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Abstract

Section 3 of the *DSM-5* will include a pathological personality trait system rooted in the quantitative epistemology of personality and clinical psychology. This system has the potential to enhance the clinical utility of the diagnostic nosology by providing a means for the dimensional assessment of individuals with psychopathology. However, there is limited research on the associations of *DSM-5* traits with common mental disorders and related clinical phenomena as measured by currently popular assessment instruments. The purpose of this article was to evaluate the convergence of the *DSM-5* trait system with a well-validated broadband clinical instrument, the Personality Assessment Inventory (PAI). Bivariate correlations were examined and factor analytic methods were used to examine the degree to which the *DSM-5* traits and PAI capture common variance in personality and mental health. In a student sample ($N = 1,001$), we found broad convergence between the *DSM-5* traits and PAI, which could be organized effectively using five factors. The implications of these findings for using traits to address issues related to diagnostic co-occurrence and heterogeneity in routine clinical assessment are discussed.

Keywords

DSM-5, traits, PID-5, PAI

Researchers and clinicians have expressed dissatisfaction with the way mental disorders are conceptualized in the *Diagnostic and Statistical Manual of Mental Disorders (DSM; American Psychiatric Association, 2000)* for decades (e.g., Blashfield, 1984; Schacht & Nathan, 1977). One persistent theme of *DSM* critiques has involved the failure to account for common dimensions underlying diverse symptoms, which seem to relate systematically to individual differences in personality. Seminal researchers such as Eysenck (1967) and Achenbach (1966) observed that variation in disordered behavior could be captured, at the broadest levels, by a few common dimensions. Even as diagnostic categories burgeoned with each new edition of the *DSM*, researchers continued to observe that their covariation, awkwardly described as “comorbidity” in the categorical medical model (Lilienfeld, Waldman, & Israel, 1994), could be accounted for by a few dispositions that resemble traits from the personality literature (Blanco et al., 2013; Krueger, 1999; Wright et al., 2013).

Personality Traits and Personality Disorders

Despite the potential relevance of personality traits for clinical issues in general, most of the attention given to the association of personality and psychopathology in the last

few decades has involved the assessment of personality disorders. Notably, the text of the *DSM-IV* observed that

alternative dimensional models share much in common and together seem to cover the important areas of personality dysfunction. Their integration, clinical utility, and relationship with the Personality Disorder diagnostic categories and various aspects of personality dysfunction are under active investigation. (American Psychiatric Association, 2000, p. 690)

Evidence for the association between traits and personality disorders and the benefits of reorganizing aspects of personality disorders using trait concepts is now strong (Markon, Krueger, & Watson, 2005; Morey et al., 2007; Samuel & Widiger, 2008; Widiger & Simonsen, 2005; Widiger & Trull, 2007; Wiggins & Pincus, 1989).

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This research paved the way for the proposal by the *DSM-5* Personality and Personality Disorders Work Group to revise personality disorder diagnosis using, in part, 25 traits organized around 5 higher-order dimensions (Krueger, Derringer, Markon, Watson, & Skodol, 2012; Wright et al., 2012) that map reasonably well onto the dimensions of the Five-Factor (Widiger & Trull, 2007) and Personality Psychopathology Five (Harkness & McNulty, 1994) models of personality (Anderson et al., 2013; De Fruyt et al., 2013; Thomas et al., 2013). Although the American Psychiatric Association (APA) *DSM-5* Task Force endorsed the proposal, the APA Board of Trustees did not. Our understanding is that, as a result of these decisions, the widely unpopular *DSM-IV* personality disorder system will be reprinted in “*DSM-5.0* Section II” (*Diagnostic Criteria and Codes*), whereas the Work Group’s model will be in “*DSM-5.0* Section III” (*Emerging Measures and Models*). The expectation is that including this model in Section 3 will promote further research that could eventually lead to the migration of the trait model to Section II, and in the meantime will provide clinicians with an evidence-based model of individual differences for clinical assessment.

Personality Traits and General Clinical Assessment

Although relatively less attention has been paid to the role of personality traits in understanding common mental disorders and other clinical issues, there is nevertheless considerable evidence regarding the importance of considering traits for general clinical assessment (Kotov, Gamez, Schmidt, & Watson, 2010; Yen et al., 2011). For instance, a recent meta-analysis (Kotov et al., 2010) showed that the correlations between normal traits and “Axis I” clinical disorders are of similar magnitude as the correlations between traits and “Axis II” personality disorders as reported by Samuel and Widiger (2008). However, as with clinical personality research in general, studies on the *DSM-5* trait model have focused primarily on questions of structural validity and the assessment of personality disorders. For the full clinical potential of *DSM-5* traits to be realized, research is needed on the relationship between *DSM-5* traits and clinical issues more broadly.

Accordingly, the goal of this study is to examine the convergence of *DSM-5* traits with a broadband dimensional measure of psychopathology and other clinical issues, the *Personality Assessment Inventory* (PAI; Morey, 1991). The PAI is well suited to this task for a number of reasons. First, PAI constructs were selected for their stability in the clinical lexicon, acceptability across orientations, and clinical applicability or importance (Morey, 1991). They represent a reasonable sampling of most of the issues with which most mental health clinicians are concerned with respect to most patients. This includes common psychopathology constructs,

such as anxiety, mood, and substance use disorders, as well as other important clinical issues such as aggression, suicidal ideation, treatment motivation, and environmental stress and support. Second, like other broadband psychopathology measures (e.g., Sellbom & Ben-Porath, 2005), the PAI has higher-order factors with clear links to normal personality traits, including internalizing (i.e., negative affectivity; neuroticism), externalizing (disinhibition, [low] conscientiousness), and social dominance (extraversion; Hoelzle & Meyer, 2009; Hopwood & Moser, 2011; Morey, 2007). Thus, it is reasonable to hypothesize that the PAI scales and *DSM-5* traits will cohere in a common structure that describes the covariance in personality and psychopathology more generally.

The ability to understand what these constructs have in common using a structure of individual differences features, which has also been shown to describe the covariance in normal personality traits and personality disorders, is of considerable importance for understanding individual differences in general and for improving psychiatric nosology. For instance, finding that different clinical disorders load strongly on the same factor would explain “comorbidity” between those disorders (Krueger & Markon, 2006). As an example, research consistently shows that associations between disorders such as those related to depression and anxiety can be understood as reflecting a common liability to negative affects (Eaton et al., 2013).

