Body Dysmorphic Disorder (BDD)

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Body dysmorphic disorder (BDD) is a disabling illness with a high worldwide prevalence (Hong et al. 2018), yet the condition still remains under-recognized and under-diagnosed (Dyl et al. 2006). People suffering from BDD are concerned with minimal or non-existent defects, develop social avoidance and may become housebound or even suicidal (Helwick 2011; Veale et al. 1996a; Phillips et al. 2005; Phillips and Diaz 1997).

BDD is primarily a psychiatric health problem and patients usually consult dermatologists, plastic surgeons, other specialists or general practitioners, but not mental health specialists, as patients firmly believe that their disease is a physical problem (Philips 1996). Even when their problem is recognized as BDD, it is important to be aware that patients may be resistant to engage with mental health professionals and seek psychiatric help. Instead, they may simply consult other dermatologists or plastic surgeons in the battle to achieve the image of 'perfection'. However, once diagnosed, a holistic psycho-dermatological approach, focusing not only on the disease, but also on the patient's psychological, emotional, physical and social needs should be adopted.

Definition

According to DSM-5, the diagnosis of BDD require the following criteria to be fulfilled see Box 14.1 (American Psychiatric Association 2013).

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Box 14.1 DSM-5 Definition of Body Dysmorphic Disorder

DSM-5 Definition of Body Dysmorphic Disorder(American Psychiatric Association 2013)

A. *Preoccupation* with one or more perceived defects or flaws in physical appearance that are *not observable or appear slight to others*.
B. *At some point during the course of the disorder, the individual has performed repetitive behaviours* (e.g. mirror checking, excessive grooming, skin picking, reassurance seeking) or mental acts (e.g. comparing his or her appearance with that of others) in response to the appearance concerns.
C. The preoccupation causes clinically significant distress or impairment in social, occupational or other areas of functioning.
D. The appearance preoccupation is not better explained by concerns with body fat or weight in an individual whose symptoms meet diagnostic criteria for an eating disorder.

Prevalence

The prevalence of BDD varies in different studies, but all have found that a high percentage of patients with the disorder presented in aesthetic practices. According to previous studies, the prevalence in the general population is 1.7–2.4%, but in the setting of general dermatology and aesthetic practices, it can reach 7–20.3% (Haas et al. 2008; Phillips et al. 2000; Harth et al. 2009).

Veale et al. performed a systematic review and analyzed the weighted prevalence of body dysmorphic disorder in different settings see Table 14.1 (Veale et al. 2016).

A Systematic Review with Meta-Analysis performed by Ribeiro ascertained the prevalence of Body Dysmorphic Disorder in Plastic Surgery and Dermatology patients 15.04% and 12.65% respectively (Ribeiro 2017)

Aetiology and Pathophysiology

Despite its prevalence, the aetiology and pathogenesis of body dysmorphic disorder (BDD) has yet to be fully elucidated. According to the present understanding, various factors play a role in its complex pathological process (Fig. 14.1).

Neurobiological abnormalities are considered to be associated with certain symptoms of BDD. There is evidence that the susceptibility to BDD may be at least partially heritable and BDD might share genetic factors with other conditions from the group of obsessive-compulsive and related disorders. Studies analyzing visual processing among BDD patients found disturbances in visual perception and

Table 14.1 Presents an estimated weighted prevalence of Body dysmorphic disorder in different settings, by Veale et al. (2016) (modified by Dimitrov D)

