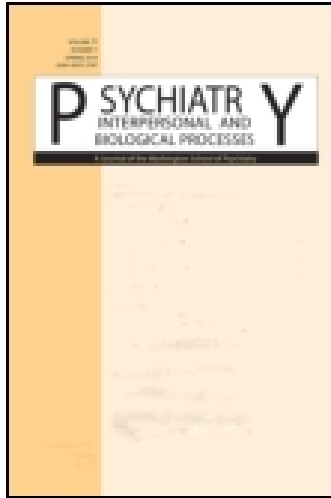


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Defense Mechanisms in Schizotypal, Borderline, Antisocial, and Narcissistic Personality Disorders

J. Christopher Perry, Michelle D. Presniak, and Trevor R. Olson

Numerous authors have theorized that defense mechanisms play a role in personality disorders. We reviewed theoretical writings and empirical studies about defenses in schizotypal, borderline, antisocial, and narcissistic personality disorders, developing hypotheses about these differential relationships. We then examined these hypotheses using dynamic interview data rated for defenses in a study of participants ($n = 107$) diagnosed with these four personality disorder types. Overall, the prevalence of immature defenses was substantial, and all four disorders fit within the broad borderline personality organization construct. Defenses predicted the most variance in borderline and the least variance in schizotypal personality disorder, suggesting that dynamic factors played the largest role in borderline and the least in schizotypal personality. Central to borderline personality were strong associations with major image-distorting defenses, primarily splitting of self and other's images, and the hysterical level defenses, dissociation and repression. Narcissistic and antisocial personality disorders shared minor image-distorting defenses, such as omnipotence or devaluation, while narcissistic also used splitting of self-images and antisocial used disavowal defenses like denial. Overall, differential relationships between specific defenses and personality disorder types were largely consistent with the literature, and consistent with the importance that the treatment literature ascribes to working with defenses.

Studies have demonstrated that personality disorders (PD) are associated with a chronic, symptomatic course (Skodol et al., 2005), high numbers of co-occurring axis I and other II disorders (McGlashan et al.,

2000), and greater treatment use (Bender et al., 2006) compared to those without personality disorders. While there is consistent evidence for the efficacy of existing psychotherapeutic treatments for PDs (Leichsenring

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Some data from the present manuscript were the basis for separate analyses in previous reports (Perry & Cooper 1985; 1986; Perry & Perry, 2004). Data collection was underwritten by a grant from the National Institute of Mental Health RO1 MH34123. The authors would like to thank The Cambridge Hospital, Cambridge, Massachusetts, at which the original data collection took place.

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& Leibing, 2003; Perry, Banon, & Ianni, 1999), long treatment durations are the rule (Perry, Bond, & Roy, 2007; Zanarini, Frankenburg, Hennen, & Silk, 2004), and the likelihood of full return to health is yet to be established. At this point, the need for further study of important potentially modifiable risk factors is clear, to develop a firmer scientific basis for the design, conduct, and ascertainment of long-term success for treatments. One such area is the study of potential mechanisms that promote or maintain the presence of pathological and adaptive personality functioning (Kazdin, 2007). The present report examines the association between specific defense mechanisms and four PD types and considers their potential role in personality functioning.

Defense mechanisms are the automatic psychological responses that individuals use in response to anxiety and internal or external stress and conflict (American Psychiatric Association, 1994). Previous research has demonstrated differential relationships between specific defenses, or levels or groups of defenses, and PD types (Perry & Bond, 2005; Presniak, Olson, & MacGregor, 2010; Vailant & Drake, 1985).

Defenses May Make Surface Traits Resistant to Change

There is a theoretical reason to study PDs and defenses together. Personality disorders are defined on the basis of phenomena measurable with low inference. These include surface traits (e.g., impulsiveness), specific behaviors (e.g., self-mutilation), self-reported experiences (e.g., feelings of emptiness), and beliefs or cognitions (e.g., grandiose sense of self-importance). It is puzzling why individuals do not perceive that these traits are often maladaptive and then strive to supplant them with more adaptive traits. The avoidance function of defenses may supply one answer to this puzzle. From a dynamic point of view, personality traits may

be maintained by the persistent use of specific defenses that serve to avoid awareness of aspects of stress and conflict. Avoidance keeps the personality traits ego-syntonic, making it unlikely that the patient would see that their own actions engender some aversive life experiences. It also makes these traits resistant to the suppressive effects of punishment or the competing effects of new operant learning. Further, any gratification resulting from the defensive actions reinforces their use, such as the pleasure obtained when passive aggression discomforts one's oppressor or superior. To the extent that these theoretical points are true, then understanding the specific defenses underlying PD types should have heuristic value.

Personality disorders are generally hypothesized to rely heavily on so-called immature defenses—those 12 on the lower part of the hierarchy of adaptation, from omnipotence down through help-rejecting complaining noted in Table 1 (Perry & Bond, 2005). We do not posit a one-to-one causal correspondence between PD type and specific defenses, because there are undoubtedly additional causal factors operating to produce surface traits, such as temperament (Perry & Körner, 2011). In addition, certain PD types may share some underlying dynamics while others do not. From a dynamic perspective, other factors contribute to character types, such as persistent motives, conflicts, and patterns of object relations based on developmental experiences. Rather, we hypothesize that there is some meaningful overlap between PD type and specific defense mechanisms as reviewed and reported below.

We began by reviewing the conceptual and empirical literature and devised the hypotheses below about the relationship between individual defenses and PD diagnoses. Our conceptual review includes those writing on character or personality types in the psychoanalytic and psychodynamic literature, several antedating the PD types described in the *Diagnostic and Statistical Manual of Mental Disorders*, third edition

TABLE 1. Summary of Theoretical Reports and Empirical Studies Relating Defenses to Individual Personality Disorders