In general, we expected a high degree of overlap across *DSM-5* traits and PAI scales, as reflected in strong but reasonably specific correlations among their respective scales, and an exploratory structure consisting of a few broad dimensions. We also anticipated that the conjoint structure of the *DSM-5* and PAI scales could be understood via five higher-order factors reflecting pathological variants of the Five-Factor Model, as suggested by previous research on the *DSM-5* traits (Krueger et al., 2012; Thomas et al., 2013; Wright et al., 2012). We further expected PAI scales to demonstrate loadings across each of these five factors, and for these loadings to be informative with respect to diagnostic co-occurrence and heterogeneity issues, which we focus on in the Discussion.

Method

Participants were college students recruited to participate in exchange for course credit who were administered the Personality Inventory for *DSM-5* (PID-5) and PAI. From an initial sample of 1,187, we removed 160 from further analyses for missing >10% items and 26 for scores above suggested cutoffs on the PAI Infrequency (75T) and Inconsistency (73T) scales (Morey, 2007), leaving 1,001 valid cases. Of these 1,001 participants, 718 (72%) were women, and the mean age was 19.63 years ($SD = 2.31$). The ethnic breakdown was as follows: 841 (84%) Caucasian, 38 (4%) African American, 32 (3%) Asian

American, 23 (2%) multiracial, 21 (2%) Hispanic, and 32 (3%) “other”; 14 participants did not report their ethnicity.

Measures

All participants were administered the 220-item PID-5 (Krueger et al., 2012), which has 25 nonoverlapping scales that load onto 5 higher-order dimensions: Negative Affect, Detachment, Antagonism, Disinhibition, and Psychoticism (Wright et al., 2012). Internal consistencies were $>.70$ across all trait scales. Participants were also administered the 344-item PAI (Morey, 1991). The PAI has 39 scales that provide broad coverage of psychopathology and clinical constructs. The internal consistencies for all PAI full scales were $>.70$, and the internal consistencies for all PAI subscales were all $>.60$.

Analyses

We first examined bivariate correlations between the *DSM-5* traits and PAI scales and subscales. Given our large sample, even small effects (e.g., $r > .05$) would be significant at the conventional alpha of .05, and furthermore the Type I error rate would be inflated by the number of statistical tests. We therefore focus on effect sizes in interpreting these results. We next conducted an initial exploratory factor analysis (EFA) with principal axis extraction to develop an initial sense of the conjoint structure of these instruments. Given the likelihood that psychopathology scales will tend to correlate, we used the oblique Promax method to rotate factors. This analysis was intended to provide an initial indication of how the *DSM-5* traits and a wide array of clinical constructs would cohere in a common framework.

Given the large number of scales and the fact that some content on the PAI is not well represented on the *DSM-5* trait system (e.g., that related to somatic concerns), we anticipated that an EFA might indicate that more than the five factors are needed to effectively describe the covariance of these instruments in this initial exploratory analysis. However, as described above, the primary purpose of this article was to evaluate how clinical constructs as represented by the PAI would fit into the *DSM-5* trait structure. Thus, we conducted further analyses to achieve this structure. Specifically, we used exploratory structural equation modeling (ESEM; Marsh et al., 2010) with maximum likelihood estimation to evaluate the conjoint structure of the PID-5 and PAI. Within this model, we target rotated the oblique substantive factors to the 25 PID-5 trait scales using coefficients from an earlier study by Wright et al. (2012), which confirmed the five-factor higher-order structure identified in initial validation research by Krueger et al. (2012) within a student sample. The PAI scales were then free to load onto these five dimensions. This approach also allowed us to model method factors for the PID-5 and PAI, given that the preliminary exploratory

factor analytic models suggested factors with loadings across most of the scales of one instrument and few of the scales of the other, as described below. Scales from each instrument were allowed to freely load on each instrument’s method factor but paths from the other instrument were constrained to 0. These method factors were constrained so as to be orthogonal to each other and to the substantive factors.

Results

Correlations Between *DSM-5* Traits and PAI Clinical Constructs

Tables 1 through 5 give bivariate correlations between PAI scales and the *DSM-5* traits for each domain. In general, a few patterns are remarkable. First, there are a number of strong associations between the scales of these instruments, as would be expected given that they share a common method and are both intended to measure distressing or problematic characteristics. Second, *DSM-5* traits differ widely in terms of their breadth, as indicated by the number of strong correlations across PAI scales. Some, such as depressivity, showed an array of strong correlations, whereas others, such as submissiveness, were more specifically correlated with only a few PAI scales. In general, the strongest correlation was with a scale that seemed to be most similar in content, as described in detail presently.

Table 1 gives the results for the Negative Affectivity domain of the *DSM-5*. No PAI scale correlated $>.40$ with submissiveness; however, it did have a relatively strong and unique negative correlation with PAI dominance. Overall, this suggests that submissiveness is not a pervasive attribute of mental health problems in general, and indicates the convergent and discriminant validity of these measures in indicating the construct. Separation Insecurity related to a number of anxiety, depression, and borderline features scales, but was most prominently indicated by Borderline Features identity problems, high scores on which capture individuals who “rely on others to help them formulate an identity, thus defining themselves primarily in relationship to other people” (Morey, 1996, p. 58). Anxiousness correlated most strongly with the Anxiety scales of the PAI, and in particular cognitive and affective features of anxiety. It also had sizeable correlations with other indicators of negative affect, such as Depression and Borderline Features. Emotional lability had a number of substantial correlations with PAI scales, but the strongest was with affective instability. Suspiciousness also had a number of strong correlates on the PAI, but the strongest of these were on the Paranoia Scale.

Table 2 gives correlations for the Detachment traits. Restricted affectivity correlated positively with social detachment and negatively with warmth, but overall had few large (i.e., $>.40$) correlations with the PAI. In contrast, most PAI scales correlated $>.40$ with depressivity, although the

Table 1. Correlations Between DSM-5 Negative Affectivity Traits and PAI Scales.

