# The Importance of Aesthetics in Body Dysmorphic Disorder

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## ABSTRACT

*It is hypothesized that body dysmorphic disorder (BDD) patients are firstly more "aesthetical," an attribute much like being musical, which varies between different individuals. This results in a greater emotional response to more attractive individuals and placing greater value on the importance of appearance in their identity compared with healthy individuals. Some BDD patients may have greater aesthetic perceptual skills. This is manifested in their education or training in art and design. Secondly, BDD patients may have higher aesthetic standards than the rest of the population. Their failure to achieve an unrealistic aesthetic standard is at the core of BDD, leading to severe distress and handicap.*

CNS Spectrums *2002;7(6):429-431*


## INTRODUCTION

Body dysmorphic disorder (BDD) is characterized by an individual's excessive preoccupation with an imagined or slight defect in appearance that causes significant distress or impairment in functioning.[1] It is hypothesized that aesthetics may play a role in the development and maintenance of BDD. Interestingly, the only catchment area survey for BDD, which found a 1-year prevalence of 0.7%, was conducted in Florence, Italy, a city renowned for its art and beauty.[2] However, there is limited research on the psychology of beauty and aesthetic perception outside of body weight and shape. Perhaps, it has been neglected because aesthetic perception is regarded as too subjective ("Beauty is in the eye of the beholder") and often defined by the consensus of a group of self-selected experts or a particular culture. Nevertheless, it seems that there are some universal rules about beauty (especially at the extreme ends of attractiveness) as well as individual or cultural variations.

## DEFINING PHYSICAL ATTRACTIVENESS

Recent evidence suggests that perceptions of physical attractiveness may have a biological basis that includes a preference for symmetry, averageness, and the exaggeration of secondary sexual characteristics.[3,4]

One feature of attractiveness is bilateral symmetry and the size of secondary sexual characteristics. Darwinian theories of beauty predict that sexual selection favors those traits that advertise healthy genes and resistance to infections, thus ensuring reproductive capacity.[5] There is evidence that animals[6] and humans[7] seek symmetry perhaps because it advertises biological quality and serves to attract individuals resistant to both developmental disruptions and infections.

According to Langlois and Roggman,[8] averageness predicts attractiveness. Symons[9] argues that averageness is attractive because natural selection has a stabilizing effect on facial features so that average traits are functionally optimal (eg, an average-sized nose is best for breathing). Therefore, averageness is associated with a good phenotypic condition. However, average faces may not be optimally attractive because many attractive features are non-average, such as exaggerated secondary sexual facial characteristics (eg, eyes, lips, chin, cheekbones).

The sizes of secondary sexual facial characteristics that develop during puberty are also important in ratings of attractiveness.[10] Enlarged jaws, chins, and cheekbones are examples of secondary sexual traits that are enlarged by testosterone during puberty in men. The largeness of these features are considered by women as sexually attractive, perhaps because they advertise a strong immune system. Female attractiveness is correlated with the opposite—tiny lower faces, big lips, and a slender lower jaw.[11] Rhodes and colleagues[12] found that exaggerated female traits were attractive in both female faces and male faces, corroborating similar findings by Perrett and colleagues.[13] The results of Rhodes and colleagues and Perrett and colleagues are particulary significant because there is stronger evidence that the sizes of secondary sexual facial characteristics advertise health and immunocomptence in males more than females.[14]

The research presented so far to define facial beauty derives from a biological perspective. There is some limited evidence indicating that social and cultural factors may also play important roles in influencing body-image standards. However, the research to date has focused on the negative impact media exposure has on disordered eating and body weight,[15] as opposed to facial attractiveness. It is therefore unclear whether such factors play a significant role in determining standards of facial beauty.

## IMPORTANCE OF PHYSICAL ATTRACTIVENESS

Although the physical cues that determine physical attractiveness have proved difficult to specify, the assertion that physical attractiveness has important interpersonal and social advantages has been consistently shown. Attractiveness appears to confer a reproductive advantage (rather than a survival advantage). There appears to be no evidence to suggest

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a survival advantage of being physical attractive. Several studies have demonstrated the benefits of being attractive (or not being ugly). For example, for students assigned to a blind date, only one factor predicted satisfaction with their date—their physical attractiveness.[16] In addition, social psychologists have repeatedly demonstrated that people are susceptible to the "what is beautiful is good" stereotype, responding more positively to more attractive individuals than less attractive individuals. Mental acuity, interpersonal skills, employability, and moral goodness are all associated with beautiful individuals.[17,18] Conversely, a negative stereotype prevails for the physically unattractive.[19] For instance, jurors were found to set greater fines for less attractive defendants.[20] Therefore, people value beauty because it may confer other qualities that have no physical markers. Evolutionary psychology might argue that because attractiveness is important for reproduction and social acceptance, then some individuals will idealize the importance of attractiveness for survival and it will be a factor in the development of BDD.

## *SYMMETRY AND OBSESSIVE-COMPULSIVE DISORDER*

One feature of attractiveness is symmetry. The need for symmetry and precision in objects or activities is a recognized symptom in obsessive-compulsive disorder (OCD), usually associated with ordering, hoarding, repeating, and counting compulsions.[21] The symptoms in BDD are very similar to Janet's[22] description of OCD patients who were tormented by an inner sense of imperfection and felt that their actions were never completely achieved to their satisfaction. In some BDD patients, the need for symmetry and order may be focused on appearance rather than an object or activity. Occasionally, this is an overt symptom of the patient who complains of a lack of symmetry in some aspect of their appearance. Alternatively, patients are unable to articulate their need for symmetry to a clinician but it may be possible to demonstrate empirically in an experimental setting.