Weighted prevalence of BDD in different settings	*n* (%) with BDD		
	Total	Female	Male
Adults in the community	13,773 (1.9%)	(2.1%)	(1.6%)
Adolescents in the community	464 (2.2%)	(2.8%)	(1.7%)
Student populations	3516 (3.3%)	(3.6%)	(2.2%)
Adult psychiatric inpatients	788 (7.4%)	(9.6%)	(5.6%)
Adolescent psychiatric inpatients	229 (7.4%)	(6.9%)	(3.5%)
Adult psychiatric outpatients	765 (5.8%)	(6.5%)	(4.6%)
General dermatology outpatient settings	914 (11.3%)	(13.4%)	(14.0%)
Cosmetic dermatology outpatients[a]	60 (9.2%)	–	–
General cosmetic surgery	2291 (13.2%)	(10.9%)	(15.3%)
Rhinoplasty	1001 (20.1%)	(16.7%)	(18.4%)
Orthognathic surgery	259 (11.2%)	(13.2%)	(8.0%)
Orthodontics/Cosmetic dentistry	480 (5.2%)	(7.9%)	(2.5%)
Vulvo-vaginal surgery	49 (18.4%)	(18.4%)	–
All cosmetic surgery and cosmetic dermatology settings[b]	(12.2%)		
Acne clinics[a]	32 (11.1%)	–	–
Female ballet dancers[c]	19 (10.5%)	–	–
Male weight lifters[c]	648 (10.6%)	–	–

[a]A weighted prevalence for males and females could not be calculated as only one study provided details on gender
[b]Estimated prevalence for all 23 cosmetic surgery settings
[c]As these were the only studies of this kind, weighted prevalence could not be calculated

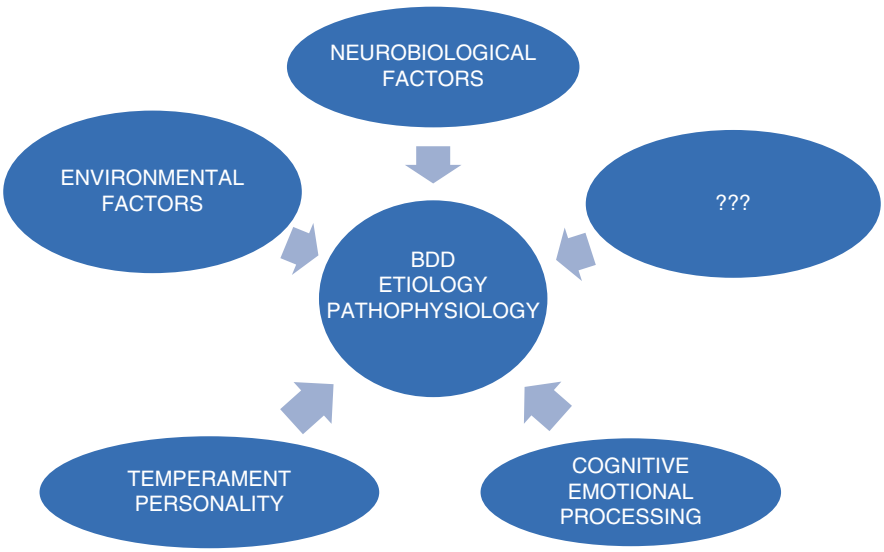

Fig. 14.1 Factors influencing the etio-pathophysiology of BDD

visuospatial information processing that contribute to the disorder's pathological deviation (McCurdy-McKinnon and Feusner 2017).

There is also evidence for a genetic component in the pathogenesis of BDD. A study analyzing the genetic influence among patients with OCD and BDD ascertained that the GABA (A)-gamma-2 1(A) allele was associated with BDD (Phillips 2017; Monzani et al. 2012).

Recent research suggested that environmental factors also play an important role among patients with BDD and may contribute to both, the development and maintenance of the disorder. Earlier experiences like abuse, bullying, maltreatment, together with current concerns about perfect physical appearance and the presence of certain personality traits, may all be important (Neziroglu and Barile 2017). We have personal clinical experience with a patient who developed BDD and suicidal ideation after she witnessed sexual abuse (Dimitrov et al. 2016).

Studies analyzing Cognitive and Emotional Processing in Body Dysmorphic Disorder patients have ascertained abnormalities in regards to information processing, emotion recognition, emotion deficits and selective processing of appearance-related information, as well as dysfunction of beliefs about one's own appearance (Buhlmann and Hartmann 2017).

