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Body image and borderline personality disorder among psychiatric inpatients

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Abstract

Objective: With the exclusion of studies in individuals with eating disorders, few investigators have examined body image issues in patients with borderline personality disorder (BPD). In this study, we examined among psychiatric inpatients relationships between body image and BPD.
Method: In a cross-sectional sample of convenience, we surveyed 126 women in an inpatient psychiatric unit using 5 measures for body image and 2 measures for BPD.
Results: Using standardized cutoffs for BPD diagnosis, participants with BPD demonstrated a number of differentiating features with regard to body image issues. Explicitly, BPD did not seem to be related to being self-conscious about one's appearance, although BPD was related to being more self-conscious, in general. Individuals with BPD were not more invested in their appearance as a source of self-definition but evaluated their own appearance more negatively and were more likely to believe that attractiveness is an important factor for happiness and acceptance. Although BPD was not related to perceptions about the strength and competence of one's own body, those with BPD indicated less comfort and trust in their own bodies. In general, it appeared that body image measures that were more perceptually grounded were more likely to be similar to non-BPD participants, whereas body image measures that were more cognitively grounded were more likely to be statistically significantly different in comparison with non-BPD participants.
Conclusions: Psychiatric inpatients with BPD demonstrate a number of disturbances in body image.

1. Introduction

Body image, or the subjective view of one's physical appearance, is a complex construct and includes a range of dimensions [1]. These dimensions are also referred to as facets or components [2] and appear to be derived from perceptual and cognitive/affective processes [3]. According to current research, negative body image is a potential precursor to future psychopathology, including the development of eating disorders [3,4]. With regard to body image distortion in those with eating disorders, in a meta-analytic examination of 83 studies on body image, researchers reported varying degrees of body image disturbance as a function of eating disorder diagnosis (anorexia nervosa demonstrated the greatest divergence with norms), considerable heterogeneity across studies that was partially attributed to the assessment approach used, and a stronger disturbance in cognitive/affective components than perceptual components [5].

Little is known about body image in borderline personality disorder (BPD). This relationship may ultimately be clinically relevant in a number of ways. For example, does poor body image potentially have any mediating effects on self-harm behavior (ie, does it facilitate self-directed self-harm behavior)? Likewise, are there any potential interrelationships between poor body image and quasi-psychotic phenomena including dissociation? However, as a preliminary investigation, the first task is to identify possible differences in body image between those with vs without BPD.

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Empirical studies on the relationship between body image and BPD are scant. Excluding studies of eating disorder samples, we were only able to locate 3 such studies. In the first study, Sansone et al [6] examined 48 women in an adult outpatient psychiatric clinic; after controlling for body mass index, investigators found relationships between self-rated bodily attractiveness (inverse relationship), facial attractiveness (inverse relationship), and social avoidance due to body image concerns, and scores on a self-report measure for BPD. In a German study, Haaf et al [7] examined 47 women with BPD, patients with bulimia nervosa, and healthy controls and found significant differences in body image scores among the 3 subsamples. However, the original report is in German, and the abstract did not indicate the body image factors that differentiated the BPD subsample from the other 2 subsamples. In a third study, Kazuko and Inoue [8] investigated 32 Japanese outpatients with BPD and compared them with other psychiatric outpatients and 216 college student controls. Distortion in body image was 1 of the 2 factors that most discriminated the BPD subsample from the other 2 subsamples, although the characterization of this feature was not available from the abstract (the original report is in Japanese). To summarize, little is actually known about the specific body image difficulties encountered in individuals with BPD, although such disturbances appear to vaguely characterize these patients.

In the following study, we examined several measures of body image in relationship to BPD among 126 female psychiatric inpatients. We hypothesized that those participants with BPD features would evidence higher disturbances on most of these measures compared with non-BPD participants.

2. Method

2.1. Participants

Participants were female psychiatric inpatients, 18 years or older, who were hospitalized in the psychiatric ward of a suburban hospital in a medium-sized, Midwest city. Both residents and faculty in the department of psychiatry are treatment providers in this setting. The sample was cross-sectional and one of convenience. Exclusion criteria were cognitive (eg, dementia), medical (eg, pain), intellectual, and/or psychiatric impairment (eg, psychosis) that would preclude the completion of a research booklet. A total of 154 inpatients were approached and 126 agreed to participate for a response rate of 81.8%.

