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Shame and Defectiveness Beliefs in Treatment-Seeking Patients with Body Dysmorphic Disorder

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Abstract

Shame is a distressing emotion experienced when individuals judge themselves in a broadly negative and critical manner. Clinical descriptions of body dysmorphic disorder (BDD) emphasize the centrality of shame, yet research on shame in BDD remains scarce. This study is the largest investigation of shame in clinically diagnosed individuals with BDD, and it's the first to examine whether shame changes with treatment. Eighty-three adults with BDD were treated with 14 weeks of open-label escitalopram. Shame was measured using the Young Schema Questionnaire – Short Form. Shame was significantly higher in individuals with BDD than in previously-reported healthy control and psychiatric outpatient samples. Shame was significantly, moderately correlated with greater suicidal thoughts and hopelessness and marginally significantly correlated with greater BDD severity. Shame decreased significantly with treatment. Reductions in shame with escitalopram were significantly associated with reductions in suicidal thoughts and hopelessness, even when accounting for reductions in BDD and depression severity.

Keywords

shame; body dysmorphic disorder; psychopharmacology; selective serotonin reuptake inhibitor; suicidal ideation

Body dysmorphic disorder (BDD) is a psychiatric illness that involves distressing or impairing preoccupations with nonexistent or slight appearance flaws (American Psychiatric Association [APA], 2013). BDD is accompanied by time-consuming rituals that intend to fix, check, hide, or obtain reassurance about one's appearance concerns (APA, 2013). BDD is common, occurring in 1.7–2.9% of the population (Buhlmann et al., 2010; Koran et al.,

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2008; Rief et al., 2006; Schieber et al., 2015). Empirically-supported treatments are cognitive behavioral therapy (CBT) and serotonin reuptake inhibitors (SRIs), such as escitalopram (Fang and Wilhelm, 2015; Phillipou et al., 2016; Phillips et al., 2016). If untreated, BDD usually has a chronic course (Phillips et al., 2013) and severe clinical presentation (Phillips et al., 2008). For example, suicide attempt rates (24–28%) are strikingly elevated in BDD (Phillips et al., 2005; Phillips, 2007).

One factor that may contribute to distress and suicide risk in BDD is shame. Shame has been discussed as a central emotion experienced by BDD sufferers since the earliest descriptions of BDD in the clinical literature (Janet, 1903). Shame is a self-conscious emotion experienced when a person judges him- or herself in a broadly negative, critical manner (Tangney and Dearing, 2002). From a cognitive-behavioral framework, the BDD belief that one's appearance is flawed likely triggers shame (Weingarden and Renshaw, 2015). Moreover, common cognitive and perceptual processing biases in BDD, such as selective attention to one's perceived flaw, likely elicit shame (Weingarden and Renshaw, 2015). In turn, shame triggers both cognitive and behavioral responses. For example, shame may be accompanied by core beliefs, such as "I am worthless" (Tangney and Dearing, 2002). Behavioral responses to shame include social withdrawal, avoidance, and concealing the object of one's shame (e.g., one's appearance) (Weingarden and Renshaw, 2015). Cognitive and behavioral responses to shame likely deepen a person's functional impairment, depression, and suicide risk (Tangney and Dearing, 2002). Indeed, in the broader psychological literature, shame is consistently related to impairment, depression, and suicide risk (Tangney and Dearing, 2002).

Although shame is prominent in clinical conceptualizations of BDD, research on shame in BDD is scarce, and much of the existing work uses analogue samples (for a review, see Weingarden and Renshaw, 2015). The primary aim of the current study was to better understand the presentation, response to treatment, and psychosocial correlates of shame in BDD patients. Data for the present study are from a 14-week, open-label treatment trial of the SSRI escitalopram for adults with BDD [citation removed for blind review].

First, we examined whether levels of shame are elevated in BDD patients compared to means reported in healthy control (HC) and psychiatric outpatient samples (Aim 1). Two prior studies with small clinical BDD samples found that shame was elevated. Specifically, one study documented higher general and body shame in a BDD sample ($n = 31$) compared to a HC sample, with large effects (Kollei et al., 2012). A second research group demonstrated elevated implicit (i.e., automatic) body shame in a BDD sample ($n = 30$) compared to HCs and participants with obsessive compulsive disorder and social anxiety disorder, with a small effect (Clerkin et al., 2014). To build on this initial literature, the present study compared levels of shame and defectiveness beliefs, measured with the Young Schema Questionnaire–Short Form (YSQ-SF) (Waller et al., 2001), in a large, clinician-diagnosed BDD sample to levels of shame and defectiveness beliefs reported in two previous studies: (1) a HC sample (Waller et al., 2001) and (2) a psychiatric outpatient sample (Thimm, 2013). Based on available data and clinical experience with BDD, we hypothesized that shame and defectiveness beliefs would be higher in our BDD sample compared to these HC and psychiatric outpatient samples.