	Submissiveness	Separation Insecurity	Anxiousness	Emotional Lability	Suspiciousness
Somatic Complaints					
Conversion	.03	.25	.17	.26	.40
Health Concerns	.02	.22	.23	.27	.34
Somatization	.12	.34	.37	.40	.45
Anxiety					
Affective	.23	.45	.68	.58	.49
Cognitive	.25	.46	.77	.58	.48
Physiological	.18	.40	.51	.48	.51
Anxiety Disorders					
Obsessive–Comp	.10	.15	.27	.19	.25
Phobias	.24	.38	.53	.45	.39
Traumatic Stress	.16	.41	.48	.44	.50
Depression					
Affective	.17	.39	.47	.48	.54
Cognitive	.20	.41	.47	.45	.51
Physiological	.08	.31	.37	.37	.45
Mania					
Activity Level	.07	.28	.22	.30	.37
Grandiosity	–.14	–.04	–.15	–.01	.07
Irritability	.15	.33	.38	.38	.40
Paranoia					
Hypervigilance	.03	.32	.39	.35	.65
Persecution	.04	.30	.26	.33	.65
Resentment	.04	.31	.34	.38	.60
Schizophrenia					
Psychotic Exp	.00	.19	.11	.27	.39
Social Detach	.08	.20	.29	.30	.46
Thought Disord	.14	.34	.38	.45	.51
Borderline Features					
Affect Instability	.13	.41	.48	.66	.55
Identity Probs	.29	.57	.59	.57	.47
Negative Rel	.09	.40	.47	.47	.58
Self-Harm	.02	.25	.17	.29	.35
Antisocial Features					
Antisocial Beh	–.06	.15	.07	.17	.35
Egocentricity	.02	.15	.08	.17	.37
Sensation Seek	–.06	.07	–.05	.10	.27
Alcohol Problems					
Alcohol Problems	.04	.18	.09	.17	.32
Drug Problems					
Drug Problems	–.05	.13	.05	.16	.31
Aggression					
Agg Attitude	–.01	.25	.28	.40	.42
Phys Aggression	–.07	.17	.09	.24	.39
Verb Aggression	–.18	.09	.09	.21	.26
Suicidality					
Suicidality	.08	.29	.27	.32	.39
Stress					
Stress	.06	.23	.33	.34	.38
Nonsupport					
Nonsupport	.03	.26	.26	.27	.54
Treatment Reject					
Treatment Reject	–.28	–.41	–.54	–.51	–.44
Dominance					
Dominance	–.38	–.22	–.25	–.14	–.14
Warmth					
Warmth	–.04	–.16	–.25	–.20	–.38

Note. PAI = Personality Assessment Inventory. Some PAI scale labels abbreviated for ease of presentation. Coefficients $\geq .40$ in bold; the largest coefficient in each column is underlined.

Table 2. Correlations Between DSM-5 Detachment Traits and PAI Scales.

	Restricted Affectivity	Depressivity	Withdrawal	Intimacy Avoidance	Anhedonia
Somatic Complaints					
Conversion	.25	.45	.37	.34	.38
Health Concerns	.15	.38	.25	.22	.32
Somatization	.14	.52	.36	.22	.46
Anxiety					
Affective	.07	.58	.43	.19	.51
Cognitive	-.01	.53	.36	.12	.45
Physiological	.16	.56	.40	.26	.49
Anxiety Disorders					
Obsessive-Comp	.08	.13	.20	.05	.11
Phobias	.03	.44	.39	.18	.42
Traumatic Stress	.15	.55	.38	.21	.45
Depression					
Affective	.29	.79	.57	.33	.80
Cognitive	.26	.81	.51	.34	.70
Physiological	.21	.52	.43	.31	.52
Mania					
Activity Level	.24	.31	.22	.26	.19
Grandiosity	.05	-.13	-.08	.04	-.18
Irritability	.20	.27	.29	.09	.24
Paranoia					
Hypervigilance	.31	.49	.45	.29	.44
Persecution	.25	.53	.40	.34	.42
Resentment	.17	.53	.40	.26	.52
Schizophrenia					
Psychotic Exp	.26	.43	.33	.39	.34
Social Detach	.40	.62	.76	.40	.69
Thought Disord	.30	.60	.47	.38	.53
Borderline Features					
Affect Instability	.17	.62	.49	.23	.59
Identity Probs	.12	.59	.37	.14	.52
Negative Rel	.13	.48	.38	.17	.42
Self-Harm	.26	.42	.24	.23	.31
Antisocial Features					
Antisocial Beh	.30	.39	.25	.30	.34
Egocentricity	.37	.33	.31	.40	.23
Sensation Seek	.33	.24	.12	.25	.12
Alcohol Problems	.25	.31	.18	.31	.24
Drug Problems	.23	.35	.24	.31	.32
Aggression					
Agg Attitude	.12	.35	.29	.15	.33
Phys Aggression	.23	.38	.28	.28	.30
Verb Aggression	.07	.15	.08	.05	.16
Suicidality	.21	.70	.39	.29	.56
Stress	.18	.43	.30	.22	.36
Nonsupport	.35	.62	.53	.36	.62
Treatment Reject	-.15	-.61	-.42	-.20	-.55
Dominance	-.06	-.33	-.26	-.13	-.33
Warmth	-.43	-.50	-.68	-.37	-.64

Note. PAI = Personality Assessment Inventory. Some PAI scale labels abbreviated for ease of presentation. Coefficients $\geq .40$ in bold; the largest coefficient in each column is underlined.

strongest of these were Depression subscales. Withdrawal also had a number of strong correlations with the PAI, the strongest of these being social detachment. PAI social detachment was also the strongest correlate of intimacy avoidance, along with PAI egocentricity; however, unlike *DSM-5* withdrawal, there were no other strong correlations with PAI scales. This pattern suggests that *DSM-5* withdrawal involves a broader form of detachment that involves significant anxiety and mood problems, whereas intimacy avoidance involves aloofness that is less tightly tied to anxiety or depression. Finally, anhedonia exhibited a number of strong correlations with PAI scales, the strongest being affective Depression.

The correlations between PAI scales and *DSM-5* Antagonism traits are given in Table 3. Egocentricity was the strongest correlate of both manipulativeness and deceitfulness, although the latter scale also had stronger correlations with other PAI scales in general. Hostility had a number of strong correlations with PAI scales as well, but the strongest of these was affective instability. Callousness correlated strongly with all the PAI Antisocial Features and Aggression scales and several others, but the strongest single correlate was physical aggression. Attention seeking and grandiosity had relatively few strong correlates, and the strongest for both was PAI grandiosity.

Table 4 shows *DSM-5* Disinhibition scale correlations with the PAI. Irresponsibility had strong correlations with most PAI scales, but the strongest were for thought disorder, a scale reflecting cognitive disorganization that is often elevated in individuals with attention deficit hyperactivity disorder (Morey, 1996). Distractibility and perseveration also correlated most strongly with this scale. However, distractibility was unique among these three in that it was fairly specific to cognitive issues and had relatively few large correlations with other PAI scales. Perseveration appeared to involve more anxiety as compared with irresponsibility, which was associated to a greater degree with externalizing and antisocial characteristics. Impulsivity had a somewhat specific pattern involving large correlations with self-harm (the most direct indicator of impulsive behavior on the PAI; Morey, 1996) and sensation seeking and lower correlations across the rest of the PAI. Rigid perfectionism and risk taking were also quite specific, exhibiting the largest correlations with PAI obsessive-compulsive and sensation seeking scales, respectively.

