## Assessing body dysmorphic disorder and eating disorders in cosmetic procedure populations

he effects of the COVID-19 pandemic have rippled across country borders, throughout the world's economy and in medical care systems. Specifically, the pandemic has significantly affected the mental health of individuals across the globe. According to the National Institute of Health, 96.2% of patients admitted for hospitalisation due to coronavirus reported high levels of post-traumatic stress symptoms (PTSS) compared to the general public, with 7%. The same researchers also found that, among healthcare workers, depression/depressive symptoms, anxiety, psychological distress and poor sleep quality increased significantly (Vindegaard and Benros, 2020). These symptoms are attributed to the high amounts of stress that healthcare and frontline workers are forced to confront at work on a daily basis. Research and data on the mental health of the general population are not as strong, but those with existing psychiatric conditions have reported that fears of getting sick and the inability to go outside have made their conditions worse (Lee, 2020).

Some of the hardest hit mental health populations include those with eating disorders and body dysmorphic disorder (BDD). The purpose of this article is to outline the most important aspects of BDD and eating disorders and to explore the impact of the COVID-19 pandemic on these disorders and the precautions that medical aesthetic practitioners should take to assess patients for these conditions before agreeing to modifying their physical appearance.

#### Defining body dysmorphic disorder

According to the fifth edition of the Diagnostic and Statistical Manual for Mental Disorders



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(DSM-V) (2013), BDD is classified under obsessivecompulsive and related disorders and requires four diagnostic criteria: first, there must be a significant preoccupation with one or more perceived flaws or defects in an individual's physical appearance, which results in performing repetitive behaviours or mental acts to placate these fears. As a result of these thoughts and compulsions, the individual will experience high levels of distress and impairment to their daily lives. Finally, the preoccupations are not better explained by concerns about body weight or fat, which may be more attributable to an eating disorder. Some of the most common areas of interest for individuals with BDD are areas of the face (for example, eves, ears or nose) and hair (Figure 1). The focus of these obsessions can vary from size concerns to perceived asymmetry, especially in the face, chest or genitalia. It should be noted that, while BDD is present across the gender spectrum, muscle dysmorphia occurs almost exclusively in male patients (American Psychiatric Association (APA), 2013). Muscle dysmorphia is a form of BDD in which a patient is preoccupied with having a muscular body or worries that their body is too lean. People with this form of BDD may spend an inordinate amount of time exercising, dieting or taking anabolic steroids to increase muscle mass.

Aside from muscle dysmorphia, the DSM-V (2013) also asks to specify the level of insight an individual has regarding their own behaviour and thoughts. There are three levels: with good or fair insight, with poor insight and with absent insight/delusional beliefs.

#### **Defining eating disorders**

Eating disorders are defined by the DSM-V (2013) as disorders that are 'characterised by a persistent disturbance of eating or eating-related behaviour that results in the altered consumption or absorption of food', resulting in impaired physical and mental health. For the purposes of this article, four types of eating disorders will be detailed and defined: bulimia nervosa, anorexia nervosa, binge eating disorder (BED) and avoidant/restrictive food intake disorder. The two eating disorders that will not be discussed are pica (the ingestion of nonfood substances) and rumination disorder (repeated regurgitation of food over a certain period of time). This is because



Figure 1. Some of the most common areas of interest for individuals with BDD are areas of the face and hair

both of the latter disorders are usually attributed to neurodevelopmental disorders or underlying medical conditions, rather than a misperception of body image or anxiety due to compulsive/impulsive behaviours, such as vomiting or avoiding food.

#### Bulimia nervosa

Bulimia nervosa, commonly referred to as simply bulimia, has four diagnostic criteria: recurrent episodes of binge-eating; equally recurrent inappropriate compensatory behaviour to prevent weight gain (for example, self-induced vomiting, misuse of laxatives, fasting and excessive exercise); each of the previous behaviours must occur for at least once a week for three months on average; and the self-evaluation coming from the individual is influenced by body shape and weight. This is also what differentiates anorexia nervosa from bulimia, as the binging behaviour is followed by some type of purging activity. The specifiers ask for levels of remission and severity based on the initial assessment, which varies from mild to extreme (APA, 2013). This type of eating disorder develops during the early years of adolescence, which may be because adolescence is when children become more aware of their appearance according to others, as well as societal standards of beauty. Additionally, this disorder affects young girls more than it affects young boys, which suggests gender as a potential risk factor.

