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Can *DSM–IV* Borderline Personality Disorder Be Diagnosed via Dimensional Personality Traits? Implications for the DSM-5 Personality Disorder Proposal

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Abstract

The proposal for the diagnosis of personality disorders (PDs) in the Diagnostic and Statistical Manual of Mental Disorders, 5th edition (DSM-5; American Psychiatric Association, in preparation) involves, in part, the use of elevated scores on dimensional personality traits. For instance, the diagnosis of borderline personality disorder (BPD) in the DSM-5 will require evidence of self- and interpersonal impairment as well as elevated scores on traits of emotional lability, anxiousness, separation insecurity, depressivity, impulsivity, risk taking, and hostility. Using a sample of individuals from the community (N=134), half of whom were receiving psychiatric treatment, we tested whether the summation of relevant personality trait scores, using data derived from a measure of the Five-Factor Model of personality (FFM), would result in a construct that corresponds to the *Diagnostic and Statistical Manual of Mental Disorders*, 4th ed. (*DSM–IV*, American Psychiatric Association, 2000) BPD construct as scored by expert consensus ratings. The *DSM–IV* and FFM BPD scores were significantly correlated (r=.60) and generated highly similar patterns of relations (r_{icc} =.84) with key constructs from BPD's nomological network. These data should serve to allay concerns that the DSM-5's new diagnostic approach will be detrimental to the identification of BPD.

Keywords

personality disorder; five-factor model; DSM-5; borderline

The problems associated with the conceptualization and diagnosis of personality disorders (PDs) in the *Diagnostic and Statistical Manual of Mental Disorders,* 4th ed. *(DSM–IV*; American Psychiatric Association, 2000) are well known and include rampant comorbidity, lack of adequate coverage, and difficulty distinguishing normality from abnormality

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(Widiger & Trull, 2007). As a result of these problems, the Diagnostic and Statistical Manual of Mental Disorders, 5th ed. (DSM-5; American Psychiatric Association, in preparation) Personality and Personality Disorder Work Group proposed a wholly different diagnostic system. One central component of this proposal is the introduction of a new dimensional model of personality pathology comprising 5 higher order domains (i.e., negative affectivity, detachment, antagonism, disinhibition, and psychoticism) and 25 lower order traits (e.g., deceitfulness). These traits play a critical role in the diagnosis of PD in the DSM-5, as they will be used in the place of the *DSM–IV* diagnostic criteria. That is, in addition to evidence of self-and interpersonal impairment, individuals will be able to be diagnosed with 1 of 6 PD 'types' left from the *DSM–IV* or with a diagnosis of Personality Disorder Trait Specified based on elevations on one or more of these traits.

Borderline Personality Disorder (BPD)

In the current study, we focus on BPD and its diagnosis in the DSM-5. Our focus on this specific PD is driven, in part, by BPD's salience to the psychological and psychiatric communities, due to its prevalence in treatment settings (Zimmerman, Rothschild, & Chelminski, 2005), costs associated with treatment (Zanarini, Frankenburg, Hennen, & Silk, 2004), and association with behaviors of great concern to treatment providers, such as suicidal and nonsuicidal self-injury (Kleindienst et al., 2008). In addition, the changes proposed for the diagnosis of PD in the DSM-5 have aroused the greatest concern as they relate to BPD. For instance, John Gunderson, a highly respected and prominent PD researcher, expressed serious reservations about whether BPD could be understood from a trait perspective and stated that the 'trait definition proposed for BPD … is not empirically based and is completely divorced from clinical concepts and literature' (2010; p. 699).

In the *DSM–IV* (American Psychiatric Association, 2000), BPD is diagnosed if there is long-standing evidence of 'a pervasive pattern of instability of interpersonal relationships, self-image, and affects, and marked impulsivity' as evidenced by symptoms (5 or more) such as frantic efforts to avoid abandonment, identity disturbance, difficulties with anger, and intense and unstable interpersonal relationships. In the DSM-5, BPD will be diagnosed if there is evidence of self and interpersonal dysfunction as well as elevated scores on the following traits: emotional lability, anxiousness, separation insecurity, depressivity, impulsivity, risk taking, and hostility.