The working sample for this study consisted of 126 women who ranged in age from 18 to 74 years (mean, 34.84; SD, 12.19). As for ethnicity, most respondents were white (81.0%), followed by African American (10.3%), Native American (5.6%), Hispanic (1.6%), and "other" (0.8%). One respondent failed to indicate race/ethnicity. As for the highest education attained, 7 respondents failed to indicate this information. Of those who did, 15.1% had not graduated high school, 24.4% had earned at least a 4-year college degree, and 5.9% had earned a graduate degree.

2.2. Procedure

During the routine workday at the study site, one of the investigators (JWC) solicited candidates for the study as time allowed. Upon review of the purpose of the study, including potential risks and benefits, participants were asked to complete a 6-page research booklet, which took about 15 minutes. The cover page of the research booklet contained the various elements of informed consent, and completion of the research booklet was assumed to be implied consent.

The research booklet initially unfolded with queries about demographic information (ie, age, race, highest level of completed education). We then explored participants' body image impressions using 5 self-report measures and BPD using 2 self-report measures. The measures were as follows.

2.2.1. Appearance self-surveillance

The Surveillance Subscale of the Objectified Body Consciousness Scale [9] measures the extent to which one engages in self-surveillance of one's own appearance. Possible responses to these items range from 1 (strongly disagree) to 6 (strongly agree). Intermediate numbers are labeled as "disagree," "somewhat disagree," "somewhat agree," and "agree." Sample items include, "During the day, I think about how I look many times" and "I rarely compare how I look with how other people look." In the current study, Cronbach alpha was .80.

2.2.2. Body image and appearance schemas

The Appearance Schemas Inventory [10] is a measure of the extent to which an individual holds core beliefs about the importance, meaning, and effects of appearance in their own and other people's lives. Underlying the 14 items are 3 subscales: (1) the Body Image Vulnerability Scale (6 items), which "reflects individuals' assumptions that their appearance is inherently defective and socially unacceptable" (pp. 44-45) [10]; (2) the Self-Investment Scale (5 items), which "concerns beliefs that deem appearance as influential and central to self-concept and that reflect the necessity of the pursuit and management of attractiveness" (p. 45) [10]; and (3) the Appearance Stereotyping Scale (3 items), which "entails assumptions about the social goodness/badness of an attractive/unattractive appearance" (p. 45) [10]. Possible responses to these items range from 1 (strongly disagree) to 6 (strongly agree). Intermediate numbers are labeled as "disagree," "somewhat disagree," "somewhat agree," and "agree." Sample items include, "If I could look just as I wish, my life would be much happier" (Body Image Vulnerability Scale), "What I look like is an important part of who I am" (Self-Investment Scale), and "Homely people have a hard time finding happiness" (Appearance Stereotyping Scale). In the current study, Cronbach alpha for each scale was .81, .76, and .71, respectively.

2.2.3. Self-consciousness

Self-consciousness, or the tendency to direct one's attention inward or outward, was measured using the Private Self-Consciousness Scale and the Public Self-Consciousness Scale [11]. The Private Self-Consciousness Scale consists of 10 items (2 reverse-scored) that measure the degree to which an individual focuses their attention on those private aspects of the self that are not observable by others. The Public Self-Consciousness Scale consists of 7 items that measure the degree to which respondents focus their attention on those aspects of the self that are observable by others. Possible responses to these items range from 1 (not at all like me) to 5 (very much like me). Intermediate numbers are labeled as "a little like me," "somewhat like me," and "quite a bit like me." Sample items include, "I am constantly examining my motives" (Private Self-Consciousness Scale) and "I usually worry about making a good impression" (Public Self-Consciousness Scale). In the current study, Cronbach alpha for each scale was .71 and .88, respectively.