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Second, two recent cross-sectional studies of shame conducted from a single online sample of participants with BDD symptoms showed that shame was significantly associated with BDD severity, depression, suicide risk, and functional impairment (Weingarden et al., 2016; Weingarden et al., 2017). This is consistent with cognitive-behavioral models of shame in BDD, which likewise suggest that shame is related to impairment, depression, and suicide risk (Weingarden and Renshaw, 2015). To build on previous analogue studies, the present study examines correlations of shame with BDD severity, depression severity, suicidal ideation (SI), hopelessness, and levels of delusionality, and it is the first to examine some of these relationships in a clinical sample. We hypothesized that shame would be significantly correlated with each of these variables.

Our third aim examined whether an empirically-supported treatment for BDD could reduce shame beliefs, which no prior study has examined. Given that shame may be a key risk factor for distress and suicidality in BDD, it is essential that gold-standard BDD treatments effectively target and reduce shame. Moreover, if current gold-standard treatments do not sufficiently target shame, these treatments may need to be modified to effectively reduce shame. It is possible that as SSRI medications alleviate BDD symptom severity, individuals in turn become less avoidant and ritualize less. In this process of re-engaging in life, these individuals may naturally begin to challenge the maladaptive beliefs that had maintained their shame. To this end, we hypothesized that levels of shame and defectiveness beliefs after 14 weeks of open-label SSRI treatment would be significantly lower than baseline levels. We also hypothesized that shame and defectiveness beliefs would be lower among treatment responders at week 14, compared to treatment non-responders.

Finally, no prior research has examined whether changes in shame across BDD treatment are associated with changes in adverse outcomes. We hypothesized that reductions in shame and defectiveness beliefs with SSRI treatment would be significantly associated with reductions in SI and hopelessness, after controlling for reductions in BDD and depression severity.

Material and Methods

Participants

Participants were recruited at two academic medical centers for a relapse prevention study of the SSRI escitalopram for BDD. Detailed inclusion and exclusion criteria and enrollment flow are reported in the main outcome paper [citation removed for blind review]. Key inclusion and exclusion criteria (based on DSM-IV) were: (1) age ≥ 18; (2) BDD diagnosis and a baseline score ≥ 24 on the Yale-Brown Obsessive-Compulsive Scale Modified for Body Dysmorphic Disorder (BDD-YBOCS) (Phillips et al., 1997); and (3) ≥ 4 (moderately ill) on the Clinical Global Impressions Severity Scale (CGI-S) (Guy, 1976). Participants were excluded for: (1) current active SI with intent or plan or a suicide attempt within the past year, (2) need for inpatient or partial hospital treatment, (3) current or past bipolar or psychotic disorder, (4) alcohol or substance abuse or dependence within the past three months, and (5) current CBT. See Table 1 for baseline demographic characteristics and Table 2 for comorbid psychiatric diagnoses at baseline.

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To examine Aim 1, levels of shame in the present sample were compared to levels of shame in (1) a HC sample and (2) a psychiatric outpatient sample. The control sample (N = 60) (Waller et al., 2001) was selected from a study of the initial psychometric properties of the YSQ-SF and consists of women with a mean age of 26.8 (SD = 6.41) years, who did not have a known psychiatric illness, and who were specifically screened to exclude those with a diagnosis of clinical or subclinical eating disorders or depression. The psychiatric outpatient sample (N = 106) (Thimm, 2013) was selected because it offers a large sample of psychiatric outpatients spanning diagnoses. This sample was primarily female (74%), with a mean age of 40.3 (SD = 12.2) years. Most patients in this comparison sample were diagnosed with a depressive (52%) and/or anxiety (58%) disorder (Thimm, 2013). No data on either comparison samples' racial composition or degree of SI were reported.

Procedures

Study procedures were approved by each site's institutional review boards, and a data and safety monitoring board regularly reviewed procedures and enrollment. Participants provided written informed consent.

