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Do obsessional belief domains relate to body dysmorphic concerns in undergraduate students?

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ABSTRACT

Body dysmorphic disorder (BDD) is characterised by extreme pre-occupation with perceived deficits in physical appearance, and sufferers experience severe impairment in functioning. Previous research has demonstrated the overlap in clinical features between BDD and obsessive–compulsive disorder, yet research into the obsessional belief domains associated with BDD is limited. Research has also suggested that BDD patients are high in social anxiety and may endorse particular delusional beliefs. The current study examined cognitive vulnerability factors for body dysmorphic symptoms in a sample of 246 undergraduate students. Individuals higher in body dysmorphic symptoms reported higher social anxiety, delusional beliefs, and obsessive beliefs, including beliefs around the importance of thoughts and the importance of controlling thoughts, intolerance of uncertainty and perfectionism, and inflated responsibility and overestimation of threat. Among these relationships, only social anxiety, delusional beliefs, and importance of thoughts and controlling thoughts were uniquely associated with body dysmorphic symptoms in a multivariate model.

1. Introduction

Body dysmorphic disorder (BDD) is characterised by pre-occupation with perceived deficits in physical appearance, which the individual views as unattractive, abnormal or deformed (American Psychiatric Association, 2013). Very little is known about the aetiology or developmental pathways of BDD, but this disorder has drawn increasing research attention in recent years, partly due to its increasing presentation across specialist settings, outside of mental health care. For example, up to 12% of patients seen by dermatologists, and up to 15% of patients seeking cosmetic surgery meet the criteria for BDD (Thompson & Durrani, 2007). Furthermore, the seriousness of BDD is now widely accepted with evidence that this disorder is associated with profound impairment for sufferers (Phillips & Menard, 2006).

The inclusion of BDD as an obsessive–compulsive and related disorder in the fifth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5; American Psychiatric Association, 2013) reflects the overlap in clinical features between BDD and obsessive–compulsive disorder (OCD). Similarities between BDD and OCD include similar gender ratio, onset during adolescence, chronic course, similar response to selective serotonin reuptake inhibitors (SSRIs), and similar response to exposure with response prevention (Frare, Perugi, Ruffolo, & Toni, 2004; McKay et al., 1997b; Neziroglu & Yaryura-Tobias, 1993; Phillips et al., 2007; Phillips, Albertini, & Rasmussen, 2002; Soomro, Altman, Rajagopal, & Oakley-Browne, 2008; Stanley & Turner, 1995). Further, rates of comorbidity between the two disorders tend to be high (Gunstad & Phillips, 2003; Phillips, Menard, Fay, & Weisberg, 2005). Indeed, the preoccupation with appearance defects in BDD has been demonstrated to be as intrusive, repetitive, and difficult to control as the obsessions in OCD (Eisen, Phillips, Coles, & Rasmussen, 2004), and moreover, the accompanying repetitive behaviours, such as mirror checking, reassurance seeking, and skin picking, bear similarity to OCD compulsions (Phillips, McElroy, Hudson, & Pope, 1995). Due to the persistent nature of appearance-related thoughts in BDD, and the similarity with preoccupation and obsessionality within BDD and OCD, it may be that cognitive beliefs that play a central maintaining feature in the development and maintenance of obsessions, may also be relevant to BDD. Thus, similarly to OCD, obsessional belief domains may function as a driving mechanism underlying maladaptive BDD behaviours.

Among preliminary theoretical accounts of BDD, Neziroglu, Roberts, and Yaryura-Tobias (2004) put forth a cognitive behavioural (CB) model, where a biological predisposition, childhood reinforcement history, and symptom development through conditioning are included as influential factors in the development of BDD. Expanding this model, Buhlmann and Wilhelm (2004) proposed that perfectionism (Bulhmann, Etcoff, & Wilhelm, 2008), fear of negative evaluation (Wilhelm, Otto, Zucker, & Pollack, 1997), and adverse childhood experience, such as teasing and abuse (Veale et al., 1996) were

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additional risk factors for BDD development. In regards to maintenance factors within CB models, Veale (2004) proposed that BDD symptoms and distress are perpetuated via internal cognitive processes, including self-focused attention, negative appraisals of body image, and rumination. Thus, negative interpretive biases are argued to exacerbate distress and lead individuals with BDD to engage in ritualistic behaviours, seek reassurance, and avoid anxiety-triggering situations in an attempt to neutralise negative affect. In this way, and similarly to CB models of OCD, dysfunctional beliefs and interpretation biases are argued to play a central role, driving pathological avoidance and ritualising behaviours.

Research investigating possible transdiagnostic belief processes underlying both BDD and OCD is thus far limited. The Obsessive Compulsive Cognitions Working Group (1997) identified six obsessive belief domains implicated in the development and maintenance of OCD, which have been well supported by empirical investigation in both adults and youth with OCD. These include: (a) the over-importance of thoughts (i.e., beliefs that the mere occurrence of thoughts implies personal significance), (b) the importance of controlling one's thoughts (i.e., beliefs that one must control their thoughts), (c) intolerance of uncertainty (i.e., that it is necessary to be certain, and ambiguity is intolerable), (d) perfectionism (i.e., that imperfection cannot be tolerated), (e) inflated responsibility (i.e., the belief that one must prevent subjectively important negative events from occurring), and (f) overestimation of threat (i.e., exaggerated beliefs of severity and probability of threat). In CB theories of OCD (see Frost and Steketee, 2002), these beliefs are argued to occur in response to the experience of unwanted intrusive thoughts, which drive a preoccupation with the intrusions, and lead to increased fear or discomfort. A patient with OCD subsequently feels compelled to neutralise these intrusions and uncomfortable feelings via pathological avoidance and/or overt or covert compulsive rituals, such as checking or washing. To the authors' knowledge, the relationship between body dysmorphic symptoms and these six OCD-relevant belief domains has not yet been examined, despite the many arguments that BDD and OCD share many clinical similarities, and therefore, may share similar underlying cognitive mechanisms. Indeed, there is preliminary evidence to suggest BDD and OCD patients may share similar dysfunctional beliefs. Buhlmann et al. (2008) found that both BDD and OCD patients reported greater perfectionist beliefs than controls, but the two clinical groups did not differ from each other. Thus, it is possible that these important obsessive belief domains may be associated with the maintenance of body dysmorphic symptoms, such as they have been associated with OCD in both adults (e.g., Obsessive Compulsive Cognitions Working Group, 2001, 2005) and adolescents (e.g., Farrell, Waters & Zimmer-Gembeck, 2012).