Defense	SPD			BPD			ASP			NPD		
	Theory	Empirical	Theory	Theory	Empirical	Obsessional	Theory	Empirical	Theory	Theory	Empirical	Empirical
Isolation Intell.								Lingiardi et al., 1999 (OR)	Perry & Perry, 2004			
Undoing	Millon, 1986				Zanarini et al., 2009 (SR)							
Other Neurotic												
Repression	Not present: Kernberg, 1984		Not present: Kernberg, 1984; Alternates be- tween present and not, Reich 1925/1975; Vaillant, 1994				Not present: Kernberg, 1984		Not present: Kern- berg, 1984	-rs: Clemence et al., 2009 (OR); Perry & Perry, 2004 (OR)		
Dissociation ^a							Gacono & Meloy, 1988; Vaillant, 1994	Vaillant & Drake, 1985 (OR; same data also published in Vaillant, 1994)	Vaillant, 1994	Vaillant & Drake, 1985 (OR; same data also published in Vaillant, 1994)		
Reaction Formation			Mostly not present Reich, 1925/1975									
Displacement												
Minor Image- Distorting												
Omnipotence/ Grandiosity	Kernberg, 1984		Higgitt & Fonagy, 1992; Kernberg, 1984				Gacono et al., 1992; Kernberg, 1984; Perry & Cooper, 1986	Presniak et al., 2010 (OR)	Gacono et al., 1992; Kernberg 1970; 1984; Perry & Perry, 2004	Berg, 1990 (Ror); Clemence et al., 2009 (OR); Perry & Perry, 2004 (OR)		
Idealization	Kernberg, 1984		Gacono et al., 1992; Kernberg, 1984		Gacono et al., 1992 (Ror)		Kernberg, 1984; Perry & Cooper, 1986Not pres- ent: Gacono et al., 1992		Kernberg, 1970; 1984; Perry & Perry, 2004	Clemence et al., 2009 (OR); Gacono et al., 1992 (Ror)		
Devaluation	Kernberg, 1984		Gacono et al., 1992; Higgitt & Fonagy, 1992; Kernberg, 1984; Vaillant, 1994; Reich, 1925/1975		Blais et al., 1999 (Ror)		Gacono & Meloy, 1988; Kernberg, 1984; Perry & Cooper, 1986; Vaillant, 1994	Presniak et al., 2010 (OR)	Kernberg, 1984; Perry & Perry, 2004; Vaillant, 1994	Clemence et al., 2009 (OR); Perry & Perry, 2004		
Disavowal												
Denial	Kernberg, 1984		Kernberg, 1984		Cramer, 1999		Cramer, 1999; Gacono & Meloy, 1988; Kern- berg, 1984	Cramer, 1999 (TAT); Presniak et al., 2010 (SR)	Cramer, 1999; Kernberg, 1970; 1984	Cramer, 1999 (TAT)		

Projection	Kernberg, 1984; Vaillant, 1994	Kernberg, 1984	Cramer, 1999 (TAT); Perry & Perry, 2004	Cramer, 1999 (TAT); Lingiardi et al., 1999 (OR); Presniak et al., 2010 (SR)	Cramer, 1999; Kernberg, 1984	Presniak et al., 2010 (SR); Zanarini et al., 2009 (SR)	
Rationalization		Reich, 1925/1975		Presniak et al., 2010 (SR)	Gacono & Meloy, 1988		
Fantasy	Vaillant, 1994						
Major Image Distorting							
Splitting	Kernberg, 1984	Kernberg, 1984; Higgitt & Fonagy, 1992; Perry & Cooper, 1986; Vaillant, 1994; Reich, 1925/1975		Berg, 1990 (Ror); Blais et al., 1999 (Ror); Hilsenroth et al., 1993 (Ror); Presniak et al., 2010 (SR); Zanarini et al., 2009 (SR)	Gacono & Meloy, 1988; Kernberg, 1984; Perry & Cooper, 1986; Vaillant, 1994		Blais et al., 1999 (Ror)
Projective Identification	Kernberg, 1984	Higgitt & Fonagy, 1992; Kernberg, 1984; Perry & Cooper, 1986; Reich, 1925/1975		Hilsenroth et al., 1993 (Ror); Zanarini et al., 2009 (SR)	Gacono & Meloy, 1988; Kernberg, 1984		Clemence et al., 2009 (OR)
Action							
Acting Out		Vaillant, 1994; Reich, 1925/1975		Lingiardi et al., 1999 (OR); Presniak et al., 2010 (SR); Zanarini et al., 2009 (SR)	Gacono & Meloy, 1988; Millon, 1986; Vaillant, 1994		Lingiardi et al., 1999 (OR); Perry & Perry, 2004 (OR); Vaillant & Drake, 1985 (OR; same data also published in Vaillant, 1994)
Passive Aggression		Reich, 1925; 1975		Presniak et al., 2010 (SR); Zanarini et al., 2009 (SR)			
Help-Rejecting Complaining				Zanarini et al., 2009 (SR)			

Note. SPD = Schizotypal Personality Disorder; BPD = Borderline Personality Disorder; ASP = Antisocial Personality Disorder; NPD = Narcissistic Personality Disorder; SR = Self-report; OR = observer report; Ror = Rorschach Inkblot Test; TAT = Thematic Apperception Test. ^aAlthough there are multiple studies examining the broader construct of dissociation and its association with personality disorders, we only included empirical studies which specifically examined dissociation as a defense mechanism.

(DSM-III; American Psychiatric Association, 1980) and subsequent editions. We included authors with a major focus on defenses, noting the specific defenses posited for each type. For reasons of space, citations are confined to Table 1. Due to varying terminologies, we also included a defense when an author clearly described the function if not the exact name. We then utilized an existing data set, which included four PD types, to examine evidence for these relationships. Our hypotheses follow.

Schizotypal Personality Disorder (SPD)

Compared to other diagnoses, SPD is relatively new in the PD literature, and there is very little written on its psychodynamics. We found only three authors who posited defenses associated with SPD (see Table 1). These defenses include those associated with Kernberg's (1984) borderline personality organization (BPO: the presence of omnipotence, idealization, devaluation, denial, primitive projection or projective identification, and splitting, and an absence of repression), along with undoing and autistic fantasy. However, no empirical studies of SPD have examined these hypotheses, making the present study the first to do so. In addition, we hypothesized that displacement would be associated with SPD, because it allows an individual to avoid confronting anxiety-provoking conflicts by supplying alternative objects of concern that are less conflictual. In this report, we tested the hypotheses that SPD psychopathology is associated with the above-noted 11 defenses.

Borderline Personality Disorder (BPD)

The psychodynamics of BPD has a substantial literature. Many authors agree that BPD is associated with the seven defens-

es characteristic of Kernberg's (1984) BPO, including omnipotence, idealization, devaluation, denial, primitive projection or projective identification, and splitting, as well as the absence of repression, or an alternation between too little and excessive repression (see Table 1). Some authors have also suggested BPD is associated with acting out, passive-aggression, dissociation, rationalization, and a relative absence of reaction formation. Studies have found empirical support for 8 of these 13 defenses, all except a positive association with dissociation, omnipotence, and rationalization, or a negative association with repression and reaction formation. In addition, studies have found associations between BPD and undoing, and help-rejecting complaining. We tested the hypotheses that BPD psychopathology is associated with each of the above 15 defenses.

Antisocial Personality Disorder (ASP)

Seven authors have posited specific defenses associated with ASP. These authors agree that core defenses in ASP include omnipotence, denial, devaluation, splitting, and acting out. In addition, some of the authors hypothesized that dissociation, projection, rationalization, and projective identification are positively associated with ASP while repression is negatively associated with ASP. There are conflicting hypotheses for the association of idealization with ASP, as some authors suggested a positive relationship and one suggested that idealization is absent. Only four empirical studies have examined individual defenses in ASP, and the results offered support for 8 of these 11 hypotheses, while failing to support those for idealization, projective identification, and repression. In addition, one study found an association between intellectualization and ASP while another found an association between passive-aggression and ASP. We tested the

hypotheses that these 13 defenses are associated with ASP.