The larger study consisted of two phases (see [citation removed for blind review] for more details): an initial 14-week open-label escitalopram treatment phase, followed by a double-blind placebo-controlled discontinuation phase. The current report uses data only from phase 1. The following fixed-flexible escitalopram dosing schedule was used during the phase 1 open-label trial: 10 mg/day for weeks 1–3; 20 mg/day for weeks 4–6; and 30 mg/day until week 14. Responders were defined as demonstrating a ≥ 30% decrease in BDD-YBOCS baseline score for two consecutive assessments (e.g., weeks 12 and 14).

In total, 173 participants were enrolled; 73 of these participants either chose not to participate (e.g., too great a time commitment) or were deemed ineligible at screening. No participants were excluded at the screening visit based on level of suicide risk. All 100 eligible participants started escitalopram. The majority of participants (74.0%) completed all 14 weeks of phase 1 treatment. The most common reasons for dropping out or being withdrawn (n = 26) included protocol non-adherence, medication-related adverse events, relocating, desire to stop medication, and lack of time. One participant was withdrawn due to a clinically significant increase in active SI. Due to missing data at weeks 0 or 14 on our primary variable of interest, the YSQ-SF, our final sample for the current report included 83 participants for Aims 1 and 2, and 53 participants for Aims 3 and 4.

Measures

Clinical Interviews—Following an initial telephone screen for basic eligibility with a trained research assistant, participants were invited to complete an in-person baseline assessment with a trained independent evaluator. Trained independent evaluators (IEs) administered clinician-rated measures with strong psychometric properties; only those relevant to this report are described here. The **Structured Clinical Interview for DSM-IV, Patient Version (SCID-P)** (First et al., 2002) was used to evaluate current and lifetime psychiatric illnesses. The SCID-P is the gold-standard clinician-administered psychiatric diagnostic assessment. To further evaluate inclusion and exclusion criteria, the **CGI-S** (Guy,

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1976), a widely-used clinician-administered measure of illness severity, was administered. The **BDD-YBOCS** (Phillips et al., 1997; Phillips et al., 2014), a 12-item semi-structured interview, was used to assess past-week BDD severity. The BDD-YBOCS was the primary outcome measure in the clinical trial. It ranges from 0 to 44, with higher scores indicating more severe BDD symptoms. In this study, inter-rater reliability of the BDD-YBOCS was excellent (ICC > 0.9). The **Hamilton Depression Rating Scale (HAM-D)** (Miller et al., 1985), a 17-item interview, measured depression severity.

Self-Report Questionnaires—Participants also completed self-reports at baseline and week 14. The **Young Schema Questionnaire-Short Form, Version S1 (YSQ-SF)** (Waller et al., 2001) assesses a broad range of schemas. The 5-item Shame and Defectiveness subscale (YSQ-DS) was used to measure shame. The YSQ-DS demonstrated excellent internal consistency across time-points (α = .93–.94). Participants rated how well each YSQ-DS item described them on a scale from 1 (*completely untrue of me*) to 6 (*describes me perfectly*). A sample YSQ-DS item includes: "*I am too unacceptable in very basic ways to reveal myself to other people.*" Higher YSQ-DS scores indicate higher endorsement of shame and defectiveness beliefs. Participants completed the 20-item **Beck Hopelessness Scale (BHS)** (Beck, 1988) to assess hopelessness. The BHS ranges from 0 to 20, with higher scores indicating greater hopelessness. Participants also completed the 21-item **Beck Depression Inventory (BDI-II)** (Beck, 1996), to assess self-reported depression severity. In the present study, only BDI-II item 9 was used, which codes suicidal thoughts or wishes (0 = *"I don't have any thoughts of killing myself,"* 1 = *"I have thoughts of killing myself, but I would not carry them out,"* 2 = *"I would like to kill myself,"* and 3 = *"I would kill myself if I had the chance"*).

Statistical Analyses

We examined skewness and kurtosis values and visually inspected variable distributions for normality. To classify the sample's severity, we examined baseline BDD and depression severity, SI, and hopelessness. Additionally, we used one-way ANOVAs to examine presence of baseline group differences on primary study variables (i.e., BDD-YBOCS, HAM-D, YSQ-DS, BDI-II item 9, BHS) between (a) those who completed versus did not complete the YSQ-DS at week 0 and (b) those who completed versus did not complete the week 14 assessment.