2.2.4. Body consciousness

The Body Consciousness Questionnaire [12] is a 15-item scale that is composed of 3 subscales: public body consciousness (6 items), private body consciousness (5 items), and body competence (4 items). "Public body consciousness involves a chronic tendency to focus on and be concerned with the external appearance of the body. Private body consciousness is the disposition to focus on internal bodily sensations" (p. 404) [12]. Body competence involves self-perceptions of bodily strength, coordination, and agility. Possible responses to these items range from 1 (not at all like me) to 5 (very much like me). Intermediate numbers are labeled as "a little like me," "somewhat like me," and "quite a bit like me." Sample items include, "I am very aware of my best and worst facial features" (Public Body Consciousness Scale), "I'm very aware of changes in my body temperature" (Private Body Consciousness Scale), and "For my size, I'm pretty strong" (Body Competence Scale). In the current study, Cronbach alpha for each scale was .83, .64, and .82, respectively.

2.2.5. Lack of familiarity with one's own body

The Body Attitude Test [13] is a 7-item scale that pertains to a lack of familiarity with one's own body. Possible responses to these items range from 1 (never) to 6 (always). Intermediate numbers are labeled as "rarely," "sometimes," "often," and "usually." Two of the items are reverse-scored. Sample items include, "I feel tense in my body" and "There are things going on in my body that frighten me." In the current study, Cronbach alpha was .82.

2.2.6. The borderline personality subscale of the Personality Diagnostic Questionnaire-4

The borderline personality scale of the Personality Diagnostic Questionnaire-4 (PDQ-4) [14] is a 9-item, true/false, self-report measure that consists of the diagnostic criteria for BPD that are listed in the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV)* [15]. A score of 5 or higher is highly suggestive of BPD. Previous versions of the PDQ have been found to be useful screening tools for BPD in both clinical [16,17] and nonclinical [18] settings, including the use of the freestanding borderline personality subscale [19]. In this study, Cronbach alpha for the PDQ-4 was .69.

2.2.7. Self-Harm Inventory

The Self-Harm Inventory (SHI) [20] is a 22-item, yes/no, self-report inventory for BPD that explores participants' histories of self-harm behavior. Each item in the inventory is preceded by the statement, "Have you ever intentionally, or on purpose, ..." and items include, "overdosed," "cut yourself on purpose," "burned yourself on purpose," and "hit yourself." Each endorsement is in the pathological direction, and the SHI total score is the summation of "yes" responses. SHI total scores of 5 or higher are highly suggestive of the diagnosis of BPD. Indeed, in comparison with the Diagnostic Interview for Borderlines [21], the gold standard for the diagnosis of BPD in research settings, the SHI demonstrates an accuracy in diagnosis of 84% [20]. In this study, Cronbach alpha for the SHI was .88

This project was approved by the institutional review boards of the hospital site as well as the university.

3. Results

Within this sample, scores on the PDQ-4 ranged from 0 to 9 (mean, 4.93; SD, 2.35), and scores on the SHI ranged from 0 to 22 (mean, 7.52; SD, 5.28). Age was not statistically significantly correlated with scores on either the PDQ-4 ($r = -.08$, $P < .45$) or the SHI ($r = -.08$, $P < .45$). Of the 126 participants, 76 (60.3%) were positive for BPD on the PDQ-4, 82 (65.1%) participants were positive for BPD on the SHI, and 70 (55.6%) participants were positive on both measures. Using the recommended cutoff of 5 for each measure, the point biserial correlation coefficients between scores on each of the measures of body image and the indicators of BPD (negative vs positive) are presented in Table 1. A positive correlation coefficient indicates that respondents whose PDQ-4 or SHI scores exceeded the clinical cutoff for BPD indicated greater scores on the corresponding measure of body image. The third column in the table indicates the distinction between scoring positively for BPD on both measures (the PDQ-4 and the SHI) vs on only one or neither measure. We included analyses for those who scored positively on both measures because single self-report measures for BPD tend to be overinclusive (ie, we believe that participants who score positively on both measures are more likely to have this disorder). Note that there were a number of statistically significant findings. Participants who scored positively on either or both measures were more likely to report body image vulnerability, appearance

Table 1
Correlations between indicators of body image and BPD (N = 126)

Body image measure	PDQ	SHI	PDQ + SHI
Appearance self-surveillance	.14	.13	.16
Body image and appearance schemas			
Body image vulnerability	.37*	.35*	.40*
Self-investment	.13	.17	.20
Appearance stereotyping	.28*	.26*	.31*
Self-consciousness			
Private self-consciousness	.28*	.31*	.38*
Public self-consciousness	.31*	.32*	.33*
Body consciousness			
Public body consciousness	.19	.07	.21
Private body consciousness	.16	.11	.18
Body competence	−.12	−.16	−.13
Lack of familiarity with one's own body	.45*	.48*	.51*

* $P < .01$.

stereotyping, private self-consciousness, public self-consciousness, and a lack of familiarity with one's own body.