Narcissistic Personality Disorder (NPD)

Six authors have hypothesized that specific defenses are associated with NPD. Many agree that NPD is associated with omnipotence, idealization, devaluation, denial, rationalization, fantasy, and splitting. Additionally, some authors posit that NPD is positively associated with sublimation, intellectualization, dissociation, projection, projective identification, and acting out, as well as negatively associated with repression. Of these 14 defenses, empirical studies have shown support for 12, excepting sublimation & intellectualization. As such, we tested the hypotheses that 13 of these 14 defenses are associated with NPD. Because the majority of the present study sample was rated for defenses with an earlier version of the DMRS that did not include the adaptive defense sublimation, this 14th hypothesis could not be tested.

We examined these hypotheses combining two recruitment phases from the same overall study. While we previously reported some data on two PD diagnoses (BPD, ASP) and defenses (Perry & Cooper, 1986) in the first sample, and a report on another diagnosis, NPD, on the combined sample (Perry & Perry, 2004), the present report differs in five important ways. First, we now include participants from both recruitment phases 1 and 2. Second, we examine SPD, which had not previously been reported on. Third, we examine the individual defenses instead of only the summary defense levels. Fourth, we use the proportional scoring system with improved distributional characteristics described below. Fifth, we employ multivariate analytic methods. Thus, the present report meaningfully advances our knowledge in this area.

METHOD

Participants

Participants for the present study were part of a longitudinal investigation of personality disorders begun in 1980 at the Cambridge Hospital. The original aim was to examine the course of BPD in comparison to near-neighbor diagnoses, ASP and bipolar type II affective disorder, for evidence of the separate validity of BPD. This aim was later expanded to include comparison to SPD (Perry, O'Connell, & Drake, 1984) and NPD (Perry & Perry, 1996).

Initially, 124 participants entered the study, 91 from the first recruitment phase between 1980 and 1983, and 33 from the second recruitment phase from 1985 to 1988. The second recruitment phase explicitly included participants with SPD, as well as all other study diagnoses. Of 124 participants who entered the study, 107 agreed to the videotaping of a 50-minute dynamic interview, which served as the raw data for this study.

Participant collection and diagnoses were reported in detail elsewhere (Perry & Perry 1996). All participants were collected from ambulatory settings as well as a local district probation department and advertisements in the local newspaper for symptomatic volunteers. Exclusion criteria included DSM-III schizophrenia, evidence of current alcohol dependence, or an IQ less than 80. The prevalence of concurrent axis I major depressive disorder and dysthymic disorder was high, and many participants met more than one study diagnosis. For the current report, 107 participants with complete data ranged in age from 18–45 ($M = 28.9 \pm 5.5$), with slightly more females (55%).

Procedures

Professionals conducted semi-structured diagnostic interviews lasting more than

two hours using the Guided Clinical Interview (GCI), which involved taking a history and using semi-structured checklists to ascertain coverage of study diagnostic symptoms. BPD was diagnosed if the subject met both DSM-III or III-R criteria and the Borderline Personality Disorder Scale cut-off of 28. The BPD Scale is a quantitative assessment of borderline psychopathology (Perry & Cooper, 1986). ASP and SPD were diagnosed according to DSM-III criteria, and rescored for DSM-III-R criteria when they became available. Bipolar type II was diagnosed according to the Research Diagnostic Criteria (Spitzer & Endicott, 1978). Videotaped interviews from participants collected during the first phase were reviewed and rated for the DSM-III-R criteria for NPD (Perry & Perry, 1996), and rediagnosis for DSM-III-R SPD was also done at that time, while in the second phase, all PD diagnoses were made from intake interviews.

Weighted kappa inter-rater reliabilities for the intake interview diagnoses were as follows: SPD = .77, NPD = .71, ASP = 1.00, and BPD = .83 ($n = 13$). The BPD diagnosis made by the BPD Scale had a reliability of $Kw = .80$, while the continuous BPD Scale score had an intraclass $R(IR) = .91$, and the continuous SPD and ASP scores had IR values of .82 and .92, respectively. The reliability of the NPD diagnosis made from the videotapes was $Kw = .47$, while the reliability for the continuous scale was $IR = .56$ ($n = 25$; Perry & Perry, 1996). On the phase II subsample, agreement between the GCI diagnostic interview and the videotaped method was $Kw = .52$ ($n = .31$) for NPD. This level of agreement between the two methods for diagnosing NPD is twice the magnitude of the median of studies of agreement between any two structured instruments for PD diagnoses available in the same era (Perry, 1992), indicating good concurrent validity of our method.

After intake, the dynamic interview was conducted by experienced clinicians, most of whom were psychoanalysts, blind to diagnostic data. The interviews lasted

about 50 minutes and were videotaped. The dynamic interviews were not structured, although there was a list of ten topic areas considered important (e.g., family of origin, work, intimate relationships; Perry, Fowler, & Greif, 2008). Compared to other types of interviews, dynamic interviews most resemble psychotherapy sessions (Beck & Perry, 2008), allowing patient's defenses to emerge.

Defense Ratings. Defenses were rated from the intake videotaped interviews using the Defense Mechanisms Rating Scales, fourth edition (DMRS; Perry, 1986). The scales, rating method, and reliability are described in detail elsewhere (Perry, 1988; Perry & Cooper, 1989). Briefly, groups of three baccalaureate-level raters viewed each interview and, after making individual ratings, formed a consensus rating of 22 defenses. The eight mature defense scales were not available except for the 31 participants in the second recruitment phase, and we therefore omitted them from these analyses, along with two alternate forms of denial, bringing the total to 20 defenses. Based on the whole interview, each defense was initially rated qualitatively as 0 = absent, 1 = probably present, or 2 = definitely present. Conceptually and empirically correlated defenses were previously grouped into summary scales called defense levels (median reliability $IR = .74$), representing each of 7 defense levels. These include the levels 1–6 in Table 1, and high adaptive level 7 (mature) defenses, available only in phase II subjects.

Proportional Defense Scoring. Because participants varied in how many defenses they used, we corrected for this as follows. The raw score for each defense (0, 1, or 2) was divided by the total sum of all defense scores, to yield a *proportional score*. This is interpretable as the proportion of all of an individual's defensive functioning (without mature defenses) attributable to the defense in question. This scoring method approximates the more recent and preferred quantitative assessment of participants' defensive func-

TABLE 2. Percentage Using the Defense and Mean (M) Percentage Score by Diagnostic Group