Finally, PAI correlates with the *DSM-5* Psychoticism traits are given in Table 5. All three scales correlated strongly with a number of PAI scales, consistent with the notion that measures of psychotic features in an undergraduate population may reflect general distress, health concerns, or confusion, as opposed to actual psychosis. The strongest correlations were with the Schizophrenia scales. Specifically, eccentricity and perceptual dysregulation correlated most strongly with PAI thought disorder and unusual beliefs correlated most strongly with psychotic experiences. The

pattern for eccentricity and perceptual dysregulation was quite similar overall, although the magnitude was, on average, stronger for perceptual dysregulation.

Conjoint Factor Analysis

The 64 scales and subscales of the PID-5 and PAI were subjected to principal axis factor analysis as an initial foray into understanding their conjoint structure. Parallel analysis indicated the extraction of seven factors whose eigenvalues exceeded those from random simulation data (eigenvalues for the first nine factors were 23.73, 5.97, 3.59, 2.58, 2.40, 2.05, 1.49, 1.20, 1.12). These factors were Promax¹ rotated; pattern coefficients are given in Table 6. The first factor had the strongest loadings on the *DSM-5* Negative Affectivity traits, as well as PAI scales involving Anxiety, Depression, Borderline Features, and Treatment Rejection, and was accordingly labeled Negative Affectivity. The second factor included scales measuring cognitive dysfunction such as those measured by Psychoticism scales from both instruments, health concerns as reflected in the PAI Somatic Complaints scales, and substance use problems. These features seem to have in common the notion of organic deficits or damage, confusion, or physical discomfort, and thus this factor was labeled Cognitive/Health Problems. The third factor had sizeable loadings on the PID-5 Detachment traits as well as PAI social detachment and Nonsupport, suggesting the label Detachment. The fourth factor was primarily influenced by *DSM-5* Antagonism traits and was labeled thus. We labeled the fifth factor Impulsivity given its loadings on PID-5 risk-taking and impulsiveness as well as PAI self-harm and sensation seeking. The sixth factor's loadings involved aggression and hostility and thus it was named Aggression. Finally, the seventh factor had loadings on PID-5 rigid perfectionism and PAI Aggression, Dominance, and Mania. As these scales together imply a need or desire to influence other's behavior, it was labeled Assertiveness.

The Organization of PAI Clinical Scales in the *DSM-5* Trait Structure

As discussed above, the primary purpose of this article was to examine the organization of clinical constructs, as represented by the PAI, in the integrative personality hierarchy embedded in the *DSM-5* traits. Thus, we used ESEM with target rotation to constrain the structure of our conjoint model to the five-factor framework previously identified in other work with the PID-5 (Krueger et al., 2012; Wright et al., 2012) and other instruments (Widiger & Simonsen, 2005). This also allowed us to model two orthogonal method factors, given that some of the factors in the initial EFA (e.g., Factors 2 and 4) seemed to be influenced primarily by one instrument. Pattern coefficients for this ESEM are given in Table 7. The root mean square error

Table 3. Correlations Between DSM-5 Antagonism Traits and PAI Scales.

	Manipulativeness	Deceitfulness	Hostility	Callousness	Attention Seeking	Grandiosity
Somatic Complaints						
Conversion	.25	.37	.35	.51	.20	.30
Health Concerns	.18	.25	.27	.33	.17	.21
Somatization	.20	.32	.37	.35	.13	.16
Anxiety						
Affective	.12	.31	.44	.26	.09	.10
Cognitive	.08	.24	.38	.15	.09	.05
Physiological	.19	.35	.41	.35	.16	.18
Anxiety Disorders						
Obsessive-Comp	.18	.13	.26	.15	.13	.18
Phobias	.06	.24	.34	.22	.02	.05
Traumatic Stress	.20	.29	.38	.26	.18	.13
Depression						
Affective	.19	.38	.47	.41	.07	.12
Cognitive	.14	.38	.40	.38	.05	.06
Physiological	.18	.31	.38	.33	.06	.12
Mania						
Activity Level	.35	.40	.35	.37	.37	.33
Grandiosity	.32	.15	.09	.22	.40	.51
Irritability	.42	.41	.59	.33	.34	.35
Paranoia						
Hypervigilance	.35	.43	.51	.45	.18	.26
Persecution	.31	.46	.45	.57	.26	.36
Resentment	.24	.41	.42	.42	.14	.19
Schizophrenia						
Psychotic Exp	.31	.40	.30	.54	.26	.36
Social Detach	.16	.36	.40	.47	-.07	.17
Thought Disord	.29	.44	.43	.47	.21	.26
Borderline Features						
Affect Instability	.30	.46	.65	.45	.21	.21
Identity Probs	.22	.33	.45	.20	.19	.08
Negative Rel	.25	.34	.49	.28	.18	.14
Self-Harm	.37	.46	.38	.47	.29	.27
Antisocial Features						
Antisocial Beh	.41	.54	.36	.57	.26	.28
Egocentricity	.52	.57	.40	.58	.33	.40
Sensation Seek	.39	.38	.30	.43	.35	.29
Alcohol Problems	.29	.39	.29	.45	.25	.21
Drug Problems	.24	.35	.24	.47	.17	.20
Aggression						
Agg Attitude	.29	.39	.63	.49	.24	.27
Phys Aggression	.35	.41	.48	.63	.28	.33
Verb aggression	.37	.36	.53	.44	.26	.28
Suicidality	.18	.30	.31	.36	.09	.10
Stress	.24	.32	.34	.29	.19	.19
Nonsupport	.28	.41	.39	.52	.10	.22
Treatment Reject	-.18	-.35	-.41	-.19	-.12	-.03
Dominance	.25	-.03	.04	.05	.27	.25
Warmth	-.12	-.36	-.43	-.48	.16	-.12

Note. PAI = Personality Assessment Inventory. Some PAI scale labels abbreviated for ease of presentation. Coefficients $\geq .40$ in bold; the largest coefficient in each column is underlined.

Table 4. Correlations Between DSM-5 Disinhibition Traits and PAI Scales.

