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Clinical Application of a Behavioral Model for the Treatment of Body Dysmorphic Disorder

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Body dysmorphic disorder (BDD) is characterized by an obsessive concern over a perceived flaw in bodily appearance. If a minor flaw does exist, the patient displays unwarranted distress. This preoccupation typically leads to compulsive behaviors, such as mirror checking or mirror avoiding, camouflaging, and seeking reassurance from others regarding one's appearance or the perceived "flaw." Although some theorists have outlined important maintaining mechanisms of the disorder, a full model of the etiology and maintenance of this disorder has only recently been articulated in the literature (Neziroglu, Roberts, & Yaryura-Tobias, (2004). A behavioral model for body dysmorphic disorder. Psychiatric Annals, 34, 915–920.). The aim of the present article is to review this model and demonstrate its application to the successful treatment of BDD via a case presentation.

Body dysmorphic disorder (BDD) is characterized by an excessive, exaggerated preoccupation with a perceived flaw in bodily appearance that is either imagined or minimal. This preoccupation typically leads to compulsive/safety-seeking behaviors, such as mirror checking/avoiding, camouflaging, and seeking reassurance from others regarding one's appearance or the perceived "flaw." BDD can be particularly detrimental in that individuals with BDD report a high level of distress and dysfunction; typically avoid school, work, and social activities; and often become housebound. They also have an alarmingly high suicide attempt rate (27.5%; Phillips et al., 2005), which highlights the severity of the disorder and the subjective distress often felt by individuals with BDD.

BDD was first recognized in the literature in 1891 (Morselli, 2001), but was not included in the *Diagnostic and Statistical Manual of Mental Disorders* until 1987. Since that time, much research has been undertaken to better understand this complicated disorder. Community prevalence rates are presently undetermined; however, preliminary studies demonstrate prevalence rates of BDD to vary from 0.7% (Faravelli, Salvatori, Galassi, & Aiazzi, 1997) to 13% (Biby, 1998). A particularly high prevalence rate of 12% is reported in dermatology clinic settings (Phillips, Wilkel & Vittorio, 2000) and a high rate, ranging from 3% to 13.1%, is also reported in patients presenting with anxiety or depression in mental health settings (Grant, Won Kim, & Crow, 2001; Nierenberg et al., 2002; Zimmerman & Mattia, 1998). Because BDD is still an underdiagnosed disorder, the rates of prevalence may be higher than current figures. A 1:1 male-to-female ratio is reported (Neziroglu & Yaryura-Tobias, 1993a,b; Phillips, 1991).

Three models of BDD have been proposed to date: the self as an aesthetic object (Veale, 2004); a neurobiological model (Rauch, Whalen, & Dougherty, 1998); and a conditioning behavioral model (Neziroglu, 2004; Neziroglu, Roberts, & Yaryura-Tobias, 2004). The aim of the present article is to illustrate how the theoretical conditioning behavioral model of the development and maintenance of BDD, as explicated by Neziroglu et al. (2004), may be utilized to formulate treatment strategies. A case illustration is provided to demonstrate how treatment is administered. See Figure 1 for a diagram of the two-factor conditioning model (Neziroglu et al., 2004).

Biological Predisposition

The model begins with the premise that some individuals are genetically predisposed to develop a disorder of a particular class in times of stress. Individuals may be predisposed to develop a single class of disorders or be multidisposed to develop several classes of

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Continuing Education Quiz located on p. 247.

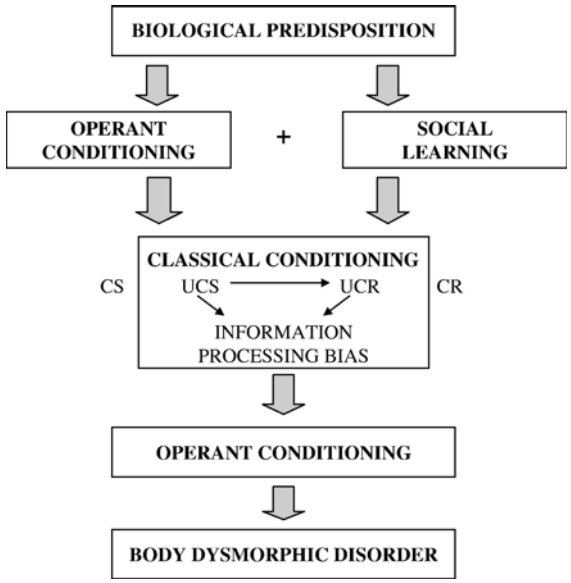

Figure 1. Two factor conditioning model of body dysmorphic disorder.

