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The Body Dysmorphic Disorder Symptom Scale: Development and preliminary validation of a self-report scale of symptom specific dysfunction

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Abstract

The Body Dysmorphic Disorder Symptom Scale (BDD-SS) is a new self-report measure used to examine the severity of a wide variety of symptoms associated with body dysmorphic disorder (BDD). The BDD-SS was designed to differentiate, for each group of symptoms, the number of symptoms endorsed and their severity. This report evaluates and compares the psychometric characteristics of the BDD-SS in relation to other measures of BDD, body image, and depression in 99 adult participants diagnosed with BDD. Total scores of the BDD-SS showed good reliability and convergent validity and moderate discriminant validity. Analyses of the individual BDD-SS symptom groups confirmed the reliability of the checking, grooming, weight/shape, and cognition groups. The current findings indicate that the BDD-SS can be quickly administered and used to examine the severity of heterogeneous BDD symptoms for research and clinical purposes.

Keywords

Body dysmorphic disorder; Self-report; Symptom subtypes; Symptom severity; Psychometric properties

Introduction

Measures of body dysmorphic disorder (BDD) and associated symptoms typically fall into one of three categories: measures of overall severity, diagnostic and screening measures, and measures of body image beliefs and satisfaction. The current standard for assessing body dysmorphic disorder, the Yale-Brown Obsessive Compulsive Scale, Modified for BDD (BDD-YBOCS; Phillips et al., 1997), measures the severity of BDD-related obsessions, compulsions, and avoidance. The BDD-YBOCS, a modified version of the original Y-BOCS (Goodman, Price, Rasmussen, Mazure, Delgado, et al., 1989; Goodman, Price, Rasmussen, Mazure, Fleischmann, et al., 1989), has strong psychometric properties and clinical and

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research utility. Although its total score is practical for treatment outcome research, the BDD-YBOCS does not capture comprehensive information with regard to specific BDD symptoms (e.g., specific cognitions).

The most commonly used measure for screening and diagnosis is the Structured Clinical Interview for DSM (First, Spitzer, Gibbon, & Williams, 2002; First, Williams, Karg, & Spitzer, 2014), which includes a diagnostic module specific to body dysmorphic disorder. The Body Dysmorphic Disorder Examination (Rosen & Reiter, 1996), designed to measure dysmorphic concern in eating disorders, also provides information with regard total severity and diagnostic status yielding a total score and a suggested cutoff for BDD diagnosis. However, its use as a measure for BDD has waned in recent years perhaps due to its particular relevance to eating disorders rather than to BDD specifically. Other screening measures include the Body Dysmorphic Disorder Questionnaire (BDDQ) which consists of yes or no questions reflective of the DSM-IV diagnostic criteria for BDD (Phillips, Atala, & Pope, 1995). Recognizing the gaps in the field with regard to screening for BDD, Mancuso and colleagues sought to validate the 7-item self-report Dysmorphic Concern Questions (DCQ) as a screening measure for BDD. The DCQ yields information with regard to potential diagnostic status, but similar to the aforementioned measures, does not assess the severity or range of symptoms specific to BDD (Mancuso, Knoesen, & Castle, 2010).

The extant literature additionally includes several self-report measures concerning body image beliefs and behaviors. Specifically, the Appearance Schemas Inventory-Revised (ASI-R) assesses psychological investment in physical appearance, as well as the importance, meaning, and influence of appearance in one's life (Cash, 2008; Cash, Melnyk, & Hrabosky, 2004). The Multidimensional Body-Self Relations Questionnaire (MBSRQ) measures several facets of body image, including evaluation of and orientation toward appearance, fitness, and health (Brown, Cash, & Mikulka, 1990; Cash, 2000). The scale includes subscales related to weight and more general body satisfaction. The more recently developed Body Image Disturbance Questionnaire (BIDQ) measures concern and preoccupation with physical appearance, as well as associated distress, impairment, and avoidance (Cash, 2008; Cash, Phillips, Santos, & Hrabosky, 2004). Although widely used in body image research, these questionnaires are not specific to the multitude of symptoms that characterize BDD. Rather, they tend to assess more global or eating disorder-specific body image beliefs and behaviors. Body image beliefs and behaviors in individuals with BDD often differ markedly from those of individuals with eating disorders, thus suggesting the need for separate assessments (Hrabosky et al., 2009).