	Irresponsibility	Impulsivity	Distractability	Perseveration	Rigid Perfectionism	Risk Taking
Somatic Complaints						
Conversion	.48	.31	.30	.37	.22	.07
Health Concerns	.34	.27	.23	.30	.16	.05
Somatization	.39	.26	.33	.36	.19	-.03
Anxiety						
Affective	.37	.25	.42	.53	.28	-.16
Cognitive	.27	.17	.38	.49	.34	-.21
Physiological	.43	.32	.38	.48	.27	-.03
Anxiety Disorders						
Obsessive-Comp	.04	-.01	.00	.28	.74	-.17
Phobias	.34	.14	.34	.44	.27	-.32
Traumatic Stress	.34	.31	.38	.45	.19	.03
Depression						
Affective	.49	.34	.47	.49	.18	-.02
Cognitive	.54	.39	.57	.51	.13	-.02
Physiological	.42	.29	.37	.41	.14	.03
Mania						
Activity Level	.41	.40	.33	.41	.26	.19
Grandiosity	.09	.13	-.06	.04	.13	.24
Irritability	.25	.29	.30	.44	.39	.09
Paranoia						
Hypervigilance	.40	.35	.35	.42	.21	.16
Persecution	.56	.41	.31	.42	.20	.15
Resentment	.45	.31	.31	.39	.20	.04
Schizophrenia						
Psychotic Exp	.54	.37	.26	.36	.19	.12
Social Detach	.47	.24	.35	.41	.18	-.10
Thought Disord	.58	.47	.61	.59	.20	.11
Borderline Features						
Affect Instability	.49	.40	.45	.53	.25	.07
Identity Probs	.35	.31	.51	.51	.20	.00
Negative Rel	.31	.31	.34	.39	.20	.05
Self-Harm	.54	.61	.40	.33	.07	.38
Antisocial Features						
Antisocial Beh	.55	.51	.31	.31	.01	.39
Egocentricity	.51	.44	.26	.31	.14	.30
Sensation Seek	.42	.60	.30	.25	-.01	.69
Alcohol Problems	.51	.46	.27	.26	.03	.34
Drug Problems	.52	.42	.25	.22	.04	.31
Aggression						
Agg Attitude	.41	.36	.24	.34	.20	.16
Phys Aggression	.50	.40	.21	.28	.16	.26
Verb Aggression	.28	.31	.11	.16	.08	.29
Suicidality	.42	.29	.32	.31	.10	.04
Stress	.39	.36	.37	.37	.13	.16
Nonsupport	.52	.33	.34	.36	.13	.05
Treatment Reject	-.37	-.31	-.50	-.51	-.15	-.01
Dominance	-.17	-.01	-.30	-.22	.07	.26
Warmth	-.41	-.22	-.28	-.35	-.14	.09

Note. PAI = Personality Assessment Inventory. Some PAI scale labels abbreviated for ease of presentation. Coefficients $\geq .40$ in bold; the largest coefficient in each column is underlined.

Table 5. Correlations Between DSM-5 Psychoticism Traits and PAI Scales.

	Eccentricity	Perceptual Dysregulation	Unusual Beliefs
Somatic Complaints			
Conversion	.37	.56	.56
Health Concerns	.28	.37	.35
Somatization	.32	.47	.39
Anxiety			
Affective	.38	.47	.34
Cognitive	.33	.38	.26
Physiological	.40	.53	.43
Anxiety-Related Disorders			
Obsessive-Compulsive	.12	.17	.23
Phobias	.25	.38	.29
Traumatic Stress	.41	.49	.40
Depression			
Affective	.45	.54	.40
Cognitive	.45	.55	.39
Physiological	.37	.46	.37
Mania			
Activity Level	.43	.49	.47
Grandiosity	.15	.15	.30
Irritability	.41	.39	.36
Paranoia			
Hypervigilance	.43	.48	.41
Persecution	.41	.56	.52
Resentment	.36	.46	.36
Schizophrenia			
Psychotic Experiences	.47	.63	.71
Social detachment	.40	.48	.41
Thought Disorder	.56	.72	.60
Borderline Features			
Affective Instability	.51	.56	.44
Identity Problems	.44	.47	.32
Negative Relationships	.40	.41	.33
Self-Harm	.35	.44	.37
Antisocial Features			
Antisocial Behaviors	.39	.49	.45
Egocentricity	.35	.47	.45
Sensation Seeking	.39	.43	.36
Alcohol Problems	.25	.43	.31
Drug Problems	.26	.42	.34
Aggression			
Aggressive Attitude		.39	.34
Physical Aggression	.32	.48	.46
Verbal Aggression	.18	.23	.22
Suicidality	.37	.45	.37
Stress	.39	.44	.36
Nonsupport	.39	.50	.43
Treatment Rejection	-.48	-.47	-.33
Dominance	-.08	-.14	.00
Warmth	-.33	-.41	-.33

Note. PAI = Personality Assessment Inventory. Coefficients $\geq .40$ in bold; the largest coefficient in each column is underlined.

Table 6. Pattern Coefficients From a Principal Axis Exploratory Factor Analysis With Promax Rotation of the Conjoint Structure of the Personality Inventory for DSM-5 (PID-5) and Personality Assessment Inventory (PAI).

