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Relative relationships of general shame and body shame with body dysmorphic phenomenology and psychosocial outcomes

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Abstract

Body Dysmorphic Disorder (BDD) is characterized by a preoccupation with a perceived flaw in appearance and repetitive avoidance behaviors. BDD involves severe psychosocial outcomes (e.g., depression, suicidality, functional impairment). Identifying correlates of BDD symptoms and outcomes can inform treatment. Shame, a painful emotion felt in response to critical self-judgment, may be one key correlate. However, research on shame in BDD is scarce and previous studies have not distinguished general shame from body shame. This study examines the relative relationships between body shame and general shame with body dysmorphic phenomenology and psychosocial outcomes. Participants ($N = 184$) were recruited online via BDD organizations and completed a survey. Path analysis was used to examine associations between body and general shame with 1) body dysmorphic phenomenology and 2) depression severity, suicide risk, and functional impairment. Both types of shame were differentially related to outcomes. Body shame was more strongly related to phenomenology, whereas general shame was more strongly related to psychosocial outcomes. Thus, it may be important for BDD treatment to focus on reducing both general and body shame. Further research should evaluate whether current treatments adequately

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Contributors

Drs. Weingarden, Renshaw, and Wilhelm designed the study. Dr. Weingarden executed the study, conducted analyses, and wrote most of the manuscript. Ms. Davidson also wrote components of the manuscript and edited the manuscript. All authors provided feedback and edits prior to submission and have approved the final manuscript.

Conflict of Interest

Dr. Weingarden, Dr. Renshaw, and Ms. Davidson declare that they have no conflicts of interest. Dr. Wilhelm has received research support in the form of free medication and matching placebo from Forest Laboratories for clinical trials funded by the NIH. Dr. Wilhelm is a presenter for the Massachusetts General Hospital Psychiatry Academy in educational programs supported through independent medical education grants from pharmaceutical companies; she has received royalties from Elsevier Publications, Guilford Publications, New Harbinger Publications, and Oxford University Press. Dr. Wilhelm has also received speaking honorarium from various academic institutions and foundations, including the International Obsessive Compulsive Disorder Foundation and the Tourette Association of America. In addition, she received payment from the Association for Behavioral and Cognitive Therapies for her role as Associate Editor for the Behavior Therapy journal, as well as from John Wiley & Sons, Inc. for her role as Associate Editor on the journal Depression & Anxiety. Dr. Wilhelm has also received salary support from Novartis.

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address and reduce general and body shame, and whether addressing shame promotes better treatment outcomes.

Keywords

Body Dysmorphic Disorder; Shame; Body Shame; Suicidality; Functional Impairment

1. Introduction

Body dysmorphic disorder (BDD) is a psychiatric disorder that involves a distressing preoccupation with an imagined or slight defect in one's physical appearance, accompanied by time-consuming rituals and impairing avoidance behaviors (American Psychiatric Association [APA], 2013). BDD typically involves the experience of exaggerated appearance-related cognitions, such as the belief that "The first thing people notice about me is what's wrong with my appearance" (Wilhelm, Greenberg, Rosenfield, Kasarskis, & Blashill, 2016). Moreover, BDD often presents with severe psychosocial correlates. Comorbid major depressive disorder (MDD) occurs in 55–83% of individuals with BDD (Phillips et al., 2006; Phillips, Menard, Fay, & Weisberg, 2005). The majority (80%) of patients report lifetime suicidal ideation, and approximately one quarter of patients (24–28%) have made a suicide attempt (Phillips, 2007; Phillips, Coles, et al., 2005; Phillips et al., 2006; Veale, Gournay, et al., 1996). BDD patients also experience functional impairment, including social dysfunction in nearly all patients (Phillips & Diaz, 1997; Phillips et al., 2006), unemployment rates (39–53%) that surpass those documented in patients with MDD or obsessive compulsive disorder (OCD) (Birnbaum et al., 2010; Didie, Menard, Stern, & Phillips, 2008; Frare, Perugi, Ruffolo, & Toni, 2004; Perugi et al., 1997; Veale, Boocock, Gournay, & Dryden, 1996), and lifetime housebound rates of 30% (Phillips et al., 2006).