While BDD and OCD share similarities in their clinical presentation and response to treatment, one construct upon which they might differ is insight. BDD patients have been found to have poorer insight (Eisen et al., 2004) and greater over-valued ideation (McKay, Neziroglu, & Yaryura-Tobias, 1997a) than OCD patients. That is, BDD patients have greater conviction that their beliefs are accurate and have poorer understanding of alternative views. Such lack of insight is thought to maintain the disorder and presents an additional treatment challenge. The DSM-5 accounts for the lack of insight in BDD patients by including categorical specifiers of “good or fair insight”, “poor insight”, and “absent insight/delusional beliefs” (American Psychiatric Association, 2013). In a study comparing 14 BDD patients with 14 healthy controls, Labuschange, Castle, Dunai, Kyrios, and Rossell (2010) found that BDD patients endorsed three times as many delusional beliefs than healthy age-matched controls on the Peters' Delusional Inventory (Peters, Joseph, Day, & Garety, 2004). The delusional beliefs of BDD patients in this study endorsed included somatic delusions (e.g., ‘Do you ever feel that people look at you oddly because of your appearance?’), delusions of reference (e.g., ‘Do you ever feel as if people seem to drop hints or say things with a double meaning?’), and grandiose delusions (e.g., ‘Do you ever feel that you are a very special or unusual person?’). The BDD patient group also rated these beliefs as significantly more frequent and distressing. This research suggests that individuals with BDD may hold a range of delusional beliefs, and that these beliefs can be particularly salient and preoccupying.

The aim of the current study was to extend the literature into the cognitive vulnerability factors associated with body dysmorphic symptoms by specifically examining the role of dysfunctional belief domains that are argued to be maintaining mechanisms of obsessionality in OCD. Given the overlap in clinical features between OCD and BDD, as well as the high comorbidity and recent reclassification of BDD as an obsessive–compulsive spectrum disorder in the DSM-5 (American Psychiatric Association, 2013), we examined the role of specific obsessive beliefs domains in uniquely predicting BDD symptom. This study used an Australian undergraduate university sample to examine unique associations among variables using regression analysis. University student populations have been found to have high rates of body dysmorphic concerns (Biby, 1998; Bohne et al., 2002). For example, Bartsch (2007) found that among 383 Australian university students, 62% reported they were concerned about their appearance, 30% reported they were preoccupied with their appearance, and 2.3% met the diagnostic criteria for BDD. The obsessive belief domains identified by the ObsessiveCompulsive Cognitions Working Group, (1997) have also been found to be present in student populations (e.g., Obsessive Compulsive Cognitions Working Group, 2005; Tolin, Woods, & Abramowitz, 2003). This suggests that both body dysmorphic symptoms and obsessive beliefs may be dimensional in nature rather than categorical, making student populations relevant for understanding relationships among these symptoms (see Abramowitz et al., 2014). Further, as BDD occurs in only 1–2% of the general population (Buhlmann et al., 2010; Koran, Abujaoude, Large, & Serpe, 2008; Rief, Buhlmann, Wilhelm, Borkenhagen, & Brähler, 2006), and is extremely secretive and underdiagnosed, large clinical studies are extremely difficult and costly to execute. Therefore, this analogue sample presents an important and appropriate step in developing and refining conceptual models, which can later be tested in clinical samples.

It was hypothesised that obsessional beliefs, including perfectionism and intolerance of uncertainty (*certainty*), over-responsibility and overestimation of threat (*vigilance*), and over-importance and control of thoughts (*thought control*), as well as delusional beliefs would each be positively associated with and would each uniquely predict greater body dysmorphic symptoms. Given the high association between social anxiety and BDD symptoms (Coles et al., 2006; Pinto & Phillips, 2005), and the slightly higher prevalence of BDD in younger adults and women relative to older adults and men (Buhlmann et al., 2010; Koran et al., 2008; Rief et al., 2006), social anxiety, gender, and age were included as additional covariates in this study.

2. Method

2.1. Participants

The participants were 246 first-year psychology students aged 17–42 years (M_{age}=21.13 years, SD=4.86). Seventy-four per cent of the students were female (M_{age}=21.07 years, SD=4.94), and 26% were male (M_{age}=21.29 years, SD=4.65). The majority of participants were Australian-born (79%), with English as their first spoken language (91%).

2.2. Measures

2.2.1. Body dysmorphic symptoms

The 10-item Appearance Anxiety Inventory (Veale et al., 2013) was used to measure body dysmorphic symptoms, including symptoms of preoccupation with appearance, mirror checking, avoidance behaviours, camouflaging, comparing one's appearance with others, and reassurance seeking. Participants rate each item on a