Neuroimaging research has developed a working neurobiological model of BDD pathophysiology, Neuroimaging studies confirmed changes among patients with BDD. Functional magnetic resonance imaging studies demonstrated differences between patients with BDD and control subjects in several regions within the lateral-temporal-parietal cortices upon exposure to low spatial frequency images (Hong et al. 2018).

Key Clinical Features

The fundamental issue with BDD is that the patient is obsessively and distressingly preoccupied with a real (often objectively trivial) or an imagined defect in his/her appearance. The main body areas of patient concern are the face and facial features, skin, but also breasts, genitals and buttocks. Patients can present signs of this disorder at any age, but in most patients the symptoms begin in adolescence and even childhood. Most patients with BDD spend considerable amounts of time in self-reflective, time-consuming and unproductive rumination. Ritualistic behaviours such as mirror checking are common, as are camouflage, covering 'defects' and ideas of reference (some patients believe that others have noticed their 'defect' and are acting on that knowledge). Affected individuals often need constant reassurance from others, but still continue repeatedly to seek dermatologic or cosmetic referral for correction of the 'defect' (Phillips et al. 2006).

Co-morbidities such as social avoidance, depression, anxiety, poor quality of life and suicidal ideation are common with a lifetime prevalence of 24–28% for suicide attempts (Helwick 2011; Veale et al. 1996a; Phillips et al. 2005; Phillips and Diaz 1997). In an observational study of 200 people with BDD, followed up for almost 5

years, the rate of completed suicide was 22–36 times higher than the general population (Helwick 2011).

Violent behavior toward practitioners can also become a possibility. For example, 2% of BDD patients threaten their practitioners and surgeons physically and at least two cosmetic surgeons have been murdered by patients with BDD (Crerand et al. 2006).

According to one survey, 12% of plastic surgeons said that they had been threatened physically by a dissatisfied BDD patient (Sarwer 2002).

The key clinical features are briefly presented in Box 14.2.

Box 14.2 Key Clinical Features

Preoccupied with an imagined or real objectively trivial defect in his/her appearance
Considerable amounts of time in self-reflective, time-consuming and unproductive rumination
Ritualistic behaviours
Ideas of reference
Need constant reassurance
Seek dermatologic/cosmetic/aesthetic referral for correction of the 'defect'
Social avoidance, depression, anxiety
Poor quality of life
Suicidality
Violent behavior toward practitioners

It is of paramount importance, especially for those practicing in various surgical and non-surgical aesthetic services, to recognize patients with BDD for the reasons presented in Box 14.3.

Box 14.3 Reasons for Recognizing Patients with BDD

1. The prime pathology is psychological rather than physical (Helwick 2011).
2. Psychosocial co-morbidities and suicidal ideation are common (Phillips et al. 2005).
3. Patients with BDD are rarely satisfied with the results of their aesthetic procedures (Veale et al. 1996a; Crerand et al. 2006).
4. Patients quite often become litigious after 'failure' to resolve their 'defect' (Francis 2012).
5. Special attention should be paid to the problem with informed consent in BDD patients undergoing plastic/aesthetic surgery/dermatological procedures. The question that practitioners should address is: **do the patients with BDD have full capacity to give a truly informed consent for cosmetic procedures? (Millard and Millard 2010).**

Techniques for Addressing the Diagnosis of BDD with Patients

Once the diagnosis of BDD has been established, sympathetically discussing this with the patient is crucial, however, it is important to still acknowledge that there is a visible difference in their appearance (if there really is one). Dismissing the concern, trying to reassure the patient that they look fine, or telling them that they should not worry is usually ineffective. Do not argue about the diagnosis; listen carefully and with sympathy to the patient's story but allow enough time for discussion. One technique is to ask the patient to allocate a severity score for their 'defect', (this is usually 10 out of 10 for most patients), and then compare that with your own assessment of the severity of the 'defect' (which can be considerably less than the patient's numeric severity assessment). A discussion about the 'gap' between the patient's and the practitioner's assessment can then be a way to open the discussion about the diagnosis of BDD.

Assessment and Use of Screening Instruments

Recognition of the condition might be achieved with proper screening by well-established and validated instruments in the form of questionnaires.