Anxiety and obsessive-compulsive disorders are often comorbid with eating disorders due to the distress associated and the strive for perfectionism A study by Ruffolo et al (2006), which investigated the prevalence of eating disorders among patients diagnosed with BDD, found that 6.5% of patients also had a comorbid lifetime diagnosis of bulimia compared to the 32.5% of patients diagnosed with a lifetime eating disorder (n=65). This suggests that bulimia and other types of eating disorders are fairly common among patients with BDD. In comparison, obsessivecompulsive disorder (OCD) is not significantly correlated with bulimia. In a study by Milos et al (2002), the researchers found that, even with an overall prevalence rate of 29.5% among patients with an eating disorder, the prevalence of OCD among both bulimia and anorexia patients did not show a significant difference (28.6% versus 30.1%). Although the research on this kind of information needs to be updated, clinicians and physicians should be aware of the prevalence and assess the patients accordingly.

#### Anorexia nervosa

Anorexia nervosa is perhaps the most well-known eating disorder due to its media attention and prevalence in adolescents. According to the DSM-V (2013), there are three important features of this disorder: persistent intake restrictions of energy sources; intense fear of gaining weight or becoming fat; and a disturbance in self-perceived weight or shape. Subtypes of anorexia may also include binging/ purging behaviour, but it is not to be confused with bulimia nervosa, as the former is seen as a way to maintain a minimally healthy weight, rather than being characterised by malnutrition. Other specifiers include levels of remission and severity based on body mass index (BMI). Some medical conditions are directly associated with anorexia, such as anaemia, sinus bradycardia and metabolic encephalopathy, and are considered diagnostic markers, which requires the presence of a physician in the treatment process. This needs early intervention before it becomes deadly, with an elevated suicide risk associated with the disorder, as well as death from starvation.

OCD is often prominent among individuals with anorexia nervosa. According to a study by Kaye et al (2004), approximately two-thirds of individuals with an eating disorder, such as anorexia, also had one or more lifetime anxiety disorders. This is consistent with previous research and information from the DSM-V, which states that early forms of obsessive behaviours can often be a predictor for anorexic behaviour later on in childhood development. In the same study, out of 741 individuals with eating disorders, 97 participants had anorexia (13%), 282 participants had bulimia (38%), 293 participants had both bulimia and anorexia (39%) and 69 participants had an eating disorder not otherwise specified or avoidant/restrictive food intake disorder (9%) (Kaye et al, 2004). The most common anxiety disorder found among this population was OCD, with 40% of all participants. In another study, conducted by Ruffolo et al (2006), those who were diagnosed with BDD and another type of lifetime eating disorder accounted for 32.5% overall and 9% of participants were diagnosed with anorexia. The prevalence of these disorders in combination with anorexia nervosa can complicate treatment and requires an all-encompassing treatment plan.

#### Binge eating disorder

BED is characterised by four criteria in the DSM-V (2013). First, the patient experiences recurrent episodes of binge eating, which are defined as eating an abnormal amount of food within a 2-hour period, accompanied by a sense of lack of control over their appetite. The second criterion describes five more aspects of a binge eating episode: eating more quickly than usual; eating until uncomfortably full; eating large amounts of food when not hungry; eating alone because of the shame associated with binge eating; and intense feelings of disgust, guilt and depression after an episode. As a result of these episodes, the patient will feel marked distress over their behaviour and their self-esteem will drop. The final criterion is that the behaviour is not associated with the act of purging, as in bulimia, or occur during the course of bulimia or anorexia. As a result of the binge eating episodes, the patient may become overweight or obese in severe or extreme cases. Specifiers, as with all previous eating disorders, include level of severity and levels of remission.