To best understand and treat BDD, it is important to conduct research that focuses on identifying risk factors and correlates to body dysmorphic phenomenology and psychosocial outcomes. Clinical conceptualizations of BDD recognize shame as central to the disorder and its adverse outcomes (e.g., see review by Weingarden & Renshaw, 2015). In its earliest clinical documentation, BDD was described as "an obsession with shame of the body" (Janet, 1903). Research on the etiology of BDD points to childhood and adolescent factors that may engender elevated levels of shame in this population. In particular, individuals with BDD report more frequent childhood abuse (Didie et al., 2006; Neziroglu, Khemlani-Patel, & Yaryura-Tobias, 2006; Veale et al., 2015), as well as more frequent experiences of bullying (Buhlmann, Cook, Fama, & Wilhelm, 2007; Veale et al., 2015) compared to healthy control and clinical comparison groups. These stressful developmental events may increase risk for BDD and heightened shame-proneness.

Shame is a painful self-conscious emotion that is felt in response to critically judging oneself as worthless or bad (Tangney & Dearing, 2002). Cognitive behavioral models suggest that processing biases (e.g., selective attention to perceived flaws) and cognitive distortions (e.g., "if I do not look perfect, I will be rejected") common to BDD may elicit shame (Weingarden & Renshaw, 2015). In response to distressing feelings of shame,

individuals with BDD may avoid situations that draw attention to perceived flaw and engage in rituals like camouflaging body parts of concern. Shame also acts as a barrier that prevents individuals from seeking treatment for their BDD symptoms. Each of these maladaptive behavioral responses likely contributes to maintenance of BDD symptoms, as well as development and maintenance of depression, suicidal thoughts, and functional impairment. Over time, shame-driven core beliefs may also develop, such as “I am bad,” and “I am worthless” (Tangney & Dearing, 2002), which serve to further maintain body dysmorphic symptoms and related impairment. Taken together, cognitive behavioral models suggest that shame may be a key risk factor for the severe presentation and psychosocial outcomes observed in BDD (Weingarden & Renshaw, 2015).

To date, however, the empirical literature on shame in BDD is scarce. One recent study demonstrated that individuals with BDD symptoms have higher levels of general shame-proneness compared to healthy controls, and that general shame predicts depressive severity and suicide risk, above and beyond anxiety severity (Weingarden, Renshaw, Wilhelm, Tangney, & DiMauro, 2016). The existing research on shame in BDD has focused primarily on general shame, felt when one judges his or her whole self as broadly defective, bad, or worthless. However, shame is a multifaceted emotion, and our understanding of BDD and its treatment would be enhanced through information about which types of shame are most strongly related to body dysmorphic phenomenology and outcomes. Other types of shame implicated in BDD include body shame, shame about having a mental illness, and shame about specific symptoms (e.g., the need to perform “embarrassing” appearance rituals) (for a review of shame in BDD, see Weingarden & Renshaw, 2015). Body shame, which is an evaluation of oneself as bad or worthless because one’s body is judged to be defective, bad, or worthless, is particularly likely to be central in BDD (Weingarden & Renshaw, 2015). However, to date little is known about the role of body shame, compared to general shame, in BDD. The present study aims to extend our knowledge of the relative relationships of body shame and general shame with body dysmorphic phenomenology (i.e., symptom severity and cognitions) (Aim 1) and adverse psychosocial outcomes (i.e., depressive severity, suicide risk, functional impairment) (Aim 2). Enhancing our understanding of the specific types of shame that are related to body dysmorphic phenomenology and outcomes may inform clinicians as to which shame experiences, specifically, should be targeted in psychological interventions for BDD.

2. Method

2.1 Participants

Adults with elevated body dysmorphic concerns were recruited through BDD organization websites (e.g., Massachusetts General Hospital BDD Clinical Research Program, International OCD Foundation). See Table 1 for the sample’s demographic and descriptive characteristics. Inclusion criteria required participants to be at least 18 years old and meet self-reported diagnostic criteria for BDD on the Body Dysmorphic Disorder Questionnaire (BDDQ). Participants were excluded if they did not accurately answer two screening items designed to detect low data quality (see Procedures for more detail), or if they did not complete the primary study measures. Initially, 1,399 people clicked the link to the survey.

