

WHAT IS EMPTINESS? CLARIFYING THE 7TH CRITERION FOR BORDERLINE PERSONALITY DISORDER

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The present study aims to clarify the 7th DSM-IV criterion for Borderline Personality Disorder: “chronic feelings of emptiness.” Emptiness has been the subject of little empirical investigation. The relationship of emptiness to boredom and other affect-states is uncertain, and patients and clinicians can find it difficult to generate verbal descriptions of emptiness. In the present study, two sets of analyses address the meaning and clinical implications of feeling empty. First, affect-states that co-occur with emptiness are identified in 45 young adults who exhibit a prominent feature of Borderline Personality Disorder (i.e., self-injury). Second, the relationship of chronic emptiness to key psychiatric variables is examined in a large nonclinical sample ($n = 274$). Results indicate that emptiness is negligibly related to boredom, is closely related to feeling hopeless, lonely, and isolated, and is a robust predictor of depression and suicidal ideation (but not anxiety or suicide attempts). Findings are consistent with DSM-IV revisions regarding the 7th criterion for Borderline Personality Disorder. In addition, findings suggest that emptiness reflects pathologically low positive affect and significant psychiatric distress.

The Diagnostic and Statistical Manual of Mental Disorders—4th edition lists nine criteria for diagnosing Borderline Personality Disorder (BPD). Some of the Borderline criteria have been more thoroughly researched than others. For example, there are numerous empirical studies and standardized assessment instruments relevant to the fourth criterion (impulsivity; e.g., Moeller, Barratt, Dougherty, Schmitz, & Swann, 2001; Whiteside & Lynam, 2001), fifth criterion (suicidal/self-mutilative behavior; e.g., Brown, 2001; Klonsky, 2007; Klonsky, Oltmanns, & Turkheimer, 2003),

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and sixth criterion (affective instability; e.g., Koenisberg et al., 2002; Putnam & Silk, 2005). However, other criteria for BPD have received less attention and are therefore less understood.

The present study focuses on the seventh criterion for BPD, "chronic feelings of emptiness." Chronic emptiness is present in approximately 71–73% of BPD patients compared to 26–34% of psychiatric patients without BPD (Grilo et al., 2001; Johansen et al., 2004). The small body of research on emptiness yields a mixed picture. On the one hand, feelings of emptiness have clear clinical relevance. In addition to being a symptom of BPD, feelings of emptiness are related to depressive symptoms (Trull & Widiger, 1991) and may precede suicide attempts (Schnyder et al., 1999). On the other hand, emptiness can be difficult to define and assess. Widiger et al. (1995) explains that "some persons will not know what is meant by feeling 'empty'" (p. 99). Johansen et al. (2004) found that chronic emptiness exhibited the lowest item-total correlation and diagnostic efficiency among the BPD criteria and concluded that this criterion needs to be better defined.

Uncertainty about the emptiness criterion is also apparent in the history of DSM revisions. According to DSM-III and DSM-III-R, the seventh criterion for BPD could be considered present if an individual exhibited either chronic feelings of emptiness or chronic feelings of boredom. Subsequent research suggested that boredom was less discriminating than emptiness in identifying individuals with BPD (Widiger et al., 1995). Thus, DSM-IV no longer equated emptiness and boredom, and the 7th criterion for BPD was revised to include only emptiness. However, research has not addressed the extent to which boredom and emptiness are similar or overlapping affect-states.

The present study aims to clarify the meaning and clinical significance of feelings of emptiness. An initial analysis examines the relationship of emptiness to other affect-states, including boredom, in individuals who exhibit a prominent feature of BPD (i.e., self-injury). A second analysis utilizes a large nonclinical sample to examine the relationship of chronic emptiness to key psychiatric variables including depression, anxiety, and suicidality.

ANALYSIS 1: 45 SELF-INJURERS

METHOD

Participants and Procedure

Participants were 45 young adults (35 women, 10 men) with a history of nonsuicidal self-injury. Participants were recruited through a mass screening of more than 2,000 college students as part of a larger study on the functions of self-injury (Klonsky, in press). The minimum inclusion criterion was five or more instances of self-cutting. More than 90% re-

ported additional self-injurious behaviors such as skin-burning, banging body parts, severe skin scratching, and interfering with wounding healing. Two-thirds of the participants reported a history of mental health treatment. Mean age of the sample was 19.4 years ($SD = 2.2$). Racial composition of the sample was: 89% Caucasian, 4% African American, 4% Asian, and 2% Hispanic. The study was approved by the institutional IRB, and all participants signed informed consent agreements describing the study and informing them that participation was voluntary. Participants received course credit for their participation, or could opt to accept \$15.