Defense	SPD		BPD		ASP		NPD	
	% use ¹	M %	% use ¹	M %	% use ¹	M %	% use ¹	M %
N/n =	39/19	41/8	33/9	7/0				
Affiliation	5.3	1.0	12.5	1.7	0.0	0.0	—	—
Altruism	0.0	0.0	0.0	0.0	0.0	0.0	—	—
Anticipation	0.0	0.0	0.0	0.0	0.0	0.0	—	—
Humor	0.0	0.0	0.0	0.0	0.0	0.0	—	—
Self-Assertion	0.0	0.0	0.0	0.0	0.0	0.0	—	—
Self-Observation	0.0	1.1	0.0	2.0	0.0	0.0	—	—
Sublimation	0.0	0.5	0.0	0.6	0.0	0.0	—	—
Suppression	0.0	0.3	0.0	0.6	0.0	0.0	—	—
Isolation	53.8	6.5	39.0	5.5	54.5	6.7	14.3	3.4
Intellectualization	48.7	6.0	46.3	6.3	51.5	6.2	85.7	8.3
Undoing	12.8	2.5	17.1	2.8	15.2	3.0	14.3	2.6
Repression	41.0	5.5	51.2	6.4	36.4	4.6	14.3	3.1
Dissociation	12.8	2.7	19.5	3.4	12.1	2.3	0.0	0.6
Reaction Formation	25.6	3.3	36.6	4.5	33.3	4.5	28.6	4.3
Displacement	33.3	4.5	24.4	3.0	33.3	4.3	14.3	2.5
Omnipotence	33.3	4.2	26.8	3.2	57.6	6.2	71.4	7.3
Idealization	23.1	3.0	19.5	3.2	30.3	3.8	42.9	4.9
Devaluation	56.4	6.8	53.7	6.7	54.5	7.3	71.4	7.2
Autistic Fantasy	25.6	3.3	12.2	1.9	18.2	2.9	14.3	4.0
Denial	33.3	5.4	41.5	6.5	45.5	6.2	71.4	6.3
Rationalization	48.7	6.6	41.5	6.0	57.6	7.5	71.4	7.2
Projection	74.4	7.9	68.3	7.2	78.8	8.2	100.0	8.9
Splitting Self-Images	56.4	6.2	63.4	7.0	33.3	4.5	42.9	5.1
Splitting Others-Images	51.3	6.5	65.9	7.4	48.5	5.7	71.4	7.3
Projective Identification	15.4	2.2	19.5	2.3	12.1	1.7	14.3	1.7
Acting Out	48.7	5.9	68.3	7.0	60.6	6.2	71.4	5.7
Passive Aggression	56.4	7.0	53.7	6.9	45.5	5.6	57.1	5.6
Help-Rejecting Complaining	30.8	3.8	26.8	3.8	12.1	2.5	28.6	4.0

Note. SPD = Schizotypal PD; BPD = Borderline PD; ASP = Antisocial PD; NPD = Narcissistic PD. N = total participants with this diagnosis. n = subset who had the eight mature level defenses rated (but not included in overall calculations). ¹Percentage of each diagnosis that definitely used the defense.

tioning, and it has better distributional characteristics compared to our previous reports. The resulting proportional scores of all 20 defenses then add up to 100%.

Data Analysis

Because PD comorbidity resulted in reduced samples of pure PD types, for multivariate analyses, we employed continuous rather than categorical diagnostic variables, consisting of the sum of the DSM-III-R scores for each type. In lieu of the sum of DSM cri-

teria for BPD, we used the BPD Scale because the latter is a more precisely quantitative scale (Perry & Cooper, 1985). We tested the relationships between hypothesized defenses and each continuous diagnostic variable in question by using stepwise multiple linear regression. We did not enter non-hypothesized variables into the models to decrease the likelihood of Type I errors (i.e., false positives). This enabled us to detect whether the hypothesized defenses shared unique variance with each diagnostic variable. However, because the defense scores are semi-

TABLE 3. Defenses and Defense Levels Predict SPD Symptoms in Multiple Linear Regression Models

	<i>df</i>	Partial <i>B</i>	Cumulative <i>R</i> ²	<i>R</i> ²	<i>F</i>	<i>p</i>
Model 1: Hypothesized Defenses						
Defenses Only	1, 104			4.14	.008	
1 Displacement		11.86	.040	.040	5.37	.022
2 Undoing		-11.87	.041	.081	5.46	.021
3 Omnipotence		-8.80	.026	.107	3.03	.085
Model 2: Hypothesized Defenses						
Controlling Sex, Age	5, 102			4.36	.001	
0 Sex		0.80			4.43	.038
Age		0.09		.077	6.67	.011
1 Displacement		11.06	.046	.123	4.79	.031
2 Undoing		-11.87	.041	.081	3.94	.050
3 Autistic Fantasy		9.12	.023	.176	2.83	.096
Model 3: Defense Levels						
Controlling Sex, Age	4, 103			4.74	.002	
0 Sex		0.91			5.44	.022
Age		0.08		.077	5.66	.019
1 Action		6.28	.040	.117	5.53	.021
2 Autistic Fantasy		11.68	.039	.155	4.70	.032

Note. SPD = Schizotypal Personality Disorder. SPD symptoms are represented by schizotypal criteria sum.

quantitative, they may under-represent the true variation in defense scores. As a result, we selected a probability of .10 for retention of variables in the model to minimize type II (false negative) errors. For each diagnostic continuous variable, we proceeded as follows. The first model allowed only hypothesized defense variables to enter into the model. The second model forced any associated demographic (i.e., age, sex) or diagnostic variables into the model, followed stepwise by the hypothesized defense variables. Whenever a forced variable became insignificant in the full model, the model was rerun without it. Finally, the third model examined the defense levels and autistic fantasy (not a member of any level), rather than the individual defenses. Because each level reflects the broader functional aim of its constituent defenses, the level's occurrence and functions may be more readily perceived by clinicians. These findings were expected to mirror the

major findings on individual defenses. For this model, after entering the above forced variables, the defense levels were entered stepwise.

RESULTS

The total study group ($n = 125$) had a mean age of 28.9 years ($SD = 5.5$) and 50% were female. The diagnostic breakdown included SPD 44 (35%), BPD 59 by DSM-III-R criteria (48%), or 46 (37%) by BPD Scale criteria, ASP 41 (33%), NPD 10 (8%), bipolar type II 74 (60%) or 22 (18%) with bipolar II but without any PD. Pairwise comparison of diagnostic groups revealed only one significant association, that between ASP and NPD, $\chi^2(2, n = 125) = 14.3, p < .001$. Similarly, intercorrelations of all continuous diagnostic scales were nonsignificant, except

TABLE 4. Defenses and Defense Levels Predict BPD Symptoms in Multiple Linear Regression Models

		Partial	Cumulative				
		<i>df</i>	<i>B</i>	<i>R</i> ²	<i>R</i> ²	<i>F</i>	<i>p</i>
Model 1: Hypothesized Defenses							
Defenses only		5, 102			12.47	< .001	
1	Splitting Self-Images		58.31	.146	.146	13.68	< .001
2	Omnipotence		-54.02	.081	.228	12.29	< .001
3	Dissociation		62.06	.071	.298	13.78	< .001
4	Acting Out		37.83	.050	.348	8.99	.003
5	Splitting Others-Images		37.71	.032	.379	5.18	.025
Model 2: Hypothesized Defenses							
Controlling Sex, Age		7, 100			9.16	<.001	
0	Sex		1.80			1.81	.182
	Age		-0.01			0.00	.951
1	Splitting Self-Images		52.44	.090	.187	10.23	.002
2	Dissociation		59.97	.061	.247	12.73	< .001
3	Omnipotence		-47.60	.060	.307	8.70	.004
4	Acting Out		40.13	.057	.364	9.92	.002
5	Splitting Others-Images		35.00	.027	.391	4.39	.039
Model 3: Defense Levels							
Controlling Sex		4, 103			11.92	< .001	
0	Sex		3.21		.097	5.49	.021
1	Major Image-Dis- torting		31.67	.085	.182	13.68	< .001
2	Hysterical		41.24	.054	.236	12.80	< .001
3	Action		30.10	.081	.317	12.16	< .001

Note. BPD = Borderline Personality Disorder. BPD symptoms are represented by BPD scale score.

between ASP and NPD, $r_s(123) = .35, p < .001$). There were no significant associations between diagnostic group and age, although there were with percent female: SPD 64%, $\chi^2(1, n = 125) = 5.07, p = .02$; BPD 64% $\chi^2(2, n = 125) = 13.43, p = .001$; ASP 37%, $\chi^2(1, n = 125) = 4.41, p = .04$, NPD 20%, $\chi^2(2, n = 125) = 14.17, p < .001$.