Analyses for aims 1–3 were conducted in SPSS Version 17.0 (SPSS Inc, 2008). For Aim 1, to examine whether shame and defectiveness beliefs were elevated in our BDD sample, we used two independent samples *t* tests to compare our sample's YSQ-DS scores at baseline to the YSQ-DS mean (*SD*) in published samples of (1) HC females (Waller et al., 2001), and (2) psychiatric outpatients (Thimm, 2013), respectively. We evaluated effect sizes of group differences with Cohen's *d*. Of note, YSQ-DS scores did not differ significantly between males and females in our sample ($p > .05$). Therefore, we compared our complete sample's YSQ-DS scores to those of the HC female sample. For Aim 2, to examine baseline correlations of shame with BDD severity, depression severity, SI, hopelessness, and levels of delusionality, we conducted bivariate correlations. To examine whether shame and defectiveness beliefs decreased across SSRI treatment (Aim 3), we first used a paired

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samples *t* test to examine whether YSQ-DS scores significantly differed between baseline and week 14. We followed up this test by calculating Cohen's *d*, adjusted for within-samples *t* tests (Dunlap et al., 1996). Second, we used a one-way ANOVA to examine whether YSQ-DS scores were significantly lower among treatment responders at week 14 compared to treatment non-responders. To ensure that end-of-treatment differences were not simply due to baseline differences, we also tested whether YSQ-DS scores differed by responder status at baseline, using a one-way ANOVA.

Aim 4 analyses were conducted in Ωnyx, Version 1.0-937 (van Oertzen et al., 2015). To examine whether reductions in shame and defectiveness beliefs with SSRI treatment corresponded with reductions in SI and hopelessness, above and beyond reductions in BDD severity and depression, we used path analysis. Path analysis offers several advantages over running a pair of multiple regressions. First, since all associations can be examined simultaneously, path analysis eliminates issues of family-wise error that result from running two regressions. Second, path analysis allows for modeling correlations among multiple outcomes simultaneously, by including covariances. In the present model, we included change scores from baseline to end-of-treatment on our measures of shame and defectiveness beliefs (YSQ-DS), depression (HAM-D), and BDD severity (BDD-YBOCS) as covarying, exogenous variables. Structural paths were indicated from each exogenous variable to two, covarying, endogenous outcomes: change in SI (BDI-II item 9) and change in hopelessness (BHS) from baseline to end of treatment (see Figure 1). Since this was a fully saturated model, no indices of model fit were obtained.

Results

Examination of skewness and kurtosis values and visual inspection of variable distributions each demonstrated acceptable normality for study variables (Kim, 2013). Baseline correlations among study variables did not indicate problems of multicollinearity (see Table 3). On average at baseline, participants had moderate-severe BDD symptoms, mild depression, and moderate levels of hopelessness (see Table 1). Most participants did not endorse SI (more highly suicidal patients were excluded from this trial because phase 2 involved discontinuation of effective medication); a minority endorsed passive SI. There were no baseline group differences on primary study variables between those who completed (versus did not complete) the YSQ-DS at baseline, nor were there baseline group differences between those who completed (versus did not complete) the week 14 assessment, *p*s > .50.

Aim 1

The BDD sample reported significantly higher levels of shame and defectiveness beliefs ($M = 3.17$, $SD = 1.57$) than a HC sample ($M = 1.48$, $SD = 0.64$), with a large effect, $t(141) = 7.87$, $p < .001$, Cohen's $d = 1.41$. Likewise, the BDD sample had significantly higher levels of shame and defectiveness beliefs compared to a psychiatric outpatient sample ($M = 2.17$, $SD = 1.19$), with a moderately large effect, $t(187) = 4.98$, $p < .001$, Cohen's $d = .72$.

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Aim 2

As hypothesized, baseline shame and defectiveness beliefs were moderately, significantly correlated with SI and hopelessness (Table 3). Shame was weakly, marginally correlated with BDD severity and, contrary to hypotheses, was not significantly associated with depression severity or level of delusionality (Table 3).

Aim 3

A paired samples *t* test indicated that YSQ-DS scores were significantly lower at week 14 ($M = 2.29$, $SD = 1.41$) compared to baseline ($M = 3.24$, $SD = 1.63$), with a moderately-large effect $t(50) = 5.23$, $p < .001$, Cohen's $d = .74$. One-way ANOVAs comparing YSQ-DS scores between treatment responders and non-responders indicated that, as expected, YSQ-DS scores did not differ at baseline by responder status, $F(1, 81) = .19$, $p = .66$. However, as hypothesized YSQ-DS scores differed significantly at week 14. Specifically, treatment responders ($M = 2.03$, $SD = 1.28$) had significantly lower YSQ-DS scores compared to treatment non-responders ($M = 3.27$, $SD = 1.43$) at week 14, with a large effect, $F(1, 55) = 8.01$, $p < .01$, Cohen's $d = .92$.