An empirical literature on the use of personality traits from the Five-Factor Model of personality (FFM; Costa & Widiger, 2002) to understand PDs is pertinent to the newly created DSM-5 PD proposal in which PDs are diagnosed, in part, using dimensional personality traits. For example, there is a significant body of literature on the conceptualization and assessment of DSM PDs using FFM data in the form of a prototype matching perspective (e.g., Miller, Reynolds, & Pilkonis, 2004) or additive counts (Miller, Bagby, Pilkonis, Reynolds, & Lynam, 2005). The latter approach suggests an individual can be scored on a given *DSM–IV* PD on the basis of scores on a smaller number of relevant FFM traits. Research using these trait approaches has demonstrated that the resultant PD scores are generally significantly correlated with explicit *DSM–IV* PD scores (see Miller, in press, for a review). A recent study compared these FFM PD counts scored via clinician ratings with *DSM–IV* PD scores (generated by expert consensus ratings) and found that the FFM PD counts manifested similar trait profiles as the *DSM–IV* PDs and, more importantly, manifested a larger number of unique correlations with ratings of impairment across a variety of functional domains (Miller et al., 2010). Specific to BPD, Trull, Widiger, Lynam, and Costa (2003) demonstrated that BPD scores that were derived from the FFM PD prototype-matching approach manifested substantial convergent relations with multiple

measures of BPD as well as associated etiological factors such as childhood sexual and physical abuse.

Although the DSM-5 PD proposal calls for the use of a newly created dimensional model of personality pathology, it is clear that this new model is relatively closely aligned with the FFM. In the current study, we compared the pattern of relations evinced by the *DSM–IV* BPD ratings and those evinced by the FFM BPD trait count (Miller et al., 2005) in relation to a number of variables relevant to BPD's nomological network, such as psychological distress, attachment, self-harm, and functional impairment. Similar to the proposed approach for the diagnosis of BPD in the DSM-5, the FFM BPD count is based on a summation of scores on a limited number of traits from the FFM (traits followed by -r require reverse scoring prior to summation): anxiety, angry hostility, depression, impulsiveness, vulnerability, openness to feelings, openness to actions, compliance-r, deliberation-r. Given the similarities between the FFM and the new DSM-5 trait model, we believe that the current results speak to the likely success of criterion B of the newly created DSM-5 diagnostic procedure in which traits replace more explicit diagnostic criteria. In order to quantify the similarity of the correlational profiles generated by the *DSM–IV* and FFM BPD scores, we calculated second-order intra-class correlations (McCrae, 2008). Also, to examine the discriminant validity of the two sets of BPD scores, we compared these two sets of correlations with those generated by *DSM–IV* and FFM scores on Antisocial PD (APD), a 'near-neighbor' of BPD. From an FFM perspective, APD is scored using the following traits: anxiety-r, angry hostility, self-consciousness-r, impulsiveness, assertiveness, activity, excitement seeking, openness to actions, trust-r, straightforwardness-r, altruism-r, compliance-r, modesty-r, tendermindedness-r, dutifulness-r, self-discipline-r, and deliberation-r.

It is important to note that the current study represents a conservative and indirect test of the new trait portion of the DSM-5 proposal for the diagnosis of PD. First, this study compares self-report trait scores to expert ratings of *DSM–IV* BPD symptoms. It is most likely that expert ratings of the DSM-5's dimensional personality traits will be considered the gold standard in the assessment of PDs, just as expert ratings derived from semistructured interviews are now considered the gold standard in the assessment of the *DSM–IV* PDs. As such, the comparison of self-report FFM BPD count scores to expert ratings of *DSM–IV* BPD symptoms in the current study may serve to decrease the degree of convergence between the two. Second, this study uses traits from a general model of personality, the FFM, whereas the traits used in the DSM-5 have been explicitly designed to capture personality pathology. As a result, it is possible that the trait list used to assess BPD from an FFM perspective may omit certain traits that could prove relevant to the valid assessment of BPD or may use traits that are too oriented toward the assessment of normative levels of relevant traits. Like the first concern, this difference should serve to decrease the degree of convergence between the two types of BPD scores to less than would be expected if the DSM-5 trait model was used.

Method

Participants

The participant sample consists of 134 individuals who are part of an ongoing longitudinal study designed to assess the relationships between BPD, interpersonal functioning, and emotion dysregulation. Participants complete an eight-session baseline process and are asked to participate in follow-up assessments at 3-month intervals. Data from the baseline assessments are used in the current study.