Schizotypal Personality Disorder (SPD)

Table 2 displays two descriptive statistics for each diagnostic group: the percentage of those scored as definitely using each defense, followed by the mean proportional score (i.e., percentage of all defensive func-

tioning attributable to that defense). The percentage of those with SPD definitely using each of the 20 defenses ranged from 13% (undoing & dissociation) to 74% (projection). The most prevalent defenses are those with scores for the percentage of all defensive functioning that were 5% or higher, as 5% represents the expected score if all were equally prevalent (100%/20 defenses = 5%). For SPD this included 11 defenses, six of which were hypothesized (*italicized*) in descending order: *projection*, passive-aggression, *devaluation*, rationalization, isolation, *splitting of others-images*, *splitting of self-images*, intellectualization, acting out, *repression*, and *denial*, although repression was hypothesized to be absent (it was not),

but it was less prevalent than splitting. SPD had an overall mean proportion of immature defenses = 65.6% ($SD = 11.6\%$).

Table 3 displays the results of the multiple regression analyses. In the first model, 3 of the 11 hypothesized defenses entered the model, yielding a cumulative $R^2 = .107$. Displacement was a positive predictor of SPD symptoms, while undoing and omnipotence were negative in direction. Model 2 forced sex and age into the model, then three defenses were entered stepwise, yielding a cumulative $R^2 = .176$. Displacement and autistic fantasy were positive predictors, while undoing was negative in direction. Finally, model 3 examined the defense levels after forcing in sex and age. Action level defenses and autistic fantasy were positive predictors of SPD symptoms, yielding a cumulative $R^2 = .155$.

Borderline Personality Disorder (BPD)

The percentage of those with BPD definitely using each of the 20 defenses (Table 2) ranged from 12% (fantasy) to 68% (projection & acting out). There were 11 defenses with proportional scores that were 5% or higher. Nine of these were hypothesized (*italicized*), including, in descending order, *splitting of others-images*, *projection*, *splitting of self-images*, acting out, *passive-aggression*, *devaluation*, *denial*, *repression*, intellectualization, *rationalization*, and isolation. *Omnipotence*, reaction formation and *help-rejecting complaining* had scores under 5%. Repression, which was hypothesized to be absent by one but alternately present by another author, was also among these but less prevalent than splitting. BPD had an overall mean of 66.3% ($SD = 10.7\%$) immature defenses.

Table 4 displays the results of the multiple regression analyses. In the first model, 5 of the 15 hypothesized defenses entered the model, yielding a cumulative $R^2 = .379$. Split-

ting of self-images, dissociation, acting out and splitting of others-images were positive predictors of BPD symptoms, while omnipotence was negative in direction. Model 2 forced sex and age into the model before the same five defenses entered stepwise, yielding a cumulative $R^2 = .391$. Dissociation and omnipotence traded their step at entry, while omnipotence remained negative in direction. Finally, model 3 examined the defense levels after forcing in sex. Three defense levels were positive predictors of BPD symptoms, major-image distorting, hysterical and action defense levels, yielding a cumulative $R^2 = .317$.

Antisocial Personality Disorder (ASP)

The percentage of those with ASP definitely using each of the 20 defenses (Table 2) ranged from 12% (help-rejecting complaining, projective identification, and dissociation) to 79% (projection). Ten defenses had scores for the percentage of all defensive functioning that were 5% or higher, nine of which were hypothesized (*italicized*) including, in descending order, *projection*, *rationalization*, *devaluation*, isolation, *omnipotence*, *denial*, *acting out*, *intellectualization*, *splitting of others-images*, and *passive-aggression*. *Repression* was not among them, consistent with the hypothesis. ASP had an overall mean of 65.5% ($SD = 11.6\%$) immature defenses.

Table 5 displays the results of the multiple regression analyses. In the first model, 3 of the 13 hypothesized defenses entered the model, yielding a cumulative $R^2 = .201$. Omnipotence, devaluation and denial were all positive predictors of ASP symptoms. Because NPD score correlated with ASP score, model 2 initially forced the NPD score, sex, and age into the model. Sex became insignificant after NPD was entered and was dropped. Two defenses then entered stepwise, yielding a cumulative $R^2 = .227$. Omnipotence was a positive predictor, while intellectualization was negative in direction.

TABLE 5. Defenses and Defense Levels Predict ASP Symptoms in Multiple Linear Regression Models

		df	Partial B	Cumulative R ²	R ²	F	p
Model 1: Hypothesized Defenses							
Defenses Only		3, 104			8.71	< .001	
1	Omnipotence		52.88	.152	.152	19.05	< .001
2	Devaluation		28.69	.030	.179	3.44	.038
3	Denial		20.03	.022	.201	2.80	.097
Model 2: Hypothesized Defenses							
Controlling NPD, Age		4, 103			8.44	< .001	
0	NPD score		0.28			4.23	.042
	Age		-0.19		.136	5.73	.019
1	Omnipotence		46.49	.087	.223	13.12	< .001
2	Intellectualization		-19.57	.024	.227	3.24	.075
Model 3: Defense Levels							
Controlling NPD, Age		4, 103			6.74	< .001	
0	NPD score		0.38			8.02	.006
	Age		-0.16		.136	3.96	.049
1	Minor Image-Distorting		17.35	.049	.185	6.00	.016
2	Disavowal		12.44	.023	.208	2.93	.090

Note. ASP = Antisocial Personality Disorder; NPD = Narcissistic Personality Disorder. ASP symptoms are represented by antisocial criteria sum.

Rationalization initially entered positive in direction, but then was removed as its *p*-value was insufficient, *F* (5, 102) = 2.41, *p* = .12. Finally, model 3 examined the defense levels after forcing in NPD score and sex. Two defense levels were positive predictors of ASP symptoms, minor-image distorting and disavowal defense levels, yielding a cumulative *R*² = .208.