Unfortunately, there is little research on the comorbidity rate of BED with OCD and BDD. Future studies should include patients with BED when investigating the prevalence of eating disorders among patients with BDD and OCD.

#### Avoidant/restrictive food intake disorder

This final type of eating disorder is simply defined as 'an eating or feeding disturbance ... as manifested by [a] persistent failure to meet appropriate nutritional and/or energy needs' (APA, 2013). This disorder is diagnosed in the absence of any other explainable conditions, such as a medical condition, another specified eating disorder and lack of available food or by a culturally sanctioned practice (for example, Ramadan or Lent). What distinguishes this disorder from the aforementioned ones is that the restrictive and avoidant behavior is not otherwise specified and is attributed to something other than a fear of gaining weight or body image distortion. Some of the associated features of avoidant/restrictive food intake disorder include avoidance of solid foods, inability to participate in social activities such as eating with others and the inability to sustain relationships based on this behaviour. Most of these features have also been associated with developmental disorders, as patients may develop these symptoms as early as infancy or early childhood. Due to this distinction, the clinical and research community called for stronger definitions of avoidant/restrictive food intake disorder and presented the modified and more inclusive definition in the DSM-V (Fisher et al, 2014).

As is the case with BED, there is little research on the comorbidity rate of avoidant/restrictive food intake disorder with OCD and BDD. Future studies should include patients with this disorder when investigating the prevalence of eating disorders among patients with BDD and OCD.

#### Impact of the COVID-19 pandemic

The COVID-19 pandemic has had a rippling effect through multiple facets of everyday life. In terms of mental health, COVID-19 has caused everyone significant amounts of stress and fear. Between the paranoia of contracting the disease to the disparities in the health system and the weakening of nations' economies, it is understandable to see a significant toll on one's state of mind. According to a study conducted by Kontoangelos et al (2020), researchers found significant increases in mental health disorders, such



Figure 2. The global usage of virtual platforms has contributed to increased feelings of dysmorphia and body insecurity

as depression, post-traumatic stress disorder (PTSD), anxiety disorders and substance use disorders among the general population. It has also been found that healthcare workers (for example, nurses and doctors) are experiencing high levels of stress and traumatic injury due to the trauma of watching patients die from coronavirus. As a result of this, people have been seeking treatment for mental health disorders at elevated rates, although the disparities in the healthcare system have made it difficult to find the right therapist, or even one who is available. In this section, how the pandemic has affected those with BDD and eating disorders, such as bulimia nervosa, anorexia and binge eating disorder, will be considered.

#### Body dysmorphic disorder and COVID-19

Although researchers are aware of the increase in anxiety and depression among the general population, it is difficult to say how the COVID-19 pandemic has specifically impacted on those with BDD. Psychologists and other mental health professionals are currently unable to meet in person, unless it is medically necessary, and, even then, the amount of contact between the patient and clinician is dramatically reduced and both parties are required to wear face masks. It is theorised that, while the isolation is damaging to mental health (Cullen et al, 2020), those with BDD may find relief in the use of face masks in public and incorporate it as a camouflaging behaviour. As with those with eating disorders who may wear baggy clothing to hide their weight loss, those with BDD may wear clothing that hides the most concerning aspect of their appearance (for example, wearing a hat or scarf to hide facial features).

The global usage of virtual platforms, such as Zoom and Skype, has also contributed to increased feelings of dysmorphia and body insecurity (Figure 2). According to an article by Rice et al (2020), a recent analysis of Google search terms has shown that terms such as 'acne' and 'hair loss' have increased within the past year. Before the use of these virtual platforms, patients used editing software on certain applications to alter their appearance and even use the filters as a guideline for desired outcomes of elective cosmetic procedures. This has been nicknamed 'Snapchat dysmorphia' after the aforementioned social networking platform, based on the exchange of selfies and other forms of photography and video. Even before the pandemic, social networking sites, such as Facebook and Instagram, increased the use of photo-editing software used to alter an individual's personal appearance. For patients with BDD, the effects of these applications and social networking sites can increase feelings of dysmorphia and body dissatisfaction.