Aim 4

See Figure 1 for a depiction of the model, including standardized path estimates (β) and significance levels. Reductions in shame and defectiveness beliefs across treatment corresponded significantly with reductions in SI ($b = .18$, $p < .01$) and hopelessness ($b = 1.39$, $p < .001$), after controlling for changes in BDD and depression severity.

Discussion

Despite clinical conceptualizations of BDD that highlight the important role of shame (Janet, 1903; Rosen, 1995; Phillips, 1996), research on shame in BDD is very limited, especially in clinical samples. This is surprising, given that shame is a highly distressing emotion that is associated with social withdrawal, depression, and suicidality across other psychiatric and medical samples (Hastings et al., 2000; Tangney and Dearing, 2002). To address this gap, the present study involved a longitudinal empirical examination of shame in a carefully diagnosed clinical sample of adults with BDD. The study addressed previously unexamined key questions that further our empirical knowledge about the role of shame in BDD's presentation and treatment.

Levels of shame and defectiveness beliefs were elevated in our BDD sample, in comparison to HC and psychiatric outpatient samples. These findings provide empirical support for the clinical observation that shame is prominent in BDD, and findings are consistent with two preliminary studies with smaller BDD samples that compared levels of shame in BDD to psychiatric and healthy comparison groups (Clerkin et al., 2014; Kollei et al., 2012). Building on prior online analogue studies (Weingarden et al., 2016; Weingarden et al., 2017), the present study is the first to examine the correlations of shame with certain adverse outcomes in a clinical BDD sample. Considering the elevated rates of suicide attempts in BDD, it is noteworthy that shame is moderately-strongly correlated with SI and

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hopelessness. Assessing shame and defectiveness beliefs in BDD patients may provide added useful information when evaluating patients' risk level.

Additionally, the present study was the first to examine whether shame changed across SSRI treatment, the gold-standard pharmacologic intervention for BDD. To the best of our knowledge no prior study has examined whether psychopharmacologic treatments affect shame in any psychiatric disorder. Shame significantly reduced across 14 weeks of escitalopram treatment, with a moderately large effect. Given that shame is a highly distressing emotion that is associated with elevated suicide risk, and was significantly associated with SI in the present sample, it is encouraging that we found preliminary evidence that SSRI treatment for BDD successfully reduces shame. Future research should examine potential underlying mechanisms of change in shame across SSRI treatment for BDD.

Moreover, our longitudinal path analysis indicates that reductions in shame and defectiveness beliefs across SSRI treatment were significantly associated with reductions in both hopelessness and SI, with moderately strong effects. This finding is especially noteworthy given that reductions in BDD severity and depression did not better account for results. This finding suggests that shame should be considered an important target in BDD treatment, above and beyond targeting depression or BDD severity, and that reducing shame may reduce SI and, potentially, risk for suicide.

This study has several limitations. It used published scores for comparison groups rather than collecting BDD and comparison sample data within the same study. Therefore, it is difficult to know whether sample differences (e.g., in comorbidities, exclusion criteria) may have influenced differences in levels of shame. In addition, the treatment examined in this report was open-label. Therefore, it is possible that shame reduced due to the passage of time, or due to being followed by a mental health provider, rather than because of SSRI treatment. Results showing that shame reduced more among treatment responders compared to non-responders lend some additional evidence that reductions in shame were associated with treatment, but future research should examine changes in shame in a placebo-controlled trial. While the BDI-II suicidal thoughts item is widely used as a measure of suicide risk clinically and in research, future studies should use a comprehensive, clinician-rated measure of suicide risk rather than a single-item measure. Likewise, while the YSQ-SF is a well-validated measure of shame and defectiveness beliefs, future research may benefit from inclusion of a BDD-specific body shame measure, such as the Body-Focused Shame and Guilt Scale (BF-SGS; Weingarden et al., 2015), as a complement to measures of general shame. Moreover, findings related to changes in SI may be somewhat limited because more highly suicidal individuals were excluded from this study. This exclusion criterion likely resulted in a restricted range in SI. However, a restricted range yields a *lower* likelihood of finding statistically significant results. Thus, it is unlikely that this limitation resulted in false positive findings. Additionally, path analysis results may be limited by the sample size. Significant path analysis findings speak to the robustness of these results. Nevertheless, future studies should examine the associations between shame and suicide risk in a larger sample with a broader range of SI.