Measuring Emptiness and Other Affect-States

A structured interview assessed affect-states present before and after self-injury, including the affect-state “empty inside.” Participants rated each of 40 affect-states for how often they occurred before and after self-injury using a five-point scale: 1—Never, 2—Rarely, 3—Sometimes, 4—Usually, 5—Always. Each affect-state was independently rated by experts in emotions research (J. A. Coan, G. Hajcak) on two dimensions: valence (positive vs. negative) and arousal (higher vs. lower). For example, “frustrated” was rated as being associated with negative valence and high arousal, “sad” with negative valence and low arousal, “excited” with positive valence and high arousal, and “relaxed” with positive valence and low arousal. The entire list of Affect-states and corresponding valence and arousal ratings are listed in the Appendix.

RESULTS

Sixty-seven percent of participants reported feeling “empty inside” at least sometimes before engaging in self-injury, and 47% reported feeling “empty inside” at least sometimes after self-injury. Correlations between ratings for “empty inside” and other affect states are presented in Table 1. Correla-

TABLE 1. Affect-States That Most Often Co-Occur with Feeling “Empty Inside” in 45 Self-Injurers

| Affect-State | Correlation (r) with “Empty Inside” | Valence/Arousal of Affect-State* |
|---------------------|---|---|
| Before Self-Injury | | |
| Hopeless | .73 | Negative/Low |
| Isolated | .71 | Negative/Low |
| Lonely | .70 | Negative/Low |
| Useless | .63 | Negative/Low |
| Worthless | .62 | Negative/Low |
| After Self-Injury | | |
| Hopeless | .84 | Negative/Low |
| Lonely | .74 | Negative/Low |
| Isolated | .69 | Negative/Low |
| Grief | .68 | Negative/High |
| Useless | .66 | Negative/Low |

*Based on independent ratings for each affect-state made by two experts in emotion research (Jim A. Coan and Greg Hajcak)

tions between feeling empty and “bored” were negligible both before self-injury ($r = -.02$, $p = .89$) and after self-injury ($r = -.001$, $p = .95$). In contrast, both before and after self-injury large correlations were found between ratings for “empty inside” and ratings for “hopeless,” “isolated,” and “lonely.” The magnitude of these correlations ranged from .69 to .84. Each of these affect-states reflects a negative affective valence and low affective arousal according to ratings by independent experts.

ANALYSIS 2: 274 COLLEGE STUDENTS

METHOD

Participants and Procedure

Participants were 274 college students (53% women) from lower-level psychology courses who completed the study measures for course credit as part of the Department of Psychology participant pool. All participants provided informed consent and had the option of completing an alternative assignment for equivalent credit. Mean age of the sample was 18.6 years ($SD = 1.2$). Racial composition of the sample was: 38% Caucasian, 38% Asian, 9% Hispanic, 8% African American, and remaining participants indicated their race as “other.”

Measures

The McLean Screening Instrument for Borderline Personality Disorder (MSI-BPD; Zanarini et al., 2003). The MSI-BPD is a self-report measure of the DSM-IV BPD criteria. In the present study, a BPD criterion was considered to be present if the corresponding MSI-BPD item was endorsed. Because two items corresponded to the ninth Borderline criterion (stress-related paranoid ideation or dissociative symptoms), this criterion was considered to be present if either of the two corresponding MSI-BPD items were present. When compared to a validated structured interview, sensitivity and specificity of the MSI-BPD were both above .90 in a sample of young adults (Zanarini et al., 2003).

The *Youth Risk Behaviors Survey* (YRBS; Kann, 2001) is administered by the United States Center for Disease Control semi-annually to a national sample of high-school students to assess a range of health-risk behaviors, including suicidal behaviors. The YRBS items assessing suicidal thoughts and behavior were utilized in the present study. A history of suicidal ideation was measured by the item: “Have you ever seriously thought about killing yourself?” A history of a suicide attempt was measured by the item: “Have you ever tried to kill yourself?” Participants could answer “yes” or “no” to each question.

The short version of the *Depression Anxiety Stress Scales* (DASS-21; Henry & Crawford, 2005) is a self-report instrument including two 7-item scales that measure depression and anxiety. Each item is rated on a 4-point severity scale. The DASS-21 has excellent psychometric properties.