	Negative Affectivity	Cognitive/Health Problems	Detachment	Antagonism	Impulsivity	Aggression	Assertivenees
<i>PID-5</i>							
Negative Affectivity							
Submissiveness	.56	-.20	-.08	.29	-.14	-.25	-.06
Sep Insecurity	.44	.13	.38	.07	.00	-.05	-.16
Anxiousness	.75	-.06	-.26	.30	-.09	.03	-.05
Emotional Labilaty	.95	-.24	-.05	.05	-.16	.03	.11
Suspiciousness	.84	-.06	-.29	.30	-.12	.18	-.04
Detachment							
Restricted Affect	.37	.08	.20	.16	-.02	.16	.10
Depressivity	-.34	-.17	.91	.04	.25	-.18	.15
Withdrawal	.05	-.16	.98	.03	-.14	-.05	.16
Intimacy Avoid	-.24	.24	.57	.11	.02	-.20	.01
Anhedonia	.29	-.04	.67	-.05	-.07	.03	-.10
Antagonism							
Manipulativeness	.02	-.12	.03	.54	.21	.20	.15
Deceitfulness	.12	-.02	.14	.55	.12	.18	-.06
Hostility	.37	-.32	.23	.35	.04	.48	.14
Callousness	-.31	.29	.37	.49	-.03	.27	-.02
Attention Seeking	.24	.05	-.50	.61	.18	.11	.06
Grandiosity	-.17	.12	.04	.62	-.06	.12	.23
Disinhibition							
Irresponsibility	.03	.34	.18	.42	.10	.01	-.25
Impulsivity	.18	.00	-.02	.27	.55	.07	-.22
Distractability	.57	-.18	.14	.20	.30	-.18	-.19
Perseveration	.57	-.14	.23	.37	.00	-.13	.10
Rigid Perfection	.24	-.05	.17	.31	-.39	-.01	.55
Risk Taking	-.19	-.10	-.11	.04	.83	.13	-.17
Psychoticism							
Eccentricity	.33	-.08	.26	.23	.26	-.10	.08
Perceptual Dysregulation	.21	.30	.23	.36	.07	-.15	.01
Unusual Beliefs	-.04	.42	.24	.38	-.03	-.15	.18
<i>PAI</i>							
Somatic Complaints							
Conversion	.00	.84	-.01	.04	-.05	-.09	.17
Health Concerns	.14	.68	-.14	-.03	-.08	.01	.07
Somatization	.35	.60	-.10	-.07	-.11	.03	.05
Anxiety							
Affective	.75	.29	-.10	-.04	-.21	.05	.05
Cognitive	.87	.18	-.17	-.07	-.23	.01	.14
Physiological	.51	.55	-.10	-.05	-.11	-.02	.11
Anxiety Disorders							
Obsessive-Comp	.13	.15	.14	.05	-.30	-.01	.71
Phobias	.55	.33	-.05	.06	-.38	.00	.00
Traumatic Stress	.59	.32	-.06	-.20	.17	-.07	.19
Depression							
Affective	.46	.19	.38	-.19	.04	.04	-.05
Cognitive	.52	.25	.24	-.13	.07	-.03	-.25
Physiological	.32	.41	.12	-.15	.02	.04	-.01
Mania							
Activity Level	.20	.35	-.10	.17	.25	-.12	.30

(continued)

Table 6. (continued)

	Negative Affectivity	Cognitive/Health Problems	Detachment	Antagonism	Impulsivity	Aggression	Assertiveness
Grandiosity	-.28	.25	-.21	.35	.13	-.03	.40
Irritability	.41	-.08	.04	.10	.17	.14	.53
Paranoia							
Hypervigilance	.25	.03	.32	-.07	.19	.25	.19
Persecution	.08	.53	.09	.12	.01	.16	.08
Resentment	.24	.24	.16	.04	-.09	.29	-.11
Schizophrenia							
Psychotic Exp	-.12	.79	.03	.22	-.02	-.16	.13
Social Detach	-.01	.13	.85	-.16	-.15	.07	.06
Thought Disorder	.37	.45	.11	.03	.19	-.19	.08
Borderline Features							
Affect Instability	.55	.09	.09	.00	.07	.32	.04
Identity Problems	.87	-.03	-.08	-.10	.22	-.05	.02
Neg Relationships	.54	.05	.04	-.16	.16	.25	.15
Self-Harm	.15	.34	-.12	.11	.43	.10	-.13
Antisocial Features							
Antisocial Beh	-.09	.40	.02	.13	.37	.18	-.15
Egocentricity	-.15	.31	.17	.22	.33	.02	.19
Sensation Seek	-.11	.17	-.01	.06	.77	.02	.00
Alcohol Problems	-.01	.45	-.12	.10	.35	.09	-.18
Drug Problems	-.12	.60	-.04	.02	.25	.10	-.18
Aggression							
Agg Attitude	.17	.12	-.04	.18	.01	.60	.01
Phys Aggression	-.15	.51	-.01	.18	.10	.35	.03
Verb Aggression	-.05	-.03	-.07	.17	.17	.71	.03
Suicidality	.25	.46	.16	-.19	.08	-.02	-.09
Stress	.38	.25	-.02	-.10	.28	-.04	.07
Nonsupport	.02	.33	.46	-.07	-.04	.19	-.08
Treatment Reject	-. 76	.05	-.09	.18	-.25	.08	.00
Dominance	-.38	-.05	-.19	.10	.17	.34	.45
Warmth	.11	.07	-.91	.09	.16	-.22	.03

Note. Some scale labels abbreviated for ease of presentation. Coefficients $\geq .40$ in bold.

Table 7. Pattern Coefficients for the Target Rotated (Wright et al., 2012) Substantive Factors of an Exploratory Structural Equation Model of the Conjoint Structure of the Personality Inventory for DSM-5 (PID-5) and Personality Assessment Inventory (PAI) With Separate Orthogonal Method Factors.

	Negative Affectivity	Detachment	Antagonism	Disinhibition	Psychoticism
<i>PID-5</i>					
Negative Affectivity					
Submissiveness	.27	.01	-.23	.03	.11
Separation Insecurity	.48	.04	.01	.21	.18
Anxiousness	.70	.20	-.07	.15	.13
Emotional Lability	.59	.11	.12	.25	.16
Suspiciousness	.32	.28	.26	.20	.29
Detachment					
Restricted Affectivity	-.34	.38	.15	.11	.13
Depressivity	.15	.40	-.07	.36	.40
Withdrawal	-.01	.71	.09	.05	.20

(continued)

Table 7. (continued)

	Negative Affectivity	Detachment	Antagonism	Disinhibition	Psychoticism
Intimacy Avoidance	-.21	.27	.05	.01	.39
Anhedonia	.06	.62	-.05	.30	.23
Antagonism					
Manipulativeness	.07	.01	.52	.18	.05
Deceitfulness	.07	.17	.41	.28	.19
Hostility	.36	.39	.58	.32	-.10
Cynicism	-.12	.31	.54	.14	.30
Attention Seeking	.23	-.32	.39	.16	.13
Grandiosity	.05	.03	.52	-.10	.20
Disinhibition					
Irresponsibility	-.06	.16	.21	.30	.45
Impulsivity	-.05	-.10	.26	.56	.19
Distractibility	.16	.08	-.10	.44	.25
Perseveration	.35	.20	.09	.17	.32
Rigid Perfectionism	.45	.20	.28	-.34	.18
Risk Taking	-.31	-.33	.30	.56	-.09
Psychoticism					
Eccentricity	.15	.12	.16	.27	.31
Perceptual Dysregulation	.13	.13	.18	.17	.58
Unusual Beliefs	.08	.10	.28	-.06	.61
PAI					
Somatic Complaints					
Conversion	.18	.07	.27	-.03	.69
Health Concerns	.25	.02	.16	.02	.54
Somatization	.37	.14	.12	.10	.53
Anxiety					
Affective	.64	.22	.02	.12	.43
Cognitive	.73	.17	-.04	.08	.37
Physiological	.50	.14	.12	.09	.58
Anxiety-Related Disorders					
Obsessive-Compulsive	.44	.17	.34	-.38	.22
Phobias	.50	.25	-.04	-.04	.42
Traumatic Stress	.44	.09	.07	.23	.44
Depression					
Affective	.23	.46	-.01	.37	.35
Cognitive	.19	.34	-.14	.44	.42
Physiological	.25	.23	.08	.22	.42
Mania					
Activity Level	.25	-.12	.33	.08	.46
Grandiosity	.03	-.29	.46	-.22	.20
Irritability	.48	.14	.53	.08	.10
Paranoia					
Hypervigilance	.24	.33	.38	.29	.18
Persecution	.19	.18	.38	.15	.50
Resentment	.21	.33	.20	.26	.27
Schizophrenia					
Psychotic Experiences	.06	.00	.27	-.06	.75
Social Detachment	-.03	.74	.11	.11	.27
Thought Disorder	.24	.10	.11	.23	.64
Borderline Features					
Affective Instability	.43	.35	.32	.39	.20
Identity Problems	.48	.13	-.04	.42	.25