The sample consisted of 63 psychiatric patients in the general adult psychiatry program at Western Psychiatric Institute and Clinic and 71 persons from the community who were not receiving mental health-related treatment (86 females; 48 males; *mean age* =44.8 [*SD* =10.5]). The sample was diverse in terms of racial identification, with 43% reporting minority identification (European American: *n* =76; African American: *n* =51). Patients were recruited via promotional flyers in outpatient facilities and through research networking systems. The community sample was recruited by telephone through the use of a random digit dialing method in order to yield a probability sample representative of demographic characteristics reflected in the U.S. census for the Pittsburgh metropolitan area. African American households were oversampled to ensure adequate racial minority representation. Participants with psychotic disorders, organic mental disorders, bipolar disorders, and mental retardation were excluded, as were participants with major medical illnesses that may be associated with organic personality change. Participants were between the ages of 21 and 60 at the time of the screening.

Procedure

All potential participants completed an initial screening interview to determine eligibility. Potential participants were also screened using the McLean Screening Instrument for Borderline Personality Disorder (MSI-BPD; Zanarini et al., 2003), which contains 10 true-false questions. The MSI-BPD, using a minimum of seven endorsed items, has been shown to have good sensitivity (.81) and specificity (.85) (Zanarini et al., 2003). The recruitment protocol was designed to capture the full spectrum of BPD features and thus used three strata (0 –2, 3– 4, or 5 or more diagnostic criteria endorsed) and two groups (community sample, psychiatric sample). Eligible participants were placed in one of six cells determined by their MSI-BPD scores and psychiatric service use. Participants were interviewed by clinicians with master's or doctoral degrees and significant assessment/clinical experience. At the initial meeting, the study was described in detail and written informed consent was obtained.

The intake process consisted of several appointments to determine diagnostic status using semistructured interviews, to collect data on functioning (past and current), and to complete a self-report battery. At the completion of the intake process, a best-estimate, consensus diagnostic conference was conducted in order to integrate all information and create a summary of Axis I and II disorders and gauge severity of impairment.

Collateral information about each research participant's functioning was also collected by asking the participant to identify up to three people he or she knew well to act as informants. Informants completed questionnaires about the participant related to several areas of functioning including PD symptomology. The informant sample included 194 females and 82 males (4 did not provide data on their gender) with a mean age of 48.5 (*SD* =14.0). Most informants were relatives of the target participants (*n* =143); the remainder were friends, romantic partners, or others. On average, informants reported knowing the target participant for 26 years (*SD* =16.7).

Measures

Consensus ratings of BPD—Following the initial evaluation sessions, which included the completion of semistructured interviews for Axis I and II disorders, the primary interviewer presented the case at two 2-hr diagnostic conferences with colleagues from the research team. All available data were reviewed and discussed: current and lifetime Axis I symptoms and diagnoses, social and developmental history, and personality features acknowledged on the Axis II interviews. Each PD symptom was rated on a scale of 0 to 2. The BPD symptom count used here is simply the addition of the BPD symptoms (α = .82).

Additional questions were added to the assessment of BPD in order to gather more detailed information regarding suicidal and nonsuicidal self-injury in relation to BPD. More specifically, participants were asked whether they had engaged in self-injurious behavior without the intent to die and with the intent to die. Interviewers asked about these behaviors over the participants' lifetime and also about the last two years. Only the lifetime responses were used here.

Revised NEO Personality Inventory (NEO-PI-R)—The NEO PI-R (Costa & McCrae, 1992) is a 240-item self-report measure of the FFM. The higher order domains of the NEO PI-R include Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness; each of these domains is underlain by six more specific facets. Internal consistencies for the facets ranged from .52 to .90; median α = .75. As noted earlier, the FFM BPD and APD counts were scored by summing the scores on the relevant facets, after reverse scoring those that require it.

Clinical ratings of depression and anxiety—Ratings of psychological distress were conducted with two well-validated, commonly used instruments: the Hamilton Rating Scale for Depression (HAM-D; Hamilton, 1960) and the Hamilton Rating Scale for Anxiety (HAM-A; Hamilton, 1959). The mean scores for the HAM-D and HAM-A were 14.67 (*SD* =9.0) and 14.87 (*SD* =10.0), respectively.

Brief Symptom Inventory (BSI)—The BSI-18 (Derogatis, 2001) is an 18-item measure of psychological symptoms experienced during the past week that includes specific symptom scales and a global severity index (GSI). Here we report only on the GSI (α = .95).