The heterogeneous nature of BDD has received growing attention. Most patients with BDD engage in a range of compulsive behaviors to check, hide, or improve the perceived defect (Phillips, Menard, Fay, & Weisberg, 2005). Indeed, an additional criterion (B) was added to the newly revised diagnostic criteria to capture such repetitive behaviors (e.g., mirror checking, excessive grooming, skin picking, or surgery seeking) or mental acts (e.g., comparing their appearance with that of others) in BDD (APA, 2013). Similarly, a specifier for muscle dysmorphia was added to further characterize individuals (mostly male) who are preoccupied with body build, considering themselves insufficiently big or muscular.

Despite the usefulness of current assessments for diagnostic, clinical, and research purposes, they do not fully capture the broad range of symptoms that mark BDD. Thus, we designed the Body Dysmorphic Disorder Symptom Scale (BDD-SS, Wilhelm, 2006; Wilhelm, Phillips, & Steketee, 2013; available upon request) to create a comprehensive instrument that provides a profile of the severity of a wide range of BDD symptoms and one that could be easily administered and interpreted in clinical and research settings. The BDD-SS could prove useful in elucidating the prevalence of specific symptoms and behaviors in BDD. Importantly, the BDD-SS captures several key aspects of BDD (compulsive behaviors, negative appearance-related cognitions, and avoidance) that need assessment, monitoring, and targeting in treatment. This new scale would allow clinicians to monitor progress in treatment over time by specific symptom dimension, rather than through more global severity measures. Such a measure could provide vital information as to how various BDD symptoms respond to interventions and help clinicians to adapt treatments accordingly. Thus, the current study was an initial step in evaluating a BDD self-report measure that could achieve both screening and severity scaling with good psychometrics. Specifically, we assessed the internal consistency of the BDD-SS. We also evaluated the convergent and discriminant validity of the BDD-SS with measures of BDD (BDD-YBOCS and BABS), body image (MBSRQ-AE and MBSRQ-AO), and depressive symptoms (the BDI-II).

Method

Participants and Procedures

Participants were 99 adults (age 18 or older) with a primary diagnosis of DSM-IV BDD (SCID, First et al., 2002) and a minimum score of 20 on the BDD-YBOCS, who presented for participation in research trials conducted at the Massachusetts General Hospital (MGH) OCD and Related Disorders program from 09/2004 to 01/2013. Patients had not begun any treatment in our clinic. The instruments described below were completed as part of a one-visit initial evaluation for participation in research studies. Clinician-based assessments were administered by doctoral-level clinicians. Participants completed self-report measures either with paper-and-pencil questionnaires or via an electronic data capture system. All participants provided informed consent and procedures were approved by the MGH Institutional Review Board. The sample was 58% female, predominately white ($n = 83$) with a mean age of 30.7 years ($SD = 11.2$). The most common comorbid Axis I diagnoses were social anxiety disorder ($n = 18$); major depressive disorder ($n = 16$), and specific phobia ($n = 14$).

Measures

The **Structured Clinical Interview for DSM-IV** (SCID; First et al., 2002), a reliable and valid semi-structured interview and the standard for diagnosing current and lifetime Axis I disorders, was used to diagnose BDD and comorbid disorders.