#### Eating disorders and COVID-19

As with BDD, research on the effect of the COVID-19 pandemic on eating disorders is limited. However,

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> preliminary research and clinical speculation based on the effects of the pandemic on mental health in general suggest a similar effect for those with eating disorders. An article by Touyz et al (2020) theorises that the phenomena of panic buying at the beginning of the pandemic in March 2020 may have further complicated peoples' relationship with food. Doctors and researchers advised the world to quarantine as soon as they could to prevent the spread of COVID-19, as it was not clear exactly how it was being spread, which resulted in bulking up on household supplies, medical masks and food. The effect of social isolation in quarantine has been theorised to negatively affect those with anorexia nervosa, as they would already be emotionally and physically isolated from others. The medical nature of eating disorders is also a complicating factor, as those who are not experiencing symptoms of COVID-19 were discouraged from visiting hospitals and medical centres for fear of contracting the disease while interacting with patients and medical personnel. As a result of these concerns, clinics have tried to make the shift towards telehealth, with some positive outcomes. However, like most therapies, it is the most efficacious when performed in person and requires herd immunity from nationwide vaccinations to reopen the clinics. This decrease in treatment can cause inordinate amounts of stress and relapse in psychiatric patients.

> Another preliminary study evaluating eating disorders during the pandemic by Fernández-Aranda et al (2020) has addressed family concerns as a factor in the treatment of anorexia nervosa through qualitative analysis of family and carer online group chats. They identified four common themes that came up in these discussions: connecting in isolation; helping others versus helping oneself; the challenges of reduced professional support; and balancing the needs of the individual with the eating disorder within the family. The increased use of online video calls and social networking sites, such as Facebook and Instagram, left patients feeling uneasy and increased their awareness of their physical form. Some found it useful to connect with online support groups and others struggling with anorexia, while others were triggered by these types of communication (Fernández-Aranda et al, 2020).

> Carers have encouraged patients to keep in touch with family, friends and support groups during quarantine, but many patients found that helping

others while they themselves are struggling could be overwhelming and self-care activities were discussed. As previously mentioned, the challenge of reduced professional support was a prominent issue among the patients, as many feared an increase in symptoms. In many cases, the professional care was replaced by family members and carers who may have been living with the patients, which introduced the final theme of the study. Family members and carers became more involved in emotional support and learned multiple coping strategies to introduce to their loved ones, which helped patients keep up aspects of treatment (Fernández-Aranda et al, 2020). With regard to other types of eating disorders, researchers and clinicians should think more about how to involve family members and carers in the process of treatment and how this could be applied during public health crises.

#### Informing medical aesthetic practitioners

Medical cosmetic procedures were temporarily halted during the pandemic, but, due to higher rates of vaccinations and easing of lockdown in the UK, clinics have reopened and are back in full swing. In the UK, medical aesthetic practitioners reported a 70% increase in virtual consultations compared to the US, which reported a 64% rise in virtual consultations (Meeson, 2020). Psychologists theorise that this is due to the 'Zoom Boom': the sharp increase and worldwide use of video calling services, such as Zoom and Skype. As people are spending more time looking at a camera, while also looking at other people, it has raised concerns in the general population about physical appearance and how to modify flaws, as well as more people being comfortable with visiting medical clinics again (Gelidan et al, 2020). Among BDD patients, it is theorised that approximately 10% will seek out some form of cosmetic treatment or procedure, whereas patients with anorexia nervosa, bulimia or binge eating disorder are prevalent in up to 2% of cosmetic or bariatric procedures (Joseph et al, 2017; D'Souza et al, 2020). Despite this prevalence and the increase in patients applying for body-altering procedures, medical practitioners often miss the signs of eating disorders and BDD through their screening process, which leads to more patients having numerous procedures to alter their appearance and feeling unsatisfied.