To the extent that BPD and eating disorders are associated, it is possible that the observed relationships between scores on measures of BPD and measures of body image may be mediated by disordered eating. Indeed, 1 item on the PDQ-4 inquires about problems with eating binges, and 2 items on the SHI ask about a history of having "starved yourself" and "abused laxatives." In an attempt to ensure that the correlations presented in Table 1 are not the result of endorsement of these items by those respondents with the most problematic body image, we recalculated the PDQ-4 and SHI scores after removing these items. We then took the conservative step of maintaining the original cutoff score of 5 on each measure. Table 2 presents a replication of Table 1 with these revised measures of BPD (ie, the disordered eating items having been removed). Although the magnitude of the correlations in Table 2 are somewhat reduced compared to Table 1, the overall pattern of statistically significant correlations is very similar.

Table 2
Correlations between indicators of body image and measures of BPD with disordered eating items removed (N = 126)

Body image measure	PDQ	SHI	PDQ + SHI
Appearance self-surveillance	.11	.11	.11
Body image and appearance schemas			
Body image vulnerability	.27*	.33*	.29*
Self-investment	.02	.17	.09
Appearance stereotyping	.14	.27*	.18
Self-consciousness			
Private self-consciousness	.20	.30*	.30*
Public self-consciousness	.28*	.30*	.31*
Body consciousness			
Public body consciousness	.12	.10	.14
Private body consciousness	.18	.05	.19
Body competence	−.12	−.18	−.15
Lack of familiarity with one's own body	.39*	.48*	.47*

The items pertaining to disordered eating were removed before scoring.
* $P < .01$.

Finally, we examined the PDQ-4 item, "When stressed, things happen; like I get paranoid or just 'black out,'" as a possible indicator of dissociation. As expected, this item, which was endorsed by 65 respondents, demonstrated correlations with the Lack of Familiarity with One's Own Body scale ($r = .36$, $P < .001$).

4. Discussion

Collectively, what do these data tell us? According to the findings in this inpatient psychiatric sample, BPD does not appear to be related to being self-conscious about one's appearance, even though BPD was related to being more self-conscious, in general. In addition, individuals with BPD were not more invested in their appearance as a source of self-definition but evaluated their own appearance more negatively and were more likely to believe that attractiveness is an important factor for happiness and acceptance. Although BPD was not related to perceptions about the strength and competence of one's own body, those with BPD indicated less comfort and trust in their own bodies.

In further examining results in this study, a number of body image scales did not generally evidence any statistically significant correlations with BPD (ie, Appearance Self-Surveillance, Self-Investment, Private Body Consciousness, Body Competence). If we closely examine these scales, they respectively capture the checking of superficial physical appearance, the necessity to pursue physical attractiveness, physiological internal sensitivity, and physical competence/fitness/ability. Because these scales evidenced few-to-no statistical correlations with the BPD measures in this study, findings subtly suggest that tangible, concrete, and/or physical aspects of body image (physical appearance and appearance management, internal physiological assessment, body competence/fitness/ability) are relatively unaffected in BPD. Note that many of these variables are shaped by perceptual processes.

In contrast, a number of body image measures in this study evidenced statistically significant associations with BPD (ie, Body Image Vulnerability, Appearance Stereotyping, Private Self-Consciousness, Public Self-Consciousness, Public Body Consciousness, and Lack of Familiarity with One's Own Body). As discussed previously, Body Image Vulnerability reflects defects in appearance and social unacceptability (eg, "What I look like is an important part of who I am," "If people knew how I really look, they would like me less"). Appearance stereotyping refers to assumptions about social goodness/badness as a function of an attractive or unattractive appearance (eg, "Attractive people have it all," "Homely people have a hard time finding happiness"). Private self-consciousness refers to the degree that an individual focuses attention on those aspects of self that are not observable to others (eg, "I'm always trying to figure myself out," "I reflect a lot about myself," "I'm constantly examining my motives"). Finally, public self-

consciousness represents the degree to which the individual focuses attention on those aspects of self that are observable to others (eg, "I'm concerned about my style of doing things," "I'm concerned about how I present myself," "I'm self-conscious about the way I look"). Note that nearly all of these variables appear to subtly and predominantly reflect cognitive processes.