Positive and Negative Affect Schedule—Expanded Form (PANAS-X)—The PANAS-X (Watson & Clark, 1994) is a 60-item self-report measure of affect. In the current study, affect was assessed in relation to the past week. We report on the factors of positive (10 items; α = .90) and negative affect (10 items; α = .92).

Experiences in Close Relationships-Revised (ECR-R)—The ECR-R (Fraley, Waller, & Brennan, 2000) is a 36-item self-report measure of two adult attachment styles: avoidance (18 items; α = .93) and anxiety (19 items; α = .94).

Multisource Assessment of Personality Pathology (MAPP)—The informant-report version of the MAPP was used to assess the *DSM–IV* PDs (see Thomas, Turkheimer, & Oltmanns, 2003). Three informant reports were received for 65 participants (49%), two were received for 38 participants (28%), one was received for 12 (9%), and 19 participants (14%) had no informant reports. Mean MAPP PD scores were used when possible. Alphas ranged from .68 to .89 (median α = .83).

Conflict Tactics Scale—The Conflict Tactics Scale (CTS; Straus, Hamby, Boney-McCoy, & Sugarman, 1996) measures relational discord and violence. Modified versions of the Psychological Aggression and Physical Assault subscales of the CTS were used in which items were modified to assess aggression with any target (not exclusive to a partner) over the previous 12 months. Data were collected on incidents in which the participant was the victim (psychological: α = .81; physical: α = .94) or the perpetrator (psychological: α = .81; physical: α = .88) of aggression.

Inventory of Interpersonal Problems—The Inventory of Interpersonal Problems (IIP; Pilkonis, Kim, Proietti, & Barkham, 1996) is a 127-item measure of difficulties in interpersonal functioning and associated distress. In the current study, we used self-report

scores from intake for the following constructs: interpersonal sensitivity, interpersonal ambivalence, aggression, need for approval, and lack of sociability. Internal consistencies ranged from .88 to .92.

Consensus ratings of impairment—Consensus ratings of functional impairment were made for romantic relationships, other social relationships (e.g., friends, family members), and work. These scores were made using a 9-point scale, ranging from 1 (*little or none*) to 9 (*severe*).

Results

In order to control for Type I error, we used an alpha of ≤.001 for all analyses. The *DSM–IV* and FFM BPD scores were significantly correlated, $r = .60$. Rather than focus on individual correlations, we compared the nature of the correlation profiles created by both in two ways. First, we tested whether the correlations between the *DSM–IV* and FFM BPD counts differed significantly with each of the criterion variables (i.e., test of dependent *r*s). Second, we calculated double-entry intraclass correlations using the two sets of correlations to conduct a conservative test of the similarity of the two sets of correlations.

Psychological Distress, Affect, and Attachment Style

Both BPD scores manifested substantial correlations with measures of depression, anxiety, overall distress, and negative affect, as well as anxious and avoidant attachment styles. None of these sets of correlations were significantly different across the *DSM–IV* and FFM BPD scores (see Table 1).

Informant Report Scores of *DSM–IV* PDs

Both BPD scores were significantly positively correlated with informant reports of paranoid, schizotypal, antisocial, borderline, histrionic, avoidant, and dependent PDs (see Table 1). *DSM–IV* BPD also was significantly correlated with informant reports of narcissistic PD. None of these sets of correlations were significantly different across the *DSM–IV* and FFM BPD scores.

Functioning

Self-harm, aggression, and victimization—Both BPD scores were significantly correlated with lifetime acts of self-harm with and without intent to die (see Table 2). Both BPD scores were also correlated with perpetration of aggression. *DSM–IV* BPD also was correlated with being the perpetrator of assault and being the victim of aggression and assault. None of these sets of correlations were significantly different across the *DSM–IV* and FFM BPD scores.

Interpersonal functioning—Both BPD scores were significantly correlated with all scales from the Inventory of Interpersonal Problems. None of these sets of correlations were significantly different across the *DSM–IV* and FFM BPD scores.

Functional impairment—Both BPD scores were significantly associated with all expert consensus ratings of impairment across all domains including psychological distress, romance, parenting, work, nonromantic social dysfunction, and causing distress to others. None of these sets of correlations were significantly different across the *DSM–IV* and FFM BPD scores.[1]

Similarity Analyses

To quantify further the degree of match between the two sets of correlations, we calculated a second-order intraclass correlation (r_{icc}) among the two sets of correlations manifested by the two BPD scores. The correlations manifested by the two BPD scores were very similar (r_{icc} =.84).