disorders. This is in keeping with the diathesis-stress model regarding mental disorders in general.

Early Operant Conditioning

The operant conditioning aspect of the model at this stage may or may not be present. Early reinforcement history and social learning were reported to play a role in the development of BDD (Neziroglu et al., 2004) but also purported not to be absolutely necessary.

Childhood Reinforcement History

Individuals with BDD may have experienced intermittent positive reinforcement about their appearance during childhood. Positive reinforcement may have taken the form of highlighting and calling attention to their appearance and repeated usage of appearance-based descriptive labels such as "cute," "adorable," "handsome," and "pretty." Also, it is suggested that there might have been more emphasis on the individual's appearance to the exclusion of his or her behavior (e.g., "You stood up so straight while playing your violin and were the cutest one there" rather than "You did such a good job playing your violin"). This early reinforcement history may instill in the child a belief that one's worth and sense of identity must be most closely associated with one's appearance. As this belief is reinforced through the individual's childhood, it becomes a strongly held basic overvalued belief.

Social and/or Vicarious Learning

A child's own personal learning experiences can be further reinforced by social and/or vicarious learning experiences. One may either develop or strengthen a set of beliefs based on learning how others are rewarded for their appearance. Thus, the connection between self-worth and physical attractiveness is further reinforced by both (a) specific observed experiences where attractive individuals have positive experiences and (b) the general experience of society's overvaluation of physical attractiveness.

Symptom Development: Classical Conditioning

Research demonstrates that in a westernized society BDD typically develops during adolescence (Neziroglu & Yaryura-Tobias, 1993a,b; Phillips et al., 1993; Rosen, Reiter, & Orosan, 1995). The fact that BDD often develops at the peak of adolescence is not surprising. Adolescence is a time when puberty occurs, secondary sexual characteristics develop, acne and other bodily changes present themselves, and the individual becomes more aware of one's body and others' responses to it. Adolescence, as a time of natural body changes, also involves a natural information processing bias to personalize and hyperfocus on one's own body. These new experiences, compounded with an earlier learning history about the importance of physical appearance, gives rise to a set of beliefs about the role of attractiveness in one's own life and in society in general.

Classical conditioning may explain how BDD develops (Neziroglu et al., 2004). Common adolescent experience such as pubertal changes, the development of acne, and being teased or abused (Neziroglu, Khemlani-Patel, & Yaryura-Tobias, 2006) serve as unconditioned stimuli (US) that appear to lead to unconditioned negative emotional responses (UR) such as disgust, shame, anxiety, and depression. These unconditioned responses may become conditioned to certain body parts [conditioned stimuli (CS)] that later on also elicit the same negative emotional states [conditioned responses (CR)]. Thus, for example, an individual who is teased about having skinny legs, a crooked nose, or large ears (US) will respond with shame, anxiety, or disgust (UR) and may eventually feel ashamed, anxious, or disgusted (CR) with those body parts (CS), even in the absence of teasing.

Information Processing Biases

Neziroglu et al. (2004) discuss that with the continued pairing of the US and the CS, the individual begins to develop a host of beliefs that are then applied to the CS. For example, if someone is abused and consequently experiences disgust with their sexual body parts (e.g., their breasts), disgust and shame will become conditioned to the breasts, with the individual thereby developing various beliefs around this conditioning. The individual may begin to look at her breasts and make assumptions such as, "My small breasts are very ugly looking." As time passes, further beliefs such as, "Only women with big breasts are desirable. No one will ever want me. As long as