Of those, 1,186 agreed to the Informed Consent and had only a single survey entry. Participants who were under age 18 or did not correctly answer two quality screening items ($n = 234$) were removed. Participants who did not meet inclusion criteria for the present study ($n = 768$) were also removed. Of note, the number of participants excluded in this step reflects that the broader data collected for the primary study (citation removed for blind review) recruited healthy control participants and participants with OCD symptoms in addition to those with body dysmorphic concerns. A final sample of 184 participants was obtained.

2.2 Measures

2.2.1 BDDQ (Phillips, 1996)—The BDDQ is a dichotomous diagnostic measure for BDD, based on DSM-IV criteria. The BDDQ shows 100% sensitivity and 89% specificity in identifying BDD diagnoses in a clinical sample (Phillips, 1996). A qualitative item prompts participants for a description of their appearance concerns, which the first author used to exclude participants whose sole concerns were weight-based (i.e., potentially better accounted for by an eating disorder) or related to trichotillomania or skin picking disorder. A second coder (M.A.-level clinical psychology doctoral student) independently scored this item for inter-rater reliability, which indicated adequate agreement ($\kappa = .68$; Landis & Koch, 1977). The two coders discussed and resolved cases on which their ratings were discrepant, and the agreed-upon score was used.

2.2.2. Body Dysmorphic Disorder Symptom Scale (BDD-SS; Wilhelm et al., 2016)—The BDD-SS measures severity of BDD symptoms and phenomenology. In the present study, the cognitions subscale was used as a measure of severity of appearance-related distorted beliefs. The BDD-SS demonstrates strong psychometric properties (Wilhelm et al., 2016), and in the present study, internal consistency was strong ($\alpha = .95$).

2.2.3 Test of Self-Conscious Affect-4 (TOSCA-4; Tangney et al., 2008)—The TOSCA-4 total shame score was used to measure proneness to general shame. The TOSCA-4 is a scenario-based self-report measure that describes 15 situations likely to evoke moral emotions (i.e., shame, guilt, externalization). Participants rate their likelihood of responding to the scenario in a number of ways (i.e., shame-driven, guilt-driven, externalization of blame-driven responses). Items do not name the emotion being assessed. Higher scores indicate greater general shame-proneness. Strong psychometric properties are reported for the TOSCA scales (Rusch et al., 2007; Woien, Ernst, Patock-Peckham, & Nagoshi, 2003), and the total shame scale demonstrated strong internal consistency in the present sample ($\alpha = .95$).

2.2.4. Body-Focused Shame and Guilt Scale – Shame Subscale (BF-SG; Weingarden, Renshaw, Tangney, & Wilhelm, 2016)—The BF-SG shame scale is a measure of body shame that was specifically developed to capture experiences of body shame typical to BDD (i.e., as opposed to body shame related to eating disorder pathology). The BF-SG scale is a scenario-based measure modeled after the TOSCA, in which higher scores correspond with greater body shame. The BF-SG shame scale has demonstrated

strong psychometric properties (Weingarden, Renshaw, Tangney, et al., 2016). Internal consistency in the present sample was strong ($\alpha = .92$).

2.2.5. Self-report Yale-Brown Obsessive Compulsive Scale – Modified for BDD (BDD-YBOCS; Phillips, Hollander, Rasmussen, & Aronowitz, 1997)—Past-week BDD symptom severity was measured with a 10-item self-report version of the BDD-YBOCS, matching procedures from earlier research (e.g., Marques, Weingarden, LeBlanc, & Wilhelm, 2011). This 10-item version excludes two items from the clinician-administered BDD-YBOCS measuring insight and avoidance, as these are difficult constructs to assess through self-report. Scores range from 0 – 40, and higher scores indicate greater severity. The 10-item BDD-YBOCS has strong psychometric properties (Phillips et al., 1997), and the measure had strong reliability within the present sample ($\alpha = .86$).