## *AESTHETICALITY AND BDD*

The discussion about attractiveness and beauty leads to a number of possible factors in the etiology of BDD. The first is that they are more aesthetically sensitive than the rest of the population.[23] It could be that BDD patients are more aware of subtle differences in facial asymmetry, the size of secondary sexual facial characteristics, or are better at evaluating harmony and balance in appearance. This is linked to the concept of "aestheticality," as proposed by Harris.[24] He has argued that individuals seeking cosmetic surgery are more aesthetically sensitive (an attribute much like being musical) and that aesthetic sensitivity may have two components, one being an emotional response and the other related to perception.

## *AESTHETIC EMOTIONAL SENSITIVITY*

Harris suggests that a consequence of increased aestheticality is that an individual reacts with greater emotional response to beauty or ugliness. We add that emotional response is related to idealized values about the degree of importance that one attaches to attractiveness and the degree of identification of these values with the self.[24] In this regard, threats to the self are likely to be associated with increased emotional response. Therefore, one would predict that BDD patients value attractiveness more than the rest of the population. Wilhelm[26] found that BDD patients rated attractive faces as more attractive compared with normal controls and OCD patients. Interestingly, one might predict that BDD patients would be more averse to unattractive faces but there was no difference between BDD and OCD patients and healthy controls in their rating of neutral and unattractive faces.

By definition, BDD patients will rate their own faces as less attractive compared with the rating of the rest of the population. When rating their own face or body (ie, when viewing oneself in a mirror) a patient's emotional response may be a mixture of disgust and depression at the failure to achieve an aesthetic standard and anxiety about the future consequences of being ugly. The emotional response is crucial to our understanding of BDD, as patients will often only "face the world" or terminate behaviors, such as mirror-checking, when the BDD patient feels "comfortable" or "just right" (similar to compulsions observed in OCD patients).

## *AESTHETIC PERCEPTUAL SKILLS*

One hypothesis proposes that BDD patients, or others seeking cosmetic surgery (or their surgeons), are superior at appreciating art and beauty than the rest of the population. Although an objective measure of aesthetic perception is required to test this hypothesis, the "gold standard" of aesthetic perception is usually a composite rating by a group of artists for works of art or cosmetic surgeons for the human form; hence, the measure is subjective. One cosmetic surgeon[27] has tried to define beauty mathematically by developing a facemask based on the golden proportion. He uses the mask to assist him prior to performing cosmetic surgery, but it is difficult to validate.

Another component of aesthetic sensitivity may be indirectly related to the patients' interests or skills in art and design. We hypothesized that BDD patients were more likely to have had an education or occupation in art and design than the three comparative groups of psychiatric patients.[28] We extracted data on the higher education, training or occupation from the case notes of 100 consecutive patients with BDD and compared them with 100 consecutive patients with a major depressive episode, 100 consecutive patients with OCD, and 100 consecutive patients with posttraumatic stress disorder. We found that 20% of the BDD patients had an education or occupation in art or design compared with 4% in the depressed group, 3% in the OCD group, and 0% in the posttraumatic stress disorder group. This was highly statistically significant ($\chi^2$=38.6, $df$=3, $P$<.001). The differences between the BDD group and the three comparative groups were relatively large and the rate in the three comparative groups were similar. These results from our retrospective study suggest that the association between an occupation or education in art and design

and BDD was relatively robust and therefore deserves further investigation in a prospective study. However, we do not have any evidence for a causal relationship between BDD and an occupation or education in art and design.

The onset of BDD is usually gradual during adolescence and an interest in art and design may be a contributory factor to the development of the disorder in some patients. Patients might develop a more critical eye and appreciation of aesthetics, which is then applied to their own appearance. An equally plausible explanation is that subjects have a selection bias for an interest in aesthetics. It seems linked to the overwhelming urge that BDD patients have to alter their appearance. Reshaping or changing one's appearance becomes the "project" and when patients do seek help they are more likely to consult a dermatologist or cosmetic surgeon. For example, Sarwer and colleagues[29] found that 5% of women presenting at a cosmetic surgery clinic in the United States had BDD. The association with aesthetics and BDD raises an interesting question about the definition of BDD as a preoccupation with an imagined defect or a minor physical anomaly that is grossly excessive. Perhaps BDD patients simply have higher aesthetic standards than the mental health professionals who diagnose them and who are unable to appreciate art and beauty to the same degree.

## HIGHER AESTHETIC STANDARDS IN BDD

It is hypothesized that BDD patients set themselves unrealistic aesthetic standards that are impossible to achieve. We have explored this with the role of the self-discrepancy theory.[30] Our research suggests that BDD patients are predominantly disturbed by a failure to achieve an internal aesthetic standard rather than not achieving the ideals of others. Therefore, they are more like depressed patients (who fail to achieve their ideal attributes or experience internal shame) than social phobic or bulimic patients (who experience external shame and are more concerned with the avoidance of punishment by the perceived demands of others). However, the situation is complex, as some BDD patients are more like social phobic patients (and in our experience easier to treat—a similar situation exists in eating disorders, where patients with bulimia tend to be easier to treat than patients with anorexia).

## CONCLUSION

We have proposed the following hypotheses as contributory factors to the development or maintenance of BDD:

a) BDD patients have a greater aesthetic emotional response to more attractive but not less attractive individuals;
b) BDD patients may have greater aesthetic perceptual skills, which are manifested in their education or training in art and design;
c) BDD patients have a distorted body image, which is a complex interaction of affective, cognitive, and somatosensory components (not just an image);
d) BDD patients have higher aesthetic standards than the rest of the population. This is manifested by the marked discrepancy between how patients see themselves and how they would ideally like to be or think they should be.

As yet, there is only limited empirical evidence for these hypotheses, but this is likely to increase over the next few years. CNS

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