Narcissistic Personality Disorder (NPD)

The percentage of those with NPD definitely using each of the 20 defenses (Table 2) ranged from 0% (dissociation) to 100% (projection). The most prevalent defenses consisted of 10 with scores for the percentage of all defensive functioning that were 5% or higher, nine of which were hypothesized (*italicized*), including, in descending order,

projection, intellectualization, omnipotence, splitting of others-images, devaluation, rationalization, denial, acting out, passive-aggression, and splitting of self-images. Repression was correctly hypothesized to be less prevalent. Idealization had a prevalence of 4.9%, just missing our 5% cutoff. NPD had an overall mean of 71.2% (*SD* = 11.8%) immature defenses. Table 6 displays the results of the multiple regression analyses predicting the NPD score. In the first model, 2 of the 13 hypothesized defenses entered the model, yielding a cumulative *R*² = .190. Omnipotence and devaluation were both positive predictors of NPD symptoms. Because NPD score correlated with ASP score, model 2 initially forced the ASP score, sex, and age into the model. Age became insignificant and was dropped. Model 2 yielded a cumulative *R*² = .302, with omnipotence and splitting of self-images as positive predictors, and, paradoxically, rationalization as a negative pre-

TABLE 6. Defenses and Defense Levels Predict NPD Symptoms in Multiple Linear Regression Models

	<i>df</i>	Partial <i>B</i>	Cumulative <i>R</i> ²	<i>R</i> ²	<i>F</i>	<i>p</i>
Model 1: Hypothesized Defenses						
Defenses Only	2, 105			12.31	< .001	
1 Omnipotence		36.74	.160	.160	20.28	< .001
2 Devaluation		17.99	.030	.190	3.83	.053
Model 2: Hypothesized Defenses						
Controlling ASP, Sex	5, 102			8.83	< .001	
0 ASP score		0.15			5.56	.020
Sex		-2.18		.186	10.83	.001
1 Omnipotence		22.60	.053	.239	6.79	.011
2 Splitting Self-images		16.75	.037	.276	4.28	.041
3 Rationalization		-17.22	.026	.302	3.85	.052
Model 3: Defense Levels						
Controlling ASP, Sex	5, 102			9.12	< .001	
0 ASP score		0.14			5.54	.021
Sex		-2.60		.186	16.63	< .001
1 Minor Image-Distorting		13.45	.048	.234	8.79	.004
2 Major Image-Distorting		12.37	.056	.290	9.07	.003
3 Autistic Fantasy		13.84	.019	.309	2.81	.097

Note. ASP = Antisocial Personality Disorder; NPD = Narcissistic Personality Disorder. NPD symptoms are represented by antisocial criteria sum.

dicator. Finally, model 3 examined the defense levels after forcing in the ASP score and sex. Two defense levels, both minor and major image-distorting defenses, and autistic fantasy were positive predictors of ASP symptoms, cumulative $R^2 = .309$.

DISCUSSION

The present report serves two purposes. First, our review brings together both theoretical description and empirical findings about defenses in four PD types. We considered these results as a series of hypotheses. Second, we examined these hypotheses using systematic, reliable, and validated methods for assessing both diagnosis and defenses. Together, both aims allowed us to advance our understanding of one fundamental psychodynamic component of these disorders.

In examining the association between PD type and defense usage, Table 2 paradoxically indicated that almost every defense is definitely used by at least a small proportion of individuals with each PD type. Within each PD type, a number of non-hypothesized defenses were also prominent, such as intellectualization, isolation of affect, and rationalization. Considered alone, prevalence confounds those defenses differentially associated with the disorder in question, with those present for general reasons that cut across disorders. This partly explains why some authors might posit or find an association that is there by chance, or because of some other co-occurring neurotic process—such as learning to distance oneself from distressing affect—rather than as a reflection of a fundamental mechanism for a disorder. Our use of multiple regression mitigated this problem by identifying only those defenses

which explained some unique variance for each disorder in question. The resulting defenses are those most closely related to the underlying dynamics of the disorder. Identifying the most characteristic defenses does not imply that the other defenses are not also used sometimes, just that they are less specific to the disorder itself. A limitation of this statistical technique is that it may miss defenses that do not share unique variance with the disorder, and contrariwise is neither immune to false positives nor to be equated with an actual test of a model. Together, prevalence and unique associations provide complementary information. A related problem devolves from the choice of comparison groups. By design, the study compared BPD to “near-neighbor disorders,” which should yield fewer differentiating defenses than comparisons to highly dissimilar groups, for example comparing PDs to non-ill participants. As a result, we have more confidence about what the regression models did find than what they did not. The likelihood of false negatives must be considered. To the degree that defenses reflect the psychodynamic contribution to disorders, these PDs vary in how dynamically determined they may be. One proxy for this is the cumulative variance that defenses predict. By this metric, BPD was the most dynamically determined disorder, with 37.9% variance by individual defenses and 31.7% by defense levels, followed by NPD, then ASP. SPD was the least, with only 10.7% of the variance explained by individual defenses and 15.5% by defense levels. These figures vary from medium to large effect sizes (Cohen, 1992), and they are clinically meaningful as discussed below. However, all four PDs have a similarly high proportion of defenses within the broad group of immature defenses.

Schizotypal Personality Disorder (SPD)

While schizoid personality has a tradition in the dynamic literature (Appel,

1974; Fairbairn, 1954), SPD is a more recent addition derived from family studies of schizophrenia (e.g., Kendler, Gruenberg & Strauss, 1981), emphasizing description of mild psychotic-like symptoms and schizoid traits. The diagnosis has been largely consistent from DSM-III onward. Individuals with SPD used as high a proportion of immature defenses as the individuals with other PD types. Several highly prevalent defenses were consistent with the inclusion of SPD within Kernberg's BPO construct: projection, devaluation, splitting of others-images, splitting of self-images and denial. Most other prevalent defenses were either action (i.e., passive-aggression & acting out), disavowal (rationalization), or obsessional defenses (i.e., isolation & intellectualization). Repression was also prevalent, contrary to the hypothesis, albeit with a lower mean prevalence than splitting, consistent with the predominance of the latter.

Defenses predicted a lower proportion of variance in SPD than the other PDs. This may reflect a difference from other personality types in the degree to which SPD has a dynamically rooted origin or dynamic factors that maintain it. The sparse literature on psychodynamic treatment of individuals with SPD relies largely on the more well-developed literature on schizoid personality (Gabbard, 2005, p. 413), with a treatment focus on affective experience that is frozen and relationships avoided. For individuals with schizoid personality, therapy works by developing a safe, tolerant, and meaningful bond more than by the analysis of neurotic level conflicts (Stone, 1985). In SPD, the therapy must deal with defenses related to the fragility of experiencing disturbances in relationships with important objects, such as projective identification and fantasy, when they come into play (Stone, 1985). Our regression analyses indicated several defenses most specific to SPD. The reliance on displacement and fantasy are consistent with a preference for dealing with people indirectly by expressing interest in symbolic connections, and with a penchant to express inhibited motives more

by fantasy (i.e., autistic fantasy) than in real relationships. Autistic fantasy may be more prevalent than we found, because a single dynamic interview may under-represent the individual's reliance upon it, unlike therapy sessions once trust has developed. The negative association with undoing suggests a lack of ambivalence about objects, something more characteristic of other PD types and neurotic individuals. Finally, the lack of direct need-satisfying engagement with others is consistent with the defense level analysis. Along with autistic fantasy, individuals with SPD rely on the group of action defenses (i.e., passive-aggression, help-rejecting complaining, & acting out), similar to those with BPD. Overall, many of the most prevalent defenses in SPD are those within Kernberg's broad categorization of BPO, although the defenses most uniquely related to SPD are not related to BPO. While SPD had a high proportion of immature defenses, it is clearly dynamically distinguishable from the other PD types.