The **BDD-Symptom Scale** (BDD-SS; Wilhelm, 2006; Wilhelm et al., 2013) assesses the presence and severity of BDD symptoms. Items were generated by experts in BDD by considering the principles underlying cognitive-behavioral models of BDD (e.g., Neziroglu, Khemlani-Patel, & Veale, 2008; Veale, 2004; Wilhelm et al., 2013), which purport that BDD

is developed and maintained by the reinforcement of maladaptive behaviors, including rituals (e.g., mirror checking and grooming) and avoidance, and dysfunctional cognitions (e.g., negative appraisals of body image). To establish content validity, a panel of expert clinicians (faculty members from MGH OCD and Related Disorders Program who treat and or conduct research in BDD) reviewed all items. The BDD-SS contains 54 symptoms divided into 7 conceptually similar symptom groups, with each group comprised of 2–19 specific symptoms. The symptom groups are: checking rituals, grooming rituals, shape/weight-related rituals, hair pulling/skin picking rituals, surgery/dermatology seeking rituals, avoidance, and BDD-related cognitions. Patients endorse (yes/no) symptoms they experienced in the past week. In groups where at least one symptom is endorsed, patients are asked to rate the overall (combined) severity of the symptoms within the group on a 0–10 scale (0 = *no problem*; 10 = *very severe*). Severity within a symptom group refers to the subjective severity associated with the whole group, not the average ratings across symptoms within the group. Thus, the severity score for each symptom group is always at least as high as the severity rating for a particular symptom within that group. The BDD-SS provides two summary scores: BDD-SS Severity (sum of all severity ratings; range 0–70) and BDD-SS Symptom (total number of symptoms endorsed; range 0–54).

The **Yale Brown Obsessive Compulsive Scale modified for BDD** (BDD-YBOCS; Phillips et al., 1997) is a valid and reliable, 12-item semi-structured clinician-administered measure of BDD symptom severity. The BDD-YBOCS has demonstrated good internal consistency ($\alpha = .80$; Phillips et al., 1997). Scores on the BDD YBOCS range from 0 to 48, with higher scores indicating more severe BDD symptoms. Internal consistency from the current sample is .54.

The **Brown Assessment of Beliefs Scale** (BABS; Eisen et al., 1998) is a valid and reliable 7-item clinician-administered measure of current insight/delusionality about appearance related beliefs. Scores range from 0 to 24; higher scores reflect poorer insight/greater delusionality. The BABS has been shown to have high internal consistency ($\alpha = .87$; Eisen et al., 1998). Internal consistency from the current sample is .73.

The **Multidimensional Body-Self Relations Questionnaire-Appearance Scales** is a 34-item assessment of body image (Brown et al., 1990; Cash, 2000). Some participants completed the 69-item version and scores were converted to the 34-item version. The study used two of the five MBSRQ-AS subscales: The 7-item **Appearance Evaluation (AE)** subscale assesses positive and negative appraisals of one's physical appearance, with lower scores indicative of more negative evaluative body image. Internal consistency was .88 (Cash, 2000). The 12-item **Appearance Orientation (AO)** subscale measures one's extent of cognitive and behavioral investment in one's appearance. High AO scores reflect greater importance on looking attractive and time spent engaging in behaviors to manage or enhance one's appearance (e.g., grooming). Internal consistency was .88 (Cash, 2000). Internal consistency from the current sample is .79.

The **Beck Depression Inventory** (BDI-II; Beck, Steer, & Brown, 1996), a widely used 21-item self-report inventory of depression was used to assess depression severity. The BDI-II has been shown to have excellent internal consistency with psychiatric subjects ($\alpha = .92$) and

among non-psychiatric controls ($\alpha = .93$) and to have excellent test–retest reliability ($r = .93$; Beck et al., 1996). The BDI-II has also been shown to have excellent concurrent validity with various measures (Beck et al., 1996). Internal consistency from the current sample is .92.

Internal consistency for the BDD-SS Severity and BDD-SS Symptom scores was calculated using Cronbach's α , and KR-20, respectively. Next, corrected item-total correlation coefficients for symptom items within each group were calculated. Convergent and discriminant validity of the BDD-SS Severity and BDD-SS Symptom scores were evaluated with the BDD-YBOCS, BABS, MBSRQ-AE, MBSRQ-AO, and the BDI-II. All analyses were conducted using SPSS 21.