There are a number of tools available from various organizations that are presented in Table 14.2.

In busy clinical practices, the following questionnaire can be a quick and helpful tool to help you gauge whether a patient may be suffering from BDD: Ahmed (2019). See Table 14.3.

Body Dysmorphic Disorder should be suspected if the patient answers Yes to Question 1; if the answer to Question 2 is (b) or (c); answers Yes to Question 3 and Yes to any part of Question 4.

The following is a more detailed screening questionnaire for BDD patients with skin concerns (Baldock and Veale 2014). See Table 14.4.

Table 14.2 Body Dysmorphic Disorder screening instruments

Body Dysmorphic Disorder screening instrument	References
The Cosmetic Procedure Screening Questionnaire (COPS)	Veale et al. (2011)
The Body Dysmorphic Disorder Questionnaire (BDDQ)	Body Dysmorphic Disorder Foundation (n.d.)
The Yale-Brown Obsessive-Compulsive Scale Modified for Body Dysmorphic Disorder (BDD-YBOCS)	Phillips et al. (1997)
Body Dysmorphic Disorder, NICE Guidance	National Collaborating Centre for Mental Health (2006)
Body Dysmorphic Disorder, Five Questions Psychiatric Evaluation for Cosmetic Procedure by Veale	Veale (2001)

Table 14.3 Screening questions for BDD

# Questions	Answer
1. Are you worried about how you look? (Yes/No); if you are, do you think about your appearance problems a lot and wish you could think about them less?	Yes/No
2. How much time per day, on average, do you spend thinking about how you look?	(a) Less than 1 h a day (b) 1–3 h a day (c) More than 3 h a day
3. Is your main concern with how you look that you are not thin enough or that you might become too fat?	Yes/No
4. How has this problem with how you look affected your life?	
(a) Has it often upset you a lot?	Yes/No
(b) Has it often gotten in the way of doing things with friends, your family or dating?	Yes/No
(c) Has it caused you any problems with school or work?	Yes/No
(d) Are there things you avoid because of how you look?	Yes/No

Table 14.4 Screening questions for BDD with skin concerns

Do you currently think a lot about your skin?
On an average day, how many hours do you spend thinking about your skin? Please add up all the time that your feature is on your mind and make your best estimate.
Do you feel your skin is ugly or very unattractive?
How noticeable do you think your skin is?
Does your skin currently cause you a lot of distress?
How many times a day do you usually check your skin, either in a mirror or by feeling it with your fingers?
How often do you feel anxious about your skin in social situations? Does it lead to you avoiding social situations?
Has your skin had an effect on dating or on existing relationship?
Has your skin interfered with your ability to work or study, or your role as a homemaker?

Differential Diagnosis

The correct diagnosis is crucial for the outcome of the treatment. If the disorder is misdiagnosed, the patient will receive inadequate care resulting in no improvement, progress of the condition and disappointment from the health provider and the health system in general.

Conditions, commonly mistakenly diagnosed as BDD are presented in Box 14.4 (Phillips n.d.).

Box 14.4 Common Misdiagnoses of BDD
BDD is commonly misdiagnosed as one of the following disorders:

- *Obsessive-Compulsive Disorder*
- *Social anxiety disorder (social phobia)*
- *Major depressive disorder*
- *Trichotillomania (hair-pulling disorder)*
- *Excoriation (skin-picking disorder)*
- *Agoraphobia*
- *Generalized anxiety disorder*
- *Schizophrenia and schizoaffective disorder*
- *Olfactory reference syndrome*
- *Eating disorder*
- *Dysmorphic concern*

Referral

Referral to a mental healthcare specialist or a psycho-dermatology clinic may be necessary for the management of BDD. The role of a dermatologist, surgeon or practitioner is to prepare the patient for potential psychiatric help. Without necessary preparation, the patient will usually refuse to seek psychiatric treatment and may continue their journey with other doctors. Discussing the distress caused by their concerns may help patients to understand the need for mental health referral. The patient should be informed that this is a recognized problem and there is a successful treatment, however, some may not be ready during the first consultation to accept that idea. Do not force the patients; allow them enough time; keep a good professional relationship and ask if they would like to come again. Referral to local or regional psycho-dermatology clinics may be easily accepted by the patient as they may feel more comfortable to be seen in a dermatology clinic by a dermatologist and psychiatrist. Some patients may not want other people to know that they need psychiatric help and may feel ashamed to be seen in a psychiatric department. One helpful approach, in the absence of psycho-dermatology clinic, might be offering the patient a telephone consultation with a psychiatrist during the dermatology consultation (Dimitrov and Elsabbahy 2013).