Discriminant Validity

To examine discriminant validity, we compared the *DSM–IV* and FFM BPD scores to those manifested by the *DSM–IV* and FFM APD scores. The *DSM–IV* and FFM APD scores were significantly correlated, r =.40. The similarity scores demonstrated a pattern of discriminant validity. As expected, the *DSM–IV* and FFM APD scores manifested a significant intraclass correlation (i.e., r_{icc} = .60). However, the profiles generated by both BPD scores were unrelated to the profiles generated by both APD scores (*DSM–IV* BPD – *DSM–IV* APD: r_{icc} = .08; *DSM–IV* BPD – FFM APD: r_{icc} = .11; FFM BPD – *DSM–IV* APD: r_{icc} = −.03; FFM BPD – FFM APD: r_{icc} = .11).

Discussion

The changes proposed for the diagnosis of PDs in the DSM-5 are viewed by some as lacking in theoretical or empirical grounding (e.g., Gunderson, 2010). This is not the case, however, for the use of dimensional traits to capture *DSM–IV* PDs. There is a significant empirical literature available that has documented that personality traits from the FFM can be used to conceptualize and assess personality disorders (e.g., Miller, in press). Consistent with previous studies, the current data provide strong empirical support for the notion that traits can be used as part of the diagnosis procedure for the assessment of PDs. The FFM BPD scores were significantly correlated with the *DSM–IV* BPD scores that were calculated on the basis of expert consensus ratings of the *DSM–IV* BPD criteria (r =.60). Despite the use of different sources of data (self-report vs. expert ratings), the two BPD scores also manifested very similar patterns of correlations (r_{icc} = .84), with an array of scores from relevant constructs. In fact, there was not a single set of correlations generated by the two BPD scores that were statistically significantly different across 34 comparisons. These data replicate previous findings that a trait-based approach can work quite well in assessing *DSM–IV* PD constructs. Our results also suggest that the FFM BPD count manifests significant discriminant validity, as it did not manifest a pattern of correlations that was a close match to the pattern of correlations derived from either APD score.

These data do not, however, speak to the exact trait proposal put forth in the DSM-5, as the DSM-5 proposal a) also includes a criterion related to self- and interpersonal dysfunction, which was not tested here, b) uses a different trait model created for inclusion in the DSM-5, and c) may not include all traits that some believe are necessary to capture BPD (e.g., Samuel et al., in press). Nonetheless, data of this sort suggest that the trait portion of the new diagnostic approach for the assessment of PDs in the DSM-5 will likely yield reliable and valid scores. Given that the traits proposed for use in the DSM-5 were designed to capture pathological aspects of personality, one would expect that such an approach would result in even stronger results than from studies that use measures such as the NEO PI-R, which was not designed for such purposes. The success of such an approach will be affected, however, to the extent that a) the DSM-5 trait model is sufficiently comprehensive and that b) the

[1]We tested whether the current results were moderated by participant status (i.e., patient vs. nonpatient). We ran 136 tests of moderation; 6 were significant at $p \leq .001$. The majority of these occurred in relation to the ratings of functioning (4 of 6). Simple slope analyses revealed that in the majority of cases, BPD and APD were more strongly related to the domains of functioning among the community participants than among the patient participants, although the simple slopes were typically significant and in the same direction for both groups.

traits outlined for use with each of the six PD 'types' are adequate and correct. Questions such as these will have to be answered as data are collected using measures created for this new diagnostic trait model.

Limitations and Conclusions

Although the current data address whether personality traits can be used in the diagnosis of PDs, they do not speak directly to the likely success of the DSM-5 approach, given that a different trait model will be used in the DSM-5. This new personality model has much in common, however, with well-validated trait models of both normal (e.g., FFM) and abnormal personality (e.g., DAPP; Livesley & Jackson, 2009). Another limitation of the current study is that the FFM traits were assessed via self-report rather than interview, which would have made the comparison between the two BPD scores more symmetrical. Data exist that show that dimensional traits can be scored using either structured interviews (Trull et al., 1998) or clinician rating forms (Few et al., 2010). Finally, the current data were derived from a relatively small sample and require replication.