Results

The means and standard deviations of study variables were: BDD-YBOCS ($M = 30.6$, $SD = 4.2$), BABS ($M = 15.2$, $SD = 4.4$), BDI-II ($M = 18.4$, $SD = 11.6$), MBSRQ-AE ($M = 2.3$, $SD = 0.78$), MBSRQ-AO ($M = 4.3$, $SD = 0.50$), BDD-SS severity ($M = 36.2$, $SD = 10.9$), and BDD-SS symptoms ($M = 26.8$, $SD = 6.8$). The internal consistency for the BDD-SS Symptom scale was KR-20 = .81. The internal consistency for the BDD-SS Severity scale was Cronbach's $\alpha = .75$.

BDD-SS Categories and Items: Descriptive Statistics

The endorsement rates for the individual symptom items of the BDD-SS are presented in Table 1. There was a wide range in the rates of endorsement, with the highest endorsed items being “Checking or inspecting certain parts of my body” and “comparing my appearance to others’ appearance” (96%), while the lowest endorsed item was “Using steroids” (0%). Table 2 displays the descriptive statistics for the BDD-SS severity ratings. All participants endorsed at least one symptom in the checking, avoidance, and cognitions groups. Average severity scores across the groups ranged from a 5.3 (Weight/Shape) to 7.5 (Cognitions).

BDD-SS Categories: Internal Consistency

A range of corrected item-total coefficients emerged, from .13 (Hiding appearance) to .59 (Eating in special ways; see Table 1). Next, KR-20 and mean inter-item correlations were computed within each symptom group (see Table 3). KR-20 is an appropriate statistic when item-level data are binary, and is interpreted the same as Cronbach's α . Further, mean inter-item correlations were chosen as KR-20 is strongly influenced by the number of items; given that the some of the symptoms groups include only a small number of items, this metric provides useful additional information. The KR-20 values ranged from .29 (Picking/Plucking) to .82 (Cognitions). However, the Picking/Plucking scale was only based on 2 items. The mean inter-item correlations ranged from .12 (Avoidance) to .40 (Weight/Shape).

Convergent and Discriminant Validity of the BDD-SS Summary Scores

Results from convergent and discriminant validity are in Table 4. The BDD-SS severity score correlated nonsignificantly with the BABS ($r = -.07$) and moderately with the BDD-YBOCS ($r = .46$), whereas for the BDD-SS symptom score there was a small association

with the BABS ($r = .24$) and a large association with the BDD-YBOCS ($r = .66$). The BDD-SS severity scale correlated moderately with the MBSRQ-AO subscale ($r = .37$) and nonsignificantly with the MBSRQ-AO subscale ($r = -.16$), whereas the BDD symptom score correlated moderately with both the MBSRQ-AO ($r = .42$) and AE subscales ($r = .30$). The BDD-SS severity and BDD-SS symptom scales demonstrated small and moderate associations respectively with the BDI-II ($r = .26$ and $r = .32$). These findings suggest that the BDD-SS symptom scale is more closely associated with established measures of BDD (i.e., BDD-YBOCS and BABS) and body image (MBSRQ) than the BDD-SS severity scale.

Discussion

A growing body of research points to the heterogeneous nature of BDD (APA, 2013; Wilhelm et al., 2014). Measures are available to assess global BDD severity and more general body dissatisfaction. A measure that adequately captures both core symptoms of BDD and unique symptoms that may affect only a subset of individuals (e.g., skin picking, muscle dysmorphia) is needed. In the present article, we introduced the BDD-SS and conducted an initial examination of its psychometric properties. The BDD-SS is a brief, self-report scale that captures a profile of BDD symptoms and their severity levels over a specific time period. Initial results from the development and validation of the BDD-SS suggest that the BDD-SS is a reliable and valid instrument when considering all items. Thus, the BDD-SS could be a useful tool for clinical and research purposes in order to characterize individuals and samples.