RESULTS

The mean number of criteria endorsed on the MSI-BPD was 3.0 ($SD = 2.4$); 9.9% of participants scored a 7 or higher, a threshold indicative of a likely diagnosis of BPD (Zanarini et al., 2003). The mean score on the DASS-21 depression scale was 7.6 out of 21 ($SD = 7.9$), and the mean score on the DASS-21 anxiety scale was 6.7 out of 21 ($SD = 7.0$). Regarding the suicide variables, 24.7% of participants endorsed a history of suicidal ideation, and 6.9% reported a suicide attempt.

Associations between BPD criteria and clinical variables are reported in Table 2. Correlational analyses were used to examine the relationship between Borderline criteria and depression and anxiety. Chronic emptiness exhibited a robust correlation with depression ($r = .50, p < .001$) and a medium-sized correlation with anxiety ($r = .32, p < .001$). No other Borderline criteria exhibited larger correlations with depression and anxiety. When controlling for anxiety, the partial correlation between emptiness and depression remained robust (partial $r = .41, p < .001$). In contrast, when controlling for depression, the partial correlation between emptiness and anxiety became negligible (partial $r = -.06, p = .30$).

Chi-square analyses were used to examine associations between the presence or absence of each BPD criterion and a history of suicide ideation and attempts. Excepting the suicidal/self-mutilation criterion, chronic emptiness exhibited a larger association with suicidal ideation ($Phi = .37, p > .001$) than any other BPD criterion. The relationship between emptiness and a history of attempted suicide was small ($Phi = .13, p < .05$).

Additional analyses were conducted to determine if associations between emptiness and clinical variables (i.e., anxiety, depression, suicidal ideation, suicide attempts) varied by level of BPD symptomatology. Linear regressions were utilized to evaluate interactions between emptiness and

TABLE 2. Associations of Chronic Feelings of Emptiness and Other Borderline Criteria with Clinical Variables in 274 College Students

| Borderline Criteria ^a | Depression ^b | | Anxiety ^b | | History of Suicidal Ideation ^c | History of Suicide Attempt ^c |
|--|-------------------------|------------|----------------------|------------|---|---|
| | <i>r</i> | <i>r</i> | <i>r</i> | <i>r</i> | <i>Phi</i> | <i>Phi</i> |
| 1—Frantic efforts to avoid abandonment | .27 | .23 | .19 | .12 | .19 | .12 |
| 2—Unstable intense interpersonal relationships | .14 | .14 | .17 | .10 | .17 | .10 |
| 3—Identity disturbance: unstable self-image | .40 | .29 | .28 | .11 | .28 | .11 |
| 4—Impulsivity | .31 | .25 | .19 | .24 | .19 | .24 |
| 5—Suicidal behavior or self-mutilation | .28 | .25 | .48 | .50 | .48 | .50 |
| 6—Affective instability | .34 | .24 | .29 | .11 | .29 | .11 |
| 7—Chronic feelings of emptiness | .50 | .32 | .37 | .13 | .37 | .13 |
| 8—Inappropriate, intense anger | .39 | .32 | .30 | .11 | .30 | .11 |
| 9—Stress-related paranoid ideation | .27 | .27 | .20 | .10 | .20 | .10 |

Note. Phi and r values above .17 are statistically significant at an alpha level of .005; Phi and r values above .19 are statistically significant at an alpha level of .001.

^aAs measured by the McLean Screening Instrument for Borderline Personality Disorder.

^bAs measured by the Depression, Anxiety, and Stress Scales short-version (DASS-21).

^cAs measured by questions from the Youth Risk Behaviors Survey.

number of BPD symptoms (minus the emptiness criterion) in the prediction of clinical variables. In all cases the interactions were not statistically significant; thus, direct effects were similar for individuals with many versus few or no BPD symptoms.

DISCUSSION

Two sets of analyses sought to clarify the meaning and clinical significance of emptiness. In Analysis 1, co-occurrence between feelings of emptiness and boredom was negligible in a sample of self-injurers. This finding suggests that emptiness and boredom are not overlapping constructs, and supports the decision in DSM-IV to no longer equate emptiness with boredom.