2.2.6. Depression Anxiety and Stress Scale – 21 (DASS-21; Lovibond & Lovibond, 1995)—The depression and anxiety subscales of the DASS-21 were used to assess depression and anxiety, respectively, with higher scores corresponding with more severe symptoms. Both subscales show strong psychometric properties and demonstrated strong internal consistency in the present sample (depression: $\alpha = .91$; anxiety: $\alpha = .82$).

2.2.7 Suicide Behaviors Questionnaire – Revised (SBQ-R; Osman et al., 2001)—Suicide risk was measured with the SBQ-R. Higher scores correspond with greater risk. The SBQ-R has strong psychometric properties (Osman et al., 2001), and in the present sample it demonstrated adequate internal consistency ($\alpha = .83$).

2.2.8 Sheehan Disability Scale (SDS; Sheehan, Harnett-Sheehan, & Raj, 1996)—The SDS total score measures functional impairment on a Likert scale from 0 (*not at all*) to 10 (*extremely*). The SDS assesses impairment across occupational, social, and family domains and has strong internal consistency and validity (Sheehan et al., 1996). In the present study, the SDS had strong internal consistency ($\alpha = .90$).

2.3 Procedures

Procedures were approved by the NIH Office of Human Subjects Research Protections and a university institutional review board. As described above, participants were recruited through advertisements on BDD clinic and organization websites, as well as online BDD forums and support groups (e.g., Yahoo! Groups for BDD). Potential participants could click a link embedded in study advertisements, to navigate to the study website on Qualtrics. Potential participants were first presented with the informed consent document and were required to click a button indicating agreement to proceed. To ensure higher data quality, participants were also required to correctly complete a CAPTCHA prior to participating. Participants were given an option to skip the survey and be directed to a list of BDD, depression, suicide, and other mental health resources. Participants who indicated consent then proceeded through the study survey, which took approximately 30 – 75 minutes to complete. The survey included two screening items designed to detect participants who were quickly clicking through questions without reading them. Participants who did not correctly answer both quality screening items were excluded from analyses. At the end of the survey,

participants were invited to enter a raffle for one of 75 \$30 electronic gift certificates offered as study compensation. All participants were then directed to a list of BDD, depression, suicide, and other mental health resources.

2.4 Statistical Analyses

Two path analysis models in Mplus (van Oortzen, Brandmaier, & Tsang, 2015) were used to evaluate the two study aims (see Figures 1 and 2). We selected path analysis, rather than using a series of multiple regressions, because path analysis allows for the prediction of multiple outcome (i.e., endogenous) variables simultaneously, while accounting for covariation among endogenous variables. To test Aim 1, body shame and general shame were modeled as covarying, exogenous variables. Structural paths were specified from body and general shame to body dysmorphic severity and body dysmorphic cognitions, which were modeled as covarying, endogenous variables. To test Aim 2, body dysmorphic severity was also included as a covarying, exogenous variable along with body shame and general shame, as we were interested in the relative relationships of body shame and general shame with psychosocial outcomes, above and beyond body dysmorphic severity. Structural paths were specified from all predictors to our three, covarying, endogenous outcomes: depression severity, suicide risk, and functional impairment. Both models were fully saturated, as all structural paths and covariances were specified; thus, no indices of model fit were obtained.

3. Results

See Table 1 for sample demographics and descriptive statistics. Mean BDD-YBOCS scores fell in the moderately severe clinical range, and mean SDS scores fell in the moderate range for functional impairment. Mean DASS-21 depression scores indicated severe depressive symptoms in the present sample, and mean SBQ-R score fell above the cutoff score used to identify suicide risk in adult psychiatric patients.

General shame and body shame were moderately correlated with one another ($r = .63, p < .001$). Standardized path estimates from models testing Aims 1 and 2 are shown in Figures 1 and 2, respectively. Model 1 indicated that body shame was significantly, moderately to strongly related to body dysmorphic severity and cognitions, whereas general shame was unrelated to body dysmorphic severity and only weakly, significantly related to body dysmorphic cognitions. Model 2 showed the opposite pattern. Above and beyond body dysmorphic severity, which was the strongest predictor of each adverse outcome, general shame was more strongly related to adverse outcomes than was body shame. General shame was significantly, weakly related to depression, suicide risk, and functional impairment. Body shame was significantly, weakly related to depression, and it was unrelated to suicide risk and functional impairment.