Borderline Personality Disorder (BPD)

The most prevalent defenses in BPD were largely those noted in the literature and supported by previous empirical work. Our findings clearly place BPD as a core disorder within BPO (Kernberg, 1975) and, historically prior to that, as an impulsive character (Reich, 1925/1975). Kernberg posited that splitting is the core defensive operation in the ego, keeping object representations of opposite affective valences apart. We found that both forms of splitting (self and others' images) were highly prevalent. However, contrary to Kernberg's assertion that repression would be relatively absent, we found repression to be almost as prevalent as splitting. This finding is more consistent with Reich's (1925/1975) observation that repression is both absent at times when the individual is most impulsive and strikingly active on other occasions. The different views of these two

authors may be less than apparent when one considers the relationship between the traumatic origins of BPD (see Herman, Perry, & van der Kolk, 1989; Zanarini et al., 2002) and fluctuations between different states of mind over time. Splitting may be a very useful defense when a child is subjected to trauma at the hands of an adult upon whom he or she is very dependent and insecurely attached. However, in later life, splitting re-emerges in situations that connote some threat to the individual, reminiscent of early traumatic situations, which then re-engages the split-off object representations. Otherwise, the early traumatic memories remain repressed while the only evidence of their presence is revealed in dissociative symptoms or states of mind that may lead to self-destructive episodes (van der Kolk, Perry, & Herman, 1991) or other problems with impulses (Perry & Körner, 2011) or poor functioning (Gunderson et al., 2006). Thus, both splitting and repression set the individual up for episodic use of action and hysterical defenses, in alternation with defenses against these same impulses, such as rationalization, denial, and reaction formation. However, additional research is needed, first, to replicate and, second, to understand the interplay of these defenses. One unexpected finding was the high prevalence of obsessional defenses of intellectualization and isolation. However, this was a universal finding across all the PD types, possibly an artifact of the press of the dynamic interview to generalize about one's life. However, contrary to one hypothesis, undoing was not prevalent, suggesting a relative absence of true ambivalence. This is consistent with our reading of possible confounding between undoing and acting out in the self-report assessment used in the study in which this hypothesis arose (Zanarini, Weingeroff, & Frankenburg, 2009).

BPD had the strongest relationship of the four PD types between defenses and personality pathology. This further reinforces the above discussion about the centrality of the major image-distorting defenses, primarily splitting of self and others' images, and

the hysterical level defenses, dissociation and repression. Omnipotence was a negative predictor, which may partly reflect its higher levels in comparison disorders NPD and ASP. While all four PDs fall within the concept of BPO, the regression analyses highlighted their differences. BPD was most strongly associated with major image-distorting defenses, while both NPD and ASP were more associated with minor image-distorting defenses. Although action defenses were prevalent in all four PD types, they were most uniquely characteristic of BPD, and to a lesser extent SPD. The association of BPD with hysterical defenses has been found elsewhere (Kramer, de Roten, Perry, & Despland, 2013) and was previously alluded to by Zetzel (1968), distinguishing hysterical individuals from “so-called good hysteric” individuals, who initially present in a neurotic state of mind, prior to regressing and presenting as borderline.

Narcissistic Personality Disorder (NPD)

From Table 2, we can see that defensive functioning in this sample of individuals with NPD is relatively consistent with previous theory and research. Conceptually, individuals with NPD split their self-images, whereby the negative ones are denied and the positive ones are transformed into an integrated omnipotent or grandiose self-view (Kernberg, 1970). This self-view is maintained through the use of disavowal level defenses, whereby their negative self-image or any potential attack on their image (e.g., perceived failure, disapproval) is disavowed through either denying the problem (i.e., denial), covering it up (i.e., rationalization), or misattributing their own experiences onto others (i.e., projection) (Clemence, Perry, & Plakun, 2009; Cramer, 1999; Perry & Perry, 2004). However, frequent use of devaluing others' images remains a marker of the negative self-image. In the regression analyses, the number of defenses that significantly predict

the disorder declines. The findings still support Kernberg's (1970) clinical description of NPD as one of splitting off self-images and holding onto a grandiose or omnipotent self-view. Further, individuals with NPD tend to devalue others, primarily as a defense against their own fear of being mediocre or ordinary, or disappointing to others. Although both splitting of others and self is evident in Table 2, the finding that only splitting of self-predicted NPD is consistent with Kernberg's assertion that the most salient form of splitting in individuals with NPD is their own split image. Although no previous study has shown splitting of self to be associated with NPD, this defense is typically only seen when the level of self-esteem has been altered in some way (e.g., narcissistic injury). Although Table 2 indicates that the disavowal level defenses are utilized in NPD, the regression analyses did not find that denial, rationalization, or projection alone were unique predictors. In fact, finding that rationalization was a negative predictor of NPD is a paradoxical result, but one that is a likely confound due to its high prevalence in ASP. Although Table 2 indicates that both the ASP and NPD had a high prevalence of rationalization, those not using rationalization contributed to differentiating NPD from ASP. However, given the high comorbidity between ASP and NPD in this sample, it is difficult to make any definitive conclusions about these disavowal level defenses without further study in larger and less co-morbid samples. Finally, without rating mature defenses in everyone, we could not test the hypothesis about sublimation.

Antisocial Personality Disorder (APD)

The results in Tables 2 and 5 are highly consistent with previous theoretical descriptions of ASP. Gacono, Meloy, and Berg (1992) proposed that individuals with ASP and/or psychopathy, have a split-off self-image, as in NPD, wherein the negative image is denied. They strongly fear their true

self-state of feeling worthless or devalued, and the use of denial and omnipotence/grandiosity helps keep this experience of the self from awareness. They tend to disavow any negative experience by denying the effects of their behaviors on others, rationalizing their criminal and/or aggressive actions, and projecting their negative experiences onto others (Gacono et al., 1992; Presniak et al., 2010). It is not surprising then that defensive functioning in ASP is quite similar to that of individuals with NPD, given that some authors (e.g., Gacono et al., 1992; Kernberg, 1967) posit that ASP is an aggressive variant of NPD. Clinically, these disorders can look quite similar in their grandiose self-presentation and their tendency to dismiss others as inferior. At times, they may display their negative self-view, say after a failure, but these are quickly defended against by disavowal level defenses. The most striking difference between these two groups is that individuals with NPD engage in more “pseudosublimatory behaviours” to earn the adoration of others and defend against their negative self-image (Cramer, 1999; Kernberg, 1970), whereas individuals with ASP resort to direct aggression towards others through acting-out behaviors (e.g., threats, violence, and stealing). This overall view of ASP was partially supported in the regression analyses. In model 1, omnipotence, devaluation, and denial were significant predictors. Even after controlling for NPD, omnipotence remained a significant predictor, although devaluation and denial dropped out of the analysis. Model 3 confirmed the theory most strongly. The predictors of ASP were the minor image-distorting defenses (i.e., omnipotence, devaluation, and idealization) and disavowal defenses (i.e., denial, rationalization, and projection). This concurs with the clinical observation that ASP individuals have a distorted view of themselves and others, which is maintained by disavowal and image-distortion directed at anything that threatens their omnipotent self-view.