(continued)

Table 7. (continued)

	Negative Affectivity	Detachment	Antagonism	Disinhibition	Psychoticism
Negative Relationships	.43	.23	.26	.32	.16
Self-Harm	.04	-.06	.30	.47	.32
Antisocial Features					
Antisocial Behaviors	-.08	.02	.39	.41	.33
Egocentricity	-.05	.04	.47	.18	.34
Sensation Seeking	-.18	-.21	.40	.49	.22
Alcohol Problems	-.04	-.09	.28	.37	.35
Drug Problems	-.09	.00	.26	.32	.42
Aggression					
Aggressive Attitude	.31	.25	.61	.30	.02
Physical Aggression	.07	.12	.57	.21	.32
Verbal Aggression	.14	.15	.70	.34	-.19
Suicidality	.11	.25	-.02	.31	.44
Stress	.24	.03	.12	.30	.35
Nonsupport	.02	.49	.19	.24	.35
Treatment Rejection	-.38	-.20	.09	-.43	-.25
Dominance	.02	-.21	.57	-.13	-.24
Warmth	.10	-.78	-.17	-.14	-.07

Note. Coefficients $\geq .40$ in bold.

of approximation (.07), standardized root mean square residual (.04), and comparative fit index (.88) values indicated acceptable fit for this model ($\chi^2_{(1,642)} = 9894.03$). The top half of the table gives pattern coefficients for PID-5 traits. The structure identified in previous research with the PID-5 was basically replicated. Specifically, most scales had the strongest pattern coefficient for their intended parent domain, and cross-loading patterns were similar to those observed in previous studies (e.g., Wright et al., 2012).

The assortment of PAI scales across these factors indicates the ability of broad personality dimensions to account for the covariance of common mental disorders and clinical issues. The Somatic Complaints scales loaded with Psychoticism, which may reflect the tendency of disordered thinking to involve somatic content. This loading may also be due to the unusual nature of certain Somatic Complaints items, such as those focusing on conversion symptoms. Anxiety and Anxiety-Related Disorders scales tended to load onto Negative Affect, as would be expected. Depression scales loaded on Detachment, as well as Disinhibition and Psychoticism, similar to the pattern for PID-5 depression.

The Mania, Paranoia, and Schizophrenia subscales loaded onto different factors. Manic activity loaded primarily on Psychoticism, again reflecting the broadening of this trait to include physical content from the PAI. Manic grandiosity loaded primarily on Antagonism, similar to PID-5 grandiosity. Manic irritability loaded on Antagonism as well as Negative Affect. Paranoid hypervigilance, which reflects the interpersonal features of paranoia, loaded primarily on Antagonism. Paranoid persecution, which reflects

the more actively psychotic features, loaded primarily on Psychoticism. Paranoid resentment, which has to do with harboring anger and holding grudges, loaded primarily on Negative Affect. With respect to the Schizophrenia subscales, whereas social detachment loaded mostly on Detachment, psychotic experiences and thought disorder loaded primarily on Psychoticism.

As would be expected, the Borderline features subscales primarily involve Negative Affect and Disinhibition, whereas the Antisocial Features subscales involve Antagonism and Disinhibition. Drug and Alcohol Problems scales loaded on Disinhibition, which would be expected given the general link between trait Disinhibition and externalizing behavior (Krueger et al., 2002). They also loaded on Psychoticism, which may reflect the unconventionality of substance use and the possibility of disrupted cognition associated with substance misuse (Latvala et al., 2009). Aggression loaded on Antagonism, as would be expected. Suicidality and Stress loaded on Psychoticism, which may again have to do with the broadening of Psychoticism to include mood-related content, as seen in the depression scale loadings. Nonsupport loaded on Detachment, as would be anticipated. Treatment rejection loaded negatively on Disinhibition and Negative Affect, indicating that people who are more conscientious and in greater emotional pain are more likely to pursue treatment. Finally, Dominance loaded positively on Antagonism and Warmth loaded negatively on Detachment, suggesting correspondence between the interpersonal dimensions across instruments.

Discussion

In this study, we investigated connections between the *DSM-5* pathological traits as represented by the PID-5 and a range of clinical issues as instantiated in the PAI. Bivariate correlations and a conjoint EFA suggested substantial convergence between these instruments. Further analyses suggested that this convergence could be conceptualized using five factors that resemble the higher-order structure of the *DSM-5* traits (Anderson et al., 2013; De Fruyt et al., 2013; Thomas et al., 2012; Wright et al., 2012). This finding builds on an emerging body of research (Blanco et al., 2013; Kotov et al., 2010; Markon, 2010; Wright et al., 2013) that indicates the potential for quantitative structural approaches to improve diagnostic nosology and clinical assessment.

Information Overlap in the PAI and *DSM-5* Traits

One overall finding is that a lot of information in the *DSM-5* traits is also available in the PAI, and vice versa. This has a number of implications, including that clinicians could use the PAI to make inferences about the *DSM-5* traits. This is important given that many clinicians will make inferences about *DSM* constructs using instruments that are not based directly on the *DSM*, such as the PAI. Tables 1 to 5 provide data with which such inferences could be made. In many cases, a single PAI scale was a reasonable marker for a *DSM-5* trait (e.g., PAI dominance for *DSM-5* submissiveness, or PAI Paranoia for *DSM-5* suspiciousness). However, it may also be worthwhile to develop more complex and effective algorithms for estimating *DSM-5* trait scores using the PAI. Various approaches to this problem have been used in the past, including regression-based approaches (Morey, 1991), clinical algorithms (Morey, 1996), and using particular scales or even all the information in a given profile to compute the fit to a diagnostic prototype (Morey, 1991). Future work should explore the relative effectiveness and burden of these different strategies.