4. Discussion

The present study aimed to collect novel, preliminary information about the relative roles of general shame and body shame in individuals with elevated body dysmorphic concerns, to build on our understanding of shame's theoretical importance in BDD, as well as to inform potential treatment targets. Results showed that both body shame and general shame are

relevant to body dysmorphic concerns, yet they appear to play distinct roles. While body shame was more strongly related to body dysmorphic phenomenology, general shame was more strongly related to adverse psychosocial outcomes common to BDD. Results showing distinct roles of body shame and general shame are consistent with findings in eating disorder research. As with BDD, shame is a central feature of eating disorders, which share phenomenological similarities with BDD (for a review, see Goss & Allan, 2009). One prior study in individuals with current or lifetime anorexia nervosa or bulimia nervosa identified unique, predictive relationships between body shame and general shame with anorexic symptoms (Troop & Redshaw, 2012).

Results highlighting the role of body shame in body dysmorphic phenomenology provide novel empirical support to the literature on our clinical and conceptual understanding of BDD, which has long described that body shame is almost inherently involved in the experience of BDD (e.g., Janet, 1903; Weingarden & Renshaw, 2015). Prior to this study, such clinical observations had very minimal empirical backing.

The finding that general shame is more strongly related to adverse psychosocial outcomes compared to body shame suggests that, when participants' shame extends from a more narrow focus on the body to a wider focus on one's whole self as worthless or defective, risk for outcomes like depression, suicidality, and functional impairment increases. It is possible that general shame, more so than body shame, triggers broad-based maladaptive behavioral responses, like wide-ranging social withdrawal and avoidance of activities, which likely contribute to development and maintenance of depression, suicidality, and functional impairment. The significant association between general shame and adverse outcomes is consistent with the broader psychological literature, which demonstrates this relationship across a number of psychiatric and medical populations (Tangney & Dearing, 2002).

Results from the present study have implications for the treatment of BDD. Findings suggest that it may be important to target both body shame and general shame in cognitive behavioral therapy (CBT) for BDD. Because body shame is closely related to the presentation of BDD itself, CBT for BDD may already inherently targets and reduce body shame. On the other hand, we may need to make more explicit efforts to target general shame in CBT for BDD. This could be done by broadening a focus on negative beliefs about appearance to negative beliefs more holistically. To an extent, this approach is already used in CBT when core beliefs (e.g., "I am defective," "I am worthless") are identified and challenged. A more explicit effort to identify automatic thoughts that tap into general shame may also be of benefit to patients. Moreover, teaching patients to develop self-compassion (e.g., by incorporating compassion-focused therapy techniques; Gilbert, 2009), may be useful in reducing generalized shame. Finally, emotion regulation techniques from dialectical behavior therapy (Linehan, 1993), which teach patients to use opposite actions in response to shame (e.g., do not conceal body parts of concern from loved ones) complement and may extend existing components of CBT treatment (e.g., use of exposure with ritual prevention). To date, however, no research has documented changes in body shame or general shame across CBT for BDD. Thus, without research in this area, we do not know whether our current treatments successfully target these shame domains, or whether further work to target shame in CBT is needed.

The present study has several limitations. First, BDD diagnoses were approximated via online self-report assessment, which may limit the diagnostic validity of the sample. Lacking a clinician who objectively assesses whether participants' appearance concerns are imagined or exaggerated precludes the ability to conclusively diagnose participants. In line with prior research using similar methods (e.g., Weingarden et al., 2016), to best mitigate this limitation we used a psychometrically strong diagnostic measure, and we limited participant recruitment to organizations and websites that are specifically related to BDD (e.g., the Massachusetts General Hospital BDD Program website, the International OCD Foundation website). Relatedly, by not including a clinician-administered diagnostic assessment, we do not have data on comorbid psychiatric diagnoses for the present sample. Data on comorbidities may help to further explain results that general shame was more strongly related to functional impairment, depression, and suicide risk. To build on this study, results should be replicated in a clinician-diagnosed sample of individuals with BDD. To further enhance data integrity, participants were required to complete a CAPTCHA prior to participating, and only data from those who correctly answered quality-screening items were included in analyses.