In addition, results indicate that emptiness is closely related to feelings of hopelessness, loneliness, and isolation. Notably, each of these affect-states reflect negative affective valence and low affective arousal. From the perspective of Watson and Tellegen's two-dimensional model of affect, such affect-states signify low positive affect rather than high negative affect (Watson & Tellegen, 1985; Watson, Wiese, Vaidya, & Tellegen, 1999). Emptiness might therefore be expected to exhibit a stronger relationship to depression than anxiety since only depression is characterized by low positive affectivity (Clark & Watson, 1991). Results from Analysis 2 support this notion. Chronic emptiness exhibited a robust and unique relationship with depression. In contrast, the relationship of emptiness to anxiety was smaller and became negligible when controlling for features shared by both anxiety and depression. Trull and Widiger (1991) also reported a relationship between emptiness and depression, but did not address whether emptiness would exhibit differential associations with depression versus anxiety.

The substantial overlap between emptiness and hopelessness observed in Analysis 1 is also noteworthy. Because hopelessness is a strong risk factor for suicide (Beck, Brown, Berchick, Stewart, & Steer, 1990), emptiness might also have an important relation to suicidality. For example, Schnyder, Valach, Bichsel, & Michel (1999) reported that emptiness often precedes suicidal behavior. Analysis 2 supports and helps elaborate this association. In Analysis 2, emptiness was more strongly related to suicidal ideation than any other Borderline criterion (excepting the suicide/self-mutilation criterion). In contrast, the relationship between emptiness and suicide attempts was small. This pattern suggests that chronic emptiness contributes to the development of suicidal ideation, but may not predict progression from suicidal ideation to an attempt.

The present study represents an initial effort to clarify the meaning and clinical implications of emptiness. Two limitations should be highlighted. First, one of the study's analyses examined emptiness as an affective state surrounding self-injury whereas DSM-IV criteria for BPD reference *chronic* emptiness. It is not certain that the affect-states found to co-occur with

state emptiness would also be associated with chronic emptiness, a limitation of the study that could be addressed in future research. Second, the study utilized non-BPD samples to study a symptom of BPD. Concern about this limitation is dampened because a sizeable proportion of participants exhibited prominent BPD features, and because the relationship of chronic emptiness to key clinical variables (depression, anxiety, and suicidality) did not differ for participants with more versus fewer BPD symptoms. Nevertheless, it would be useful for future studies to replicate and extend findings in samples of BPD patients.

Future research should also investigate which verbal descriptions accurately characterize emptiness and can aid in its assessment. Widiger et al. (1995, p. 99) recommends the verbal description “without meaning, purpose, or substance.” Results from the present analyses suggest that inquiring about hopelessness, loneliness, and isolation may also be useful for assessing emptiness. Ultimately, it will be important to develop a standardized measure of emptiness, both to improve assessments in clinical settings and to facilitate research on the relationship of emptiness to depression, hopelessness, suicide, and other clinical outcomes.

APPENDIX

Affect-States^a

| | |
|---|---|
| 1. Angry (at others) | 21. Isolated |
| 2. Angry (at self) | 22. Stupid |
| 3. Sad | 23. Relaxed |
| 4. Afraid | 24. Useless |
| 5. <i>Excited</i> | 25. Rejected ^b |
| 6. <i>Happy</i> | 26. Embarrassed ^b |
| 7. Guilty ^b | 27. Bored |
| 8. Lonely | 28. Indifferent ^c |
| 9. Relieved | 29. In a trance ^c |
| 10. Ashamed | 30. Satisfied |
| 11. Empty inside | 31. Out of control |
| 12. Hopeless | 32. Unreal |
| 13. <i>Hopeful</i> | 33. <i>Aroused sexually</i> |
| 14. Worthless | 34. Outside my body ^c |
| 15. Overwhelmed | 35. <i>Mesmerized</i> ^c |
| 16. Anxious | 36. Frustrated |
| 17. Calm | 37. <i>Euphoric</i> |
| 18. Frightened | 38. Unaware of surroundings ^b |
| 19. Hurt Emotionally ^b | 39. Grief |
| 20. Disgust with body ^b | 40. <i>Restless</i> ^c |

^aAffect-states were coded by two-raters on dimensions of valence and arousal. Bold indicates negative valence; no bold indicates positive valence. Italics indicates higher arousal; no italics indicates lower arousal.

^bValence ratings agreed for 39/40 and arousal ratings for 35/40 affect-states. Raters disagreed on whether “Unaware of Surroundings” had a neutral or negative valence. Arousal ratings were discrepant for “Guilty,” “Hurt Emotionally,” “Disgust with Body,” “Rejected,” and “Embarrassed.”

^cThe affect-states “Indifferent,” “In a Trance,” “Outside my Body,” “Mesmerized,” and “Restless” were coded as having neutral valences.

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