The BDD-SS yields two summary scores, a total severity score (the sum of the 7 severity scores) and a total symptom score (the number of specific symptoms endorsed). Supporting their convergent validity, both total scores correlated strongly with the BDD-YBOCS (Phillips et al., 1997). The total BDD-SS symptom score correlated more strongly than the total BDD-SS severity score with the BDD-YBOCS. Thus, despite the moderate correlation between the total BDD-SS symptom and severity scores ($r = .55$), the former was more closely associated with global BDD severity (BDD-YBOCS), which is independent from the number of symptoms endorsed. It may be that number of symptoms endorsed can be used as a proxy of symptom severity and to gauge treatment effects over time. However, both of the BDD-SS summary scores are based in part on the number of symptoms endorsed, and thus neither should be regarded as a pure measure of severity.

There are limitations to the BDD-SS that should be highlighted. Firstly, there are some disadvantages to the scoring system we used. The BDD-SS summary scores are confounded with the number of symptoms; therefore it is possible that an individual with few types of symptoms that are very severe may, in error, receive a lower total severity and symptom score than an individual with many symptoms, but who is less impaired. This limitation is not unique to the BDD-SS and affects other measures frequently administered by clinicians and researchers (e.g., the Obsessive Compulsive Symptoms Rating Scale; Yovel et al., 2012). Thus, there is precedence for the use of this scoring system in the field. One major advantage of our simple scoring system is that the scores can be quickly and easily calculated without a calculator within seconds, which might enhance the clinical utility of our measure. Rather than calculate a total score, one could also look at the BDD-SS as a

profile of item scores used to guide treatment planning. Clinically, we use this approach routinely. In a recently published treatment manual on CBT for BDD, we recommend any symptom group with a severity level of 5 (moderate) should warrant clinical attention (Wilhelm et al., 2013). Items with a severity of 0 provide no evidence of need for clinical attention. This can inform clinical decision making and help to evaluate the effectiveness of treatment. For example, high severity on cosmetic symptoms might guide a clinician to using a modular approach early in treatment incorporating motivational interviewing and psychoeducation about the ineffectiveness of cosmetic treatment, whereas multiple obsessions and compulsions might lead to an integrative CBT approach targeting first the most severe cluster followed by less severe ones.

A second limitation of our measure pertains to some of its psychometrics. Whereas the BDD-YBOCS provides a single global measure of symptom severity, an important aim of the BDD-SS is to capture the severity of a wide range of symptoms associated with BDD. Our results suggest that the BDD-SS is a reliable and valid instrument when considering all items. However, internal consistency decreased when considering some of the specific clusters, especially for those clusters with few items within a cluster internal consistency where outcomes were bound to be lower. Symptom groups of the BDD-SS may require further refinement in order to be adequately captured by a single score. Item selection and symptom clusters for the BDD-SS were theoretically informed. However, the symptom groups of the BDD-SS were not designed to measure distinct symptom constructs and it is possible that some items might fit better within a different symptom group (e.g., “becoming upset by compliments” might fit better under Cognitions than Avoidance). Given the subject to item ratio, factorial analysis is beyond the scope of the current paper; however, future research should empirically assess its structure via factor analysis to determine support for the validity of the specific BDD-SS groups. Some of the internal consistency estimates of measures from our sample are somewhat low, and thus our results need to be interpreted with caution.

Despite its current limitations, the fine-grained assessment structure of the BDD-SS might ultimately help us gain a better understanding of the nature of BDD. In addition to negative cognitions and avoidance, all participants endorsed at least one compulsive behavior, most commonly checking and grooming rituals. This is consistent with prior research (Phillips et al., 2005, 2010) and further supports the recent inclusion of the ritual criterion (Criterion B) in DSM 5. There are likely non-specific symptom types that cut across symptom groups, for example, the severity scores of certain symptoms such as checking compulsions, avoidance, or negative appearance-related cognitions, that may be linked to several broad symptom subtypes. Assessment of common symptom types may benefit research into the etiology of BDD as well as an understanding of the mechanisms associated with successful treatment outcome. At the same time, results highlight possible subsets of the disorder. For example, some, but not all participants, endorsed behaviors related to weight/shape, picking/plucking, and surgical/dermatological procedures. The variable endorsement rate of symptoms in this study provides further support for the heterogeneity of BDD and suggests the need for specific assessment and treatment of various symptoms. Indeed, modular cognitive-behavioral therapy for BDD (CBT-BDD; Wilhelm et al., 2013), which addresses both core symptoms of BDD and provides specific strategies to flexibly address symptoms that may