While online recruitment in some ways limits the present study, it also represents potential methodological strengths for the specific research questions at hand. Shame is a significant barrier to treatment for people with BDD (Marques et al., 2011). Highly shame-prone individuals may be unlikely to participate in face-to-face research, whereas they may be more willing to participate in an online study. In this way, using an Internet design presents an opportunity to learn about the role of shame in BDD even among the most shame-prone individuals, by eliminating a major barrier. Online recruitment also has the potential to reach a broader range of individuals experiencing body dysmorphic symptoms. For example, it may provide better access to those who are more severely impaired, due to the high housebound rates in BDD (e.g., up to 30%) (Phillips et al., 2006), as well as to those with subclinical body dysmorphic symptoms, who may not otherwise call into a specialty clinic for services. Appearance concerns occur on a continuum of severity that includes normative levels of appearance discontent to clinically diagnosable BDD (Cash & Henry, 1995). Subclinical body dysmorphic concerns are likely underreported and fairly prevalent in psychiatric populations (Zimmerman and Mattia, 1998; Altamura et al., 2001). Individuals with subclinical body dysmorphic concerns experience similar symptoms, psychosocial impairment, and elevated risk of suicide (Altamura et al., 2001). Therefore, recruiting individuals whose body dysmorphic symptoms range from subclinical to clinical severity contributes meaningful information toward the primary research questions.

Another limitation is the predominantly female sample, which reduces the generalizability of our findings. The largest study to-date examining gender and BDD found more similarities than differences between males and females (Phillips, Menard, & Fay, 2006), suggesting that results regarding shame in BDD may extend to both males and females. However, to build on this study, more research is needed examining the role of shame in males with BDD. Finally, the study was cross-sectional in design. Therefore, we are unable to draw causal conclusions about the relationships between shame and outcomes of interest. Clinical implications of results should be interpreted with these limitations in mind.

The present study was the first to examine the relative relationships of body shame and general shame with body dysmorphic phenomenology and outcomes. Findings suggest that future research investigating shame in BDD may be enhanced by including measures of both general shame and body shame. Following longitudinal replication in a clinical sample, a next step in advancing this line of research includes examining whether body shame and general shame reduce across empirically supported treatments for BDD, as well as whether reductions in shame across treatment correspond with reductions in BDD phenomenology and adverse outcomes.

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Highlights

- Examines relationship of general and body shame with BDD phenomenology and outcomes
- Body shame was more strongly related to BDD phenomenology than general shame
- General shame was more strongly related to adverse outcomes than body shame
- It may be important for BDD treatments to focus on reducing both types of shame

Figure 1.

Standardized structural path estimates in a model testing the relationship between body shame and general shame with body dysmorphic phenomenology (i.e., severity and cognitions). *Note:* * $p < .05$. ** $p < .01$. *** $p < .001$.

Figure 2.

Standardized structural path estimates in a model testing the relationship between body shame and general shame with psychosocial outcomes, controlling for body dysmorphic severity. *Note:* * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 1

Demographics and Means (SDs) of Primary Variables

Variable	%/M(SD)
Age M (SD)	29.68 (10.14)
Gender (% female)	92.4
Relationship status:	
% single, divorced, widowed	37.5
% dating, cohabiting (unmarried)	39.7
% married	22.8
Race	
% Caucasian	80.4
% African American/Black	2.7
% Asian	6.0
% Hispanic/Latino	6.5
% Another race	4.3
BDD-YBOCS M (SD)	22.75 (5.85)
SDS M (SD)	17.77 (8.53)
SBQ-R M (SD)	9.69 (4.25)
DASS-21 Depression M (SD)	24.33 (11.86)
DASS-21 Anxiety M (SD)	15.98 (10.02)

Note: BDD-YBOCS = Self-report (10-item) Yale-Brown Obsessive Compulsive Scale Modified for BDD; SDS = Sheehan Disability Scale; DASS-21 Depression = Depression Anxiety Stress Scale-21 depression subscale; SBQ-R = Suicide Behaviors Questionnaire-Revised.