Practice Point
The patient should be informed that this is a recognized problem and there is successful treatment, however some may not be ready during the first consultation to accept that idea.

Treatment

The treatments of choice in BDD are cognitive behavioural therapy (CBT) and serotonin specific reuptake inhibitor (SSRI) medication.

Cognitive behavioural therapy (CBT) is an evidence-based psychotherapeutic method for BDD. Self-focused attention can be reduced, as can rumination, the need for reassurance, social avoidance and other symptoms. It facilitates patients' true understanding of their problem and aids the development of helpful coping strategies (Singh and Veale 2019).

The National Institute for Health and Clinical Excellence (UK) guidelines recommend CBT for patients with BDD, suggesting a protocol with16–24 sessions (National Collaborating Centre for Mental Health 2006).

Four small randomized controlled trials of CBT have demonstrated its efficacy (Rabiei et al. 2012; Rosen et al. 1995; Veale et al. 1996b; Wilhelm et al. 2014).

A study comparing CBT for BDD with anxiety management found that CBT was significantly superior, not only in reducing symptom severities, but also improving both quality of life and level of insight (Veale et al. 2014).

An internet-based CBT programme (BDD-NET) was found to be superior to internet supportive therapy (Enander et al. 2016).

The biggest BDD therapy study, and also the first to compare Cognitive Behavioural Therapy versus Supportive Psychotherapy for adults with Body Dysmorphic Disorder, analyzed the efficacy and posttreatment effects of both therapeutic methods. More consistent improvements in symptom severity and quality of life were found in those treated with CBT (Wilhelm et al. 2019).

Medical research has proven the benefit of serotonin reuptake inhibitors as well. Three randomized controlled trials have proven the benefit of SSRIs for patients with BDD. Fluoxetine was found to be significantly more effective than a placebo in improving the symptoms of BDD sufferers (Phillips et al. 2002).

Clomipramine was found to be more efficacious than the non-SSRI antidepressant desipramine for BDD symptoms, depressive symptoms and functional disability (Hollander et al. 1999).

Another study analyzed the effect of switching to a placebo or continued on escitalopram for a further 6 months, with BDD patients who had already responded to escitalopram (Phillips et al. 2016). The researchers ascertained that the time to relapse was longer and the rates of relapse were less for those who continued on escitalopram (18% versus 40%).

An open-label trial of fluvoxamine, citalopram and escitalopram demonstrated that these medications improved BDD as well as the associated symptoms in 63%–83% of patients (Perugi et al. 1996; Phillips et al. 1998; Phillips and Najjar 2003; Phillips 2006).

There is no established guideline in regards to the dosage of SSRI in BDD patients. The clinical experts recommended higher doses in comparison to those in depression. Some patients may require a dose above the maximum licenced one (Phillips 2004).

Both cognitive behavioural therapy (CBT) and serotonin reuptake inhibitor (SSRI) medications have been proven in their efficacy for the treatment of BDD. Whether one of them is better than the other is not known, since no randomized controlled studies have directly compared them (Singh and Veale 2019).

Despite its prevalence and recent development in medical science, BDD still remains under-recognized and under-diagnosed. Proper education of health care providers in all specialties and levels of the various medical services might help the sufferers to be identified and referred accordingly. Early recognition is of paramount importance to prevent further progress of the disease and to improve the quality of life of the patients and their families.

Patients with severe problems should have continuing access to multidisciplinary teams with specialist expertise in BDD.

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