affect some but not all individuals with BDD (e.g., cosmetic surgery seeking, hair pulling/skin picking, mood management, and shape/weight/muscularity concerns), has been shown to be efficacious in reducing BDD severity (Wilhelm et al., 2014).

Another limitation of the current study is that it neither includes test–retest reliability data nor data on the change of this measure with treatment. Future studies should focus on the extent to which changes in BDD-SS scores reflect clinically significant improvement that occurs with treatment. In addition, it will be important to establish clinical cut-scores for the distinction between body image dissatisfaction and BDD and to provide a normative sample. Future research on the BDD-SS will also need to examine multiple samples, with adequate composition and sample size, to further establish screening value and severity scaling. These studies should also examine its test–retest reliability and its factorial structure. In addition, the BDD-SS should be examined in the context of known group validity for specific subtypes of BDD, such as muscle dysmorphia.

In sum, our initial results suggest that the BDD-SS appears to be a generally reliable and valid comprehensive measure of BDD. It (1) covers a wide range of BDD and BDD-related symptoms, (2) provides a detailed profile of BDD severity, (3) can be administered within 10 min as a self report measure, (4) can be easily scored and interpreted, and it (5) can be used to target specific symptoms in treatment. Future research is needed to further develop and test the BDD-SS. It is our hope that clinicians and researchers alike will use the information it provides to enhance our understanding of the nature and treatment of BDD.

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Table 1

Endorsement rates and within-category corrected item-total correlations of the BDD-SS symptoms.

Category Symptom	Endorsement rate <i>n</i> (%)	Category corrected item-total correlation
Checking		
Checking or inspecting certain parts of my body	95 (96)	.32
Measuring or counting body part	31 (31)	.17
Touching or feeling body part	84 (85)	.40
Asking questions about my appearance over and over again, even though I understood the answer the first time	50 (51)	.41
Mentally reviewing past events, conversations, and actions to find out how people reacted to my appearance	72 (73)	.38
Checking mirrors repeatedly	86 (87)	.31
Comparing my appearance to others' appearance (in person, in pictures or in the media)	95 (96)	.16
Scrutinizing others	72 (73)	.33
Grooming		
Grooming myself longer than necessary	58 (59)	.53
Spending a lot of money to improve my appearance	28 (28)	.30
Tanning	13 (13)	.28
Combing hair	39 (39)	.58
Applying makeup	43 (43)	.32
Shaving	53 (54)	.39
Changing clothes	61 (62)	.31
Weight/Shape		
Lifting weights	39 (40)	.40
Using steroids	0 (0)	NA
Exercising excessively	19 (19)	.50
Eating in special ways	39 (39)	.59
Picking/Plucking		
Skin picking	39 (39)	.17
Pulling or plucking hair	21 (21)	.17
Avoidance		
Avoiding mirrors or reflective surfaces	49 (49)	.15
Avoiding social situations where family, friends, acquaintances, co-workers are present (work, parties, family gatherings, meetings, talking in small groups, having a conversation, dating, speaking to boss or supervisor)	67 (68)	.34
Avoiding public areas (shopping, stores, busy streets, restaurants, movies, buses, trains, parks, waiting in lines, public restrooms)	47 (47)	.41
Avoiding intimate or close physical contact with others (sexual activity, hugging, kissing, dancing, talking closely)	57 (58)	.32
Avoiding physical activities like exercise or recreation because of concern about appearance	44 (44)	.39
Avoiding being seen nude or with few clothes	57 (58)	.19