The overlap of these instruments was explored further in the initial EFA model. This model suggested that both instruments are heavily saturated with negative affectivity, which is the case with most broadband measures of psychopathology. Other factors emerged that were more or less general. For instance, Detachment also had a number of strong loadings across instruments, whereas Assertiveness was fairly specific to a few scales. This pattern suggested the possibility that various aspects of these instruments might be arranged hierarchically (e.g., Assertiveness and Aggressiveness might reflect lower-order variations of Negative Affectivity and Antagonism, which were recovered because both instruments tended to emphasize such features; see Markon, 2009). A broad implication of the

results of this analysis suggested common variance across personality and psychopathology constructs that were separated across the first and second axes of the *DSM-IV*, an issue that we explored in greater detail using a more constrained ESEM model.

Personality and Psychopathology: Toward a Model of Psychological Systems

The broad convergence between personality and psychopathology constructs is consistent with the hypothesis that these domains can be integrated in a clinically useful, evidence-based framework. In such a model, the higher-order domains that describe covariation in normal personality, personality disorder, and clinical constructs more generally might be thought of as psychological systems (e.g., Insel et al., 2010; Regier, Narrow, Kulh, & Kupfer, 2009). These systems appear to cut across cultures (Terracciano & McCrae, 2006), questionnaire, observational, and neuroimaging assessment methods (DeYoung et al., 2010; Durbin, Schalet, Hayden, Simpson, & Jordan, 2009; South, Oltmanns, Johnson, & Turkheimer, 2011), and developmental periods (Shiner & DeYoung, in press). As such, and keeping in mind that dualism can be taken too concretely, these psychological systems are roughly analogous to the biological systems that comprise a medical chart review (i.e., vascular, nervous, gastrointestinal, etc.). Just as a physician's assessment typically begins with a general overview of bodily systems that are assessed in more detail given positive screening data, a mental health clinician's assessment could begin with a broad assessment of psychological systems, which would precede a more detailed assessment.

We will highlight two specific clinical advantages of thinking about psychiatric taxonomy in this way. First, these results and others like them provide an evidence-based explanation for the co-occurrence of certain disorders that are systematically related to the same higher-order domain or system. The ability of these domains to explain diagnostic co-occurrence may provide a framework for stepped psychological assessment, in which these five psychological systems are screened to identify areas for more detailed assessment as described above (see Widiger & Trull, 2007, for an example of similarly stepped assessment of personality pathology). For instance, based on the results of this study as presented in Table 7, a positive screen for Disinhibition would indicate follow-up assessments targeting externalizing behaviors such as substance abuse (PAI drug problems), impulsivity (PAI self-harm), or antisocial behavior (PAI antisocial behaviors), whereas a positive screen for Detachment might signal the need for a more thorough assessment of depression (PAI affective depression), negative psychotic symptoms (PAI social withdrawal), or issues in the environment (PAI nonsupport).

Second, it is possible that certain syndromal concepts reflect dysfunction in different systems, such that heterogeneity in their expression can be understood as a function of the particular systems that are dysregulated. For instance, in this study patterns emerged with the Mania, Paranoia, and Schizophrenia subscales that demonstrated how variability in the expression of clinical disorders may be understood using a trait model. Thus, indicators of these broad systems could be used in clinical practice to better understand how certain forms of psychopathology are most likely to be expressed, and perhaps to indicate targets for individualized intervention.

To realize the potential of trait models for clinical assessment, several important further empirical avenues will need to be explored. Although the focus here was on what traits and clinical constructs have in common, attention also needs to be paid to distinguishing constructs that load on the same factor. This an interesting and complex direction for future research given that constructs might be distinguished in a variety of ways. Some might differ in terms of temporal dynamics (McGlashan et al., 2005). For example, the general tendency to be dominant or warm might be more stable than the experience of confusion or emotional dysregulation or the enactment of dominant or warm behaviors under certain conditions. Others might involve construct bandwidth. One way to handle this issue from a personality perspective is to evaluate where various constructs fit in hierarchical trait models (Markon, 2009; Markon et al., 2005; Wright et al., 2012). However, some aspects of psychopathology may lie outside of the personality hierarchy. For instance, many maladaptive behaviors reflect a combination of diathesis (which may be partly or mostly captured by traits) and stress, which may be driven by factors that are mostly independent of personality. While the nature/nurture rubric is probably overly simplistic (e.g., Distel et al., 2011), it is also true that the notion of traits as systems provides a firm foundation with which to evaluate the potential influences of extra-trait factors, such as environmental stressors.

Study Limitations

In addition to areas for further research that are stimulated by the current findings, ongoing studies should assess the specific limitations of this project. Chief among these involve the use of a convenience sample of college students and the reliance on self-report assessments. These features may have particularly affected findings related to Psychoticism. This trait did not consistently emerge in the EFA, and in the ESEM model presented in Table 7, it is more diffuse than might have been expected despite target rotation. In particular, it includes aspects of mood dysregulation and somatic symptoms. It is possible that items related to Psychoticism are perceived differently in clinical and nonclinical samples. For instance, whereas an item

related to cognitive slippage may resonate phenomenologically with a psychotic or highly dysregulated patient, to an individual with a more limited appreciation of this phenomenology it may simply sound like “I think I might be losing my mind.” Thus, it may be endorsed for less specific reasons. Similarly, the EFA results in Table 6 might be taken to suggest that any response that implies some sort of neurological dysfunction, such as pain, substance abuse, and even psychotic experiences, may tend to group together in a non-clinical population. For these and other reasons, further research is needed in clinical samples to validate the convergence of the PAI and PID-5 before applying the findings suggested by this study to clinical assessment. In general, further research with multiple assessment methods and in diverse samples will be valuable moving forward.

Conclusion

In conclusion, this study showed that the conjoint structure of *DSM-5* traits as measured by the PID-5 and clinical constructs as measured by the PAI cohere and can be organized effectively in a consensual five-factor structure. These findings imply the potential for integrating personality and psychopathology using traits, which can be thought of as reflecting broad psychological systems that connect personality, psychopathology, and clinically relevant behavior, and for using the PAI to assess for pathological personality traits as represented in the *DSM-5*.

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Note

1. Solutions from Oblimin and Geomin rotations were similar to those reported in Table 6; further information is available on request.

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