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This situation begs the question: how can cosmetic and bariatric practitioners be informed about body dysmorphia and eating disorders? An article by Greenberg et al (2019) describes a brief guide for medical practitioners to identify these disorders in potential candidates for cosmetic procedures. They suggest using the Body Dysmorphic Disorder Questionnaire (BDDQ), which is a strong and accurate scale that clinicians use in mental health evaluations and studies. If they test positive, it is suggested that medical practitioners ask follow-up questions, such as detailing a history of psychiatric disorders and gauging the patient's expectation for the outcome of the procedure. The patient should then be referred to a mental healthcare facility or clinician who specialises in the treatment of BDD. For eating disorders, questions from the Eating Disorder Examination Questionnaire can be used to assess for binge eating disorder, anorexia and bulimia during a consultation appointment or before as a screening tool. According to a study by D'Souza et al (2020), these questions were used to assess patients who were considering either cosmetic or bariatric procedures, and the researchers found that patients with either an eating disorder or a lifetime history of binge eating disorder and bulimia nervosa were more likely to consider either surgery process. Screening for these disorders can not only save the medical practitioner time and resources, but it could also save patients' lives.

#### **Key points**

- Body dysmorphic disorder (BDD) falls on the obsessive-compulsive disorder spectrum and is characterised by perceptual distortions, especially on certain parts of physical appearance
- Binge eating disorder, bulimia nervosa and anorexia nervosa are all types of eating disorders that have a similar association with BDD, in that patients have trouble perceiving their physical appearance objectively and without judgement
- The increased use of social media has played a role in exacerbating symptoms of anxiety, depression and/or dysmorphia that occur alongside BDD and eating disorders
- Potential candidates for aesthetic procedures should be screened for BDD and eating disorders to prevent further damage to mental health and the preservation of time and resources
- Aesthetic doctors and nurses should be aware of the stigma of mental illness and take it into consideration during practice.

#### **CPD** questions

- What are some of the other social factors that contribute to the severity of body dysmorphic disorder and eating disorders?
- What can health professionals do to support patients with these disorders in the clinic and the field of medicine?
- What are some ways that health professionals can combat stigma against mental illness in the medical field?

### Importance of awareness and stigma reduction

The COVID-19 pandemic has exposed enormous gaps in the healthcare system, especially in regard to mental health. With patients staying at home and falling back into their compulsions, it stands to say that mental healthcare must be worked on and improved if society is to recover from the pandemic. According to a study on university students in the US, the closure and evacuation of campuses left students feeling abandoned, frustrated and betrayed by the institutions that promised to house and feed them (Zhai and Du, 2020). Health professionals are feeling similar sentiments in the wake of several waves of cases. As a result, there have been significant increases in reports of depression, anxiety and sleep disturbance among health professionals (Li et al, 2020). Among the general public, social isolation has continued to negatively impact on mental health, even with the increased use of video calling and social media.

To combat these issues, several things must be done. First, mental healthcare must be established as a fundamental part of the healthcare system globally, because it is as important as the treatment of physical medical conditions. In acknowledging this, it helps people to validate their own experiences, encourages them to seek out care for their issues and makes it affordable as a part of standard healthcare plans. Second, medical professionals should be trained in certain aspects of mental health, as it pertains to their area of expertise, which would reduce unnecessary treatments and surgeries in favour of the proper help that people need. Training medical aesthetic practitioners and surgeons to recognise eating disorders and body dysmorphia is part of this plan. Finally, continuing to provide educative materials to the public on the nature of disorders to raise awareness and acceptance is crucial.

#### Conclusion

BDD and eating disorders are prominent in patients seeking cosmetic treatments. In educating and increasing awareness of these disorders among medical aesthetic practitioners and surgeons, patients can be steered in the correct direction toward proper treatment. Research into incorporating these

protective measures for cosmetic treatment patients should continue, as well as researching the impact of psychoeducation for medical professionals. For more information on BDD and related disorders, please visit hope4ocd.com or the International OCD Foundation's website at iocdf.org.

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