Category Symptom	Endorsement rate <i>n</i> (%)	Category corrected item-total correlation
Hiding appearance (with make-up, clothing, hairstyle, jewelry, hats, hands, or body position)	78 (79)	.13
Changing appearance (getting a haircut)	26 (26)	.21
Discounting compliments	80 (81)	.25
Becoming upset by compliments	36 (36)	.14
Surgical/Dermatological		
Visiting plastic surgeons, dermatologists or dentists to improve appearance	15 (15)	.45
Obtaining cosmetic surgery	6 (6)	.23
Using medications or topical treatments to correct defects (e.g., skin, baldness)	46 (46)	.20
Applying self-surgery	4 (4)	.15
Cognitions		
I believe others are thinking of my appearance	81 (82)	.38
The first thing people notice about me is what's wrong with my appearance	71 (72)	.37
I think that others are staring at or talking about me	54 (55)	.42
I believe others treat me differently because of my physical defects	40 (40)	.53
If my appearance is defective, I am worthless	43 (43)	.49
If my appearance is defective, I will end up alone and isolated	53 (54)	.45
If my appearance is defective, I am helpless	45 (45)	.43
No one can like me as long as I look the way I do	41 (41)	.47
If my appearance is defective, I am unlovable	39 (39)	.50
I must look perfect	53 (54)	.17
I look defective or abnormal	72 (73)	.37
I am an unattractive person	72 (73)	.34
What I look like is an important part of who I am	87 (88)	.21
Outward appearance is a sign of the inner person	48 (48)	.40
No one else my age looks as bad as I do	31 (31)	.32
If I could look just the way I wish, I would be much happier	94 (95)	.36
People would like me less if they knew what I really looked like	51 (52)	.54
My appearance is more important than my personality, intelligence, values, skills, how I relate to others, and my performance at work or in other settings	35 (35)	.44
If I learn to accept myself, I'll lose my motivation to look better	44 (44)	.30

Table 2

Descriptive statistics for the BDD-SS severity clusters.

Severity group	Endorsement rate <i>n</i> (%)	<i>M</i> (<i>SD</i>)
Checking	99 (100)	7.4 (1.8)
Grooming	93 (94)	6.1 (2.4)
Weight/Shape	56 (57)	5.3 (3.1)
Picking/Plucking	55 (56)	5.2 (3.1)
Avoidance	98 (99)	6.9 (2.0)
Surgical/Dermatological	55 (56)	5.4 (3.1)
Cognitions	99 (100)	7.5 (1.9)

Note: Possible range = 0–10, with higher scores denoting increased severity. Endorsement rate reflects the proportion of participants who endorsed at least one symptom within a given cluster.

Table 3

Internal consistency of BDD-SS symptom clusters.

Cluster	Number of items	Mean inter-item correlation	KR-20
Checking	8	.16	.60
Grooming	6	.23	.68
Weight/Shape	5	.40	.73
Picking/Plucking	2	.17	.29
Avoidance	10	.12	.57
Surgical/Dermatological	4	.18	.42
Cognitions	19	.19	.82

Note: KR-20 = Kuder–Richardson 20.

Table 4

Intercorrelations among study variables.

	BDD-SS symptoms	BDD-SS severity	BDD-SS symptoms	BDD-YBOCS	MBSRQ-AO	MBSRQ-AE	BABS
BDD-SS symptoms	.55***						
BDD-YBOCS	.46***	.64***					
MBSRQ-AO	.37***	.42***	.35**				
MBSRQ-AE	-.16	-.30**	-.18	-.06			
BABS	-.07	.24**	.23*	-.001	-.24*		
BDI-II	.26*	.32**	.19	-.10	-.32**	.02	

Note: Due to missing data, *d*'s vary from 97 to 71.

* $p < .05$.
** $p < .01$.
*** $p < .001$.