If the preceding interpretations of the data are accurate, these findings indicate that with body image assessment, individuals with BPD are more likely to respond neutrally to items related to perceptual influences (ie, visual, sensory, and kinesthetic discernment) and more negatively to items related to cognitive influences. This proposed pattern suggests the possibility of cognitive distortion, which is likely to be a manifestation of the broader cognitive distortions encountered in individuals with BPD.

Cognitive distortions have long been identified in BPD. For example, Linehan [22] has outlined a number of cognitive distortions in patients with BPD, describing some as "...pessimistic predictions based on selective attention to negative events in the past or present, rather than on verifiable data" (p. 123). Likewise, Layden et al [23] have described cognitive distortions in terms of maladaptive schemas based upon unlovability and incompetence. In turn, the presence of observed cognitive distortions in BPD has generated a number of different therapies, in-part or fully based upon cognitive therapy. For example, De Groot et al [24] explicitly describe the connecting cognitive themes between Schema-Focused Therapy, Dialectical Behavior Therapy, Cognitive Analytic Therapy, Systems Training for Emotional Predictability and Problem Solving, Transference Focused Psychotherapy, Mentalization-Based Treatment, and Interpersonal Reconstructive Therapy.

In a meta-analytic study of patients with eating disorders by Sepuveda et al [5], the cognitive/affective components demonstrated more disturbance than the perceptual components, which seem to reflect the general findings in this study. Although we do not have admission or discharge diagnoses for participants and cannot evaluate the role of eating disorders in this way, we were able to examine the effects of eating pathology on the body image measures used in this study. Overall patterns remained the same. In other words, although eating pathology may a mediating variable, it does not fully explain these findings.

Given the identified presence of a number of body image disturbances in this sample, we do not know if there are any additional potential mediating variables, beyond the possibility of eating disorders. However, examples of mediating variables in this case might be abuse in childhood, posttraumatic stress disorder, and comorbid psychiatric diagnoses such as mood and anxiety disorders.

We wondered whether there might be relationships between body image disturbances, particularly the lack of familiarity with one's own body, and specific items on the SHI that relate to self-mutilation. Multiple analytic queries between the lack of familiarity with one's own body and individual SHI items yielded no clear patterns of response. In other words, a lack of familiarity with one's own body did not consistently relate to items indicating self-mutilation. However, a lack of familiarity with one's own body did demonstrate correlations with the PDQ-4 item associated with dissociation.

With regard to psychotherapy treatment, according to these findings, patients with BPD may evidence global self-consciousness, negative self-evaluation, and overvaluation of attractiveness. These are likely to be key areas for exploration and subsequent cognitive/behavioral intervention. Although cognitive/behavioral intervention has undergone little study in BPD per se, a meta-analysis of available studies indicates that this type of treatment is highly effective in improving body image and that changes are generally maintained at follow-up [25,26]. In a study of eating disorder patients with and without BPD, both subgroups experienced similar outcomes with cognitive-behavioral treatment [27], suggesting that this type of intervention is applicable to and beneficial for patients with BPD.

This study has a number of potential limitations, including the self-report nature of the data; the diagnosis of BPD using self-report measures, which are known to be overinclusive (ie, to generate false positives); use of a sample of convenience (potential sampling bias); and the use of judgment in interpreting cognitive vs perceptual influences with regard to the body image items (ie, items were not strictly perceptual or cognitive). However, this appears to be the most systematic study to date of body image in psychiatric inpatients with BPD. In addition, we used 2 measures of BPD, and the consistency of findings enables some pragmatic general conclusions. According to our findings, in psychiatric inpatients with BPD, there are a number of body image disturbances. Only further research will tease out any potential mediating variables in these observed relationships; the tempering effects, if any, of cognitive vs perceptual influences; and the potential efficacy of cognitive-behavioral interventions for body image disturbances in psychiatric patients with BPD.

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