Despite some potential problems that may require modification, we believe that there is much to like about this aspect of the current DSM-5 PD proposal, as it more explicitly ties the substantial empirical literature on general personality traits to the research on pathological personality. For example, research has demonstrated that conceptualizing PDs as maladaptive configurations of general traits can help explain various and important issues in the study of PDs, including comorbidity (Lynam & Widiger, 2001), sex differences (Lynam & Widiger, 2007), and potential changes (i.e., decreases) in PD symptoms over time. Finally, using an elemental approach to the assessment and diagnosis of personality pathology has a great deal to recommend it, as it allows for the parsing of these multidimensional constructs into narrower components that allow for an examination of the unique relations between these lower order traits and functional impairment.

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Table 1

Diagnostic and Statistical Manual of Mental Disorders, 4th ed. (DSM-IV) and Five-Factor Model of Personality (FFM) Borderline Personality Disorder (BPD) and Antisocial Personality Disorder (APD) Scores in Relation to Distress, Affect, Attachment Style, and Informant-Report PDs

	Borderline PD		Comparison PD	
	DSM-IV BPD	FFM BPD	DSM-IV APD	FFM APD
Psychological Distress				
Depression	.58 *a	.56 *a	.18b	.19b
Anxiety	.59 *a	.58 *a	.25b	.20b
Distress	.54 *a	.65 *a	.19b	.22b
Affect				
Negative	.41 *a,b	.56 *a	.15b	.21b
Positive	−.29 *a,b	−.44 *a	−.02b	−.03b
Attachment Style				
Anxiety	.48 *a,b	.60 *a	.22b	.31 *b
Avoidance	.30 *a,b	.29 *a	.18a,b	.02b
Informant-report PDs				
Paranoid	.46 *a	.40 *a	.27a	.34 *a
Schizoid	.27a	.23a	.14a	.15a
Schizotypal	.46 *a	.45 *a	.19a	.32 *a
Antisocial	.54 *a	.43 *a	.38 *a	.47 *a
Borderline	.53 *a	.53 *a	.24a	.39 *a
Histrionic	.50 *a	.36 *a	.25 *a	.36 *a
Narcissistic	.36 *a	.28a	.14a	.36 *a
Avoidant	.33 *a,b	.48 *a	.09b	.20a,b
Dependent	.41 *a	.36 *a	.20a	.23a
Obsessive-Compulsive	.22a	.19a	.15a	.11a

Note. Correlations with different superscripts in the same row indicate that these correlations are significantly different from one another ($p < .001$); correlations with the same superscript in the same row are not statistically significantly different from one another.

* $p < .001$.

Table 2

Diagnostic and Statistical Manual of Mental Disorders, 4th ed. (DSM-IV) and Five-Factor Model of Personality (FFM) Borderline Personality Disorder (BPD) and Antisocial Personality Disorder (APD) Scores in Relation to Functioning

	Borderline PD		Comparison PD	
	DSM-IV BPD	FFM BPD	DSM-IV APD	FFM APD
Self-harm				
No intent to die	.45 *a	.39 *a,b	.10b	.24a,b
Intent to die	.56 *a	.36 *a,b	.14b	.14b
Aggression–perpetration				
Aggression	.38 *a	.33 *a	.23a	.37 *a
Assault	.35 *a	.20a	.31 *a	.32 *a
Aggression–victimization				
Aggression	.31 *a	.27a	.17a	.21a
Assault	.23a	.21a	.12a	.15a
Interpersonal Functioning				
Interpersonal sensitivity	.55 *a,c	.73 *a	.18b	.34 *b,c
Interpersonal ambivalence	.38 *a,b	.55 *a	.16b	.37 *a,b
Aggression	.47 *a	.59 *a	.32 *a	.45 *a
Need for approval	.46 *a	.59 *a	.02b	.05b
Lack of sociability	.44 *a,b	.56 *a	.17b	.16b
Functioning				
Distress	.62 *a	.64 *a	.22b	.17b
Romantic	.44 *a	.39 *a	.30 *a	.19a
Parental	.58 *a	.44 *a,b	.58 *a	.30b
Occupational	.54 *a	.46 *a	.59 *a	.37 *a
Social	.54 *a	.45 *a	.41 *a	.27a
Distress on others	.76 *a	.59 *a,b	.52 *b	.46 *b

Note. Correlations with different superscripts in the same row indicate that these correlations are significantly different from one another ($p < .001$); correlations with the same superscript in the same row are not statistically significantly different from one another.

* $p < .001$.