionnaires.³² BDD patients and controls were equally likely to experience spontaneous images of their appearance. However BDD patients were likely to rate the images as significantly more negative, recurrent, and vivid than normal controls. Images in BDD patients were more distorted, and the "defective" features took up a greater proportion of the whole image. They typically reported visual images, which were sometimes associated with other sensations (for example, organic sensations of hunger or fatigue). Of particular significance is that the images were more likely to be viewed from an observer perspective than from a field perspective, similar to a finding in social phobia.³³ An observer perspective consists of the individual looking at himself or herself from another person's perspective. A field perspective consists of an individual looking out from their own body.

It is proposed that activation of imagery is associated with an increased self focused attention directed towards specific features of an image, leading to a heightened awareness and a relative magnification of certain aspects, which contributes to the development of a distorted body image. The next step in the model is the negative appraisal and aesthetic judgment of the image, by the activation of assumptions and values about the importance of appearance. In BDD, appearance has become overidentified with the self and at the centre of a "personal domain".³⁴ Typical assumptions include "if I am unattractive, then life is not worth living", "if I am defective, then I will be alone all my life", or "I can only do something when I feel comfortable about my appearance".⁶ The preoccupation is maintained by various safety or submissive behaviours, such as mirror checking or camouflaging to reduce scrutiny by others or to enhance appearance. However, these tend to increase the doubts and reinforce the behaviour in a further vicious circle.

COGNITIVE BEHAVIOUR THERAPY

The efficacy of cognitive behaviour therapy for BDD has recently been reviewed.³⁵ There are only two randomised

Questions (true (T)/false (F); answers at end of paper)

- (1) Which of the following statements are believed to be true of BDD?
 - A. Onset is usually in adolescence.
 - B. There is no comorbidity.
 - C. The prevalence rate is 0.7%.
 - D. There are more female than male sufferers.
- (2) What are the hypothesised risk factors for the development of BDD?
 - A. Genetic predisposition.
 - B. Childhood adversity, such as bullying and teasing.
 - C. Only (B).
 - D. None of the above.
- (3) Which medications?
 - A. SSRIs.
 - B. Antipsychotic medication alone.
 - C. Only B.
 - D. Only A.
- (4) BDD may preferentially respond to a noradrenergic reuptake inhibitor (where there is equal efficacy in the treatment of depression) rather than a potent or selective serotonergic reuptake inhibitor.
- (5) BDD patients may experience distorted view images from an observer perspective rather than a field perspective.

controlled studies, both of which used a wait-list comparison group.^{29, 36} There are also case-control studies³⁷ and case series.³⁸ A randomised controlled trial is now required that compares later versions of cognitive behaviour therapy against an attentional control treatment with equal credibility and a selective serotonin reuptake inhibitor (SSRI). The key components of cognitive behaviour therapy are engagement and helping patients to develop a good psychological understanding of the factors that maintain BDD. This then leads to behavioural experiments or graded exposure tasks to situations or activities without the safety behaviours. Patients may require imagery rescripting for past traumas and cognitive restructuring for the idealised values they hold about the importance of appearance to the self. As in other chronic disorders, patients often find it helpful to attend a support group or join a national user group like OCD Action (Aberdeen Centre, 22–24 Highbury Grove, London N5 2EA, UK; telephone 020 7226 4000; www.ocdaction.org.uk).

PHARMACOTHERAPY

The neurobiology and the role of serotonin in BDD are also speculative. For example, there are case reports of the worsening of BDD with serotonin antagonists. Others have found impaired executive functioning, which implies frontostriatal dysfunction and an excessive input of anxiety. BDD is conceptualised as being on the spectrum of OCD, which may preferentially respond to a potent or selective serotonergic reuptake inhibitor rather than a noradrenergic reuptake inhibitor (where there is equal efficacy in the treatment of depression). There is evidence for the modest benefit of SSRI antidepressants in two randomised controlled trials.^{39, 40} Of note is that patients with and without a delusional disorder did equally well with an SSRI. There is no evidence for the benefit of antipsychotic medication alone in BDD. Before concluding that an SSRI is ineffective, the maximum tolerated dose must be taken for at least 12–16

weeks. Expert opinion may then advise adding a low dose of antipsychotic drug to an SSRI if there is a failure to respond to two or more SSRIs (similar to the treatment of OCD).⁴⁰

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ANSWERS

1. (A) T, (B) F, (C) T, (D) F; 2. (A) T, (B) T, (C) F, (D) F; 3. (A) T, (B) F, (C) F, (D) T; 4. F: BDD may preferentially respond to a potent or selective serotonergic reuptake inhibitor rather than a noradrenergic reuptake inhibitor (where there is equal efficacy in the treatment of depression); 5. T.