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Given the high rates of suicide in BDD, it is critically important to investigate potential risk factors for suicide and mechanisms for reducing suicide risk in BDD sufferers. The present study lends new evidence about the central role of shame in BDD and our results raise the possibility that reducing shame via SSRI treatment may be one potential mechanism for reducing risk of suicidality, and potentially completed suicide, in BDD sufferers. Further research is needed to examine this important question.

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Conflicts of Interest and Sources of Funding

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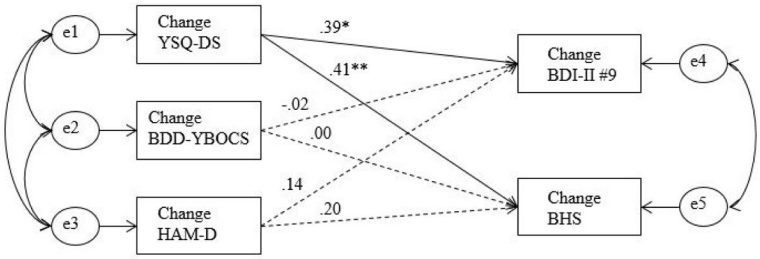

Figure 1.

Path diagram with standardized path estimates shown.

Note: Structural paths shown with a dotted line indicate non-significant paths. YSQ-DS = Young Schema Questionnaire Defectiveness-Shame Subscale; BDD-YBOCS = Yale-Brown Obsessive Compulsive Scale, Modified for Body Dysmorphic Disorder; HAM-D = Hamilton Depression Rating Scale; BDI-II #9 = Beck Depression Inventory-II Item 9 (suicidality item); BHS = Beck Hopelessness Scale.

$^{*}p < .01$. $^{**}p < .001$.

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Table 1

Demographic Characteristics (N = 83)

	***M* (*SD*) / n (%)**
Age	34.6 (12.7)
Sex - female	56 (67.5)
Race[a]	
White	73 (88.0)
American Indian/Alaskan Native	5 (6.0)
Asian	2 (2.4)
Black/African American	6 (7.2)
Ethnicity - Hispanic	9 (10.8)
Marital status	
Single	52 (62.7)
Married	15 (18.1)
Divorced/Separated	13 (15.7)
Other	3 (3.6)

Note.

[a]Percentages do not add up to 100 because 3 participants identified as more than one race.

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Table 2

Current Comorbid Psychiatric Diagnoses at Baseline (N = 83)

	n (%)
Major depressive disorder	33 (39.8)
Social anxiety disorder	24 (28.9)
Obsessive-compulsive disorder	14 (16.9)
Specific phobia	11 (13.3)
Generalized anxiety disorder	6 (7.2)
Eating disorder – Not otherwise Specified	5 (6.0)
Binge eating disorder	3 (3.6)
Dysthymia	3 (3.6)
Panic disorder	3 (3.6)
Agoraphobia	2 (2.4)
Posttraumatic stress disorder	2 (2.4)
Trichotillomania	2 (2.4)
Anorexia nervosa	1 (1.2)
Bulimia nervosa	1 (1.2)

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Table 3

Means, Standard Deviations, and Intercorrelations among Primary Clinical Measures at Baseline

	M (*SD*)	1	2	3	4	5
1. YSQ-DS	3.17 (1.57)	-	-	-	-	-
2. BDD-YBOCS	32.87 (5.46)	.22[a]	-	-	-	-
3. HAM-D	11.05 (6.75)	.20	.49***	-	-	-
4. BDI #9	0.36 (0.53)	.39***	.26*	.44***	-	-
5. BHS	9.35 (5.79)	.50***	.31**	.48***	.42***	-
6. BABS	15.69 (4.67)	.18	.42***	.20	.16	.17

Note: YSQ-DS = Young Schema Questionnaire–Short Form, defectiveness/shame scale; BDD-YBOCS = Yale-Brown Obsessive Compulsive Scale Modified for BDD; HAM-D = Hamilton Depression Rating Scale. BDI #9 = Beck Depression Inventory-II suicidality item 9; BHS = Beck Hopelessness Scale; BABS = Brown Assessment of Beliefs Scale.

[a] $p = .05$.

* $p < .05$.

** $p < .01$.

*** $p < .001$.