Limitations

The primary limitation of the study is the reliance on a qualitative assessment of the presence of each defense. Although by adjusting for the presence of other defenses, we transformed these scores into continuous scores (percentages), nonetheless the variables are only semi-quantitative, not reflecting the full variation available with true quantitative scoring. For instance, in the present report, the mean percentage of the individual defenses ranged from 0.6% (dissociation in NPD) to 8.9% (projection in NPD). By contrast, a quantitative scoring of interviews of a sample of women in the community yielded mean defense scores that ranged from a low of 0.0% (projective identification) to a high of 17.0% (self-assertion; data supplied by the first author). One consequence is that the current method is more likely to miss findings compared to the full quantitative method, hence, replications using the latter method are likely to detect some findings that we missed. Another limitation is that the data source was a single dynamic interview, which with some participants may provide an unstable estimate. Perry and colleagues (2008) found significant variation among individuals with BPD or major depression in the quality of dynamic interviews on different occasions, which in turn might be associated with differences in defensive functioning. Countering this is that our sample size was large enough to smooth out some of these differences. A third limitation is that we did not have ratings of the high adaptive level (mature) defenses for the whole sample. However, in the 31 participants where mature level defenses ratings were available, only 5 (16.1%) used any, suggesting that this omission would not distort most PD defense profiles. A fourth limitation is that DSM-III-R diagnoses were used. However, due to the great similarity of the criteria between DSM-III-R and DSM-IV, this is likely to have had minimal effect on the results of the regression analyses, as

the continuous diagnostic criteria scores we used are likely robust to slight alterations in criteria. As a result of these limitations, we consider our results as tentative confirmation of some of the hypotheses derived from the literature, not fully validating.

Future Directions

Additional studies should replicate/validate and expand our findings by the use of quantitative assessment techniques, identifying each defense as it occurs on multiple data sources for more precise estimates. We already have evidence that successful treatment improves defensive functioning (Hersoug, Sexton, & Hoglend, 2002; Perry, Beck, Constantinides, & Foley, 2009; Roy, Perry, & Banon, 2009), that different diagnoses may show some different patterns of change (Per-

ry et al., 2009), and that change in defenses may in fact mediate improvement in symptoms (Kramer, Despland, Michel, Drapeau, & de Roten, 2010). In addition, there is some evidence that addressing or interpreting defenses improves defensive functioning within and across sessions (Perry, Petraglia, Olson, Presniak, & Metzger, 2012; Winston, Winston, Samstag, & Muran, 1994). As a result, the study of psychotherapy process presents unique opportunities to examine the effect of therapeutic processes on patterns of change in defensive functioning and overall outcome. From our above findings, we would posit that improvement in the core immature defenses in each of the above disorders would presage overall improvement in the symptoms, cognitions, behaviors, and overall functioning of the PD itself. Such findings would further establish a central role for defenses in personality disorders.

REFERENCES

- American Psychiatric Association. (1980). *Diagnostic and statistical manual of mental disorders* (3rd ed.). Washington, DC: Author.
- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.
- Appel, G. (1974). An approach to the treatment of schizoid phenomena. *Psychoanalytic Review*, 61, 99-113.
- Beck, S. M., & Perry, J. C. (2008). The measurement of interview structure in five types of psychiatric and psychotherapeutic interviews. *Psychiatry*, 71, 219-233.
- Bender, D. S., Skodol, A. E., Pagnao, M. E., Dyck, I. R., Grilo, C. M., Shea, M. T., ... Gunderson, J. G. (2006). Prospective assessment of treatment use by patients with personality disorders. *Psychiatric Services*, 57, 254-257.
- Berg, J. L. (1990). Differentiating ego functions of borderline and narcissistic personalities. *Journal of Personality Assessment*, 55, 537-548.
- Blais, M. A., Hilsenroth, M. J., Fowler, J. C., & Conboy, C. A. (1999). A Rorschach exploration of the DSM-IV borderline personality disorder. *Journal of Clinical Psychology*, 55, 563-573.
- Clemence, A. J., Perry, J. C., & Plagkun, E. M. (2009). Narcissistic and borderline personality disorders in a sample of treatment refractory patients. *Psychiatric Annals*, 29, 175-184.
- Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112, 155-159.
- Cramer, P. (1999). Personality, personality disorders, and defense mechanisms. *Journal of Personality*, 67, 535-545.
- Fairbairn, W. R. D. (1954). *An object-relations theory of the personality*. New York: Basic Books.
- Gabbard, G. O. (2005). *Psychodynamic psychiatry in clinical practice*. Arlington, VA: American Psychiatric Press.
- Gacono, C. B., & Meloy, J. R. (1988). The relationship between cognitive style and defensive process in the psychopath. *Criminal Justice and Behavior*, 15, 472-483.
- Gacono, C. B., Meloy, J. R., & Berg, J. L. (1992). Object relations, defensive operations, and affective states in narcissistic, borderline, and antisocial

- cial personality disorder. *Journal of Personality Assessment*, 59, 32-49.
- Gunderson, J. G., Daversa, M. T., Grilo, C. M., McGlashan, T. H., Zanarini, M. C., Shea, M. T., et al. (2006). Predictors of 2-year outcome for patients with borderline personality disorder. *American Journal of Psychiatry*, 163, 822-826.
- Herman, J. L., Perry, J. C., & van der Kolk, B. (1989). Childhood trauma in borderline personality disorder. *American Journal of Psychiatry*, 146, 490-495.
- Hersoug, A. G., Sexton, H. C., & Hoglend, P. A. (2002). Contribution of defensive functioning to the quality of working alliance and psychotherapy outcome. *American Journal of Psychotherapy*, 56, 539-554.
- Higgitt, A., & Fonagy, P. (1992). Psychotherapy in borderline and narcissistic personality disorder. *British Journal of Psychiatry*, 161, 23-43.
- Hilsenroth, M. J., Hibbard, S. R., Nash, M. R., & Handler, L. (1993). A Rorschach study of narcissism, defense, and aggression in borderline, narcissistic, and cluster C personality disorders. *Journal of Personality Assessment*, 60, 346-361.
- Kazdin, A. E. (2007). Mediators and mechanisms of change in psychotherapy research. *Annual Review of Clinical Psychology*, 3, 1-27.
- Kendler, K. S., Gruenberg, A. M., & Strauss, J. S. (1981). An independent analysis of the Copenhagen sample of the Danish adoption study of schizophrenia, II: The relationship between schizotypal personality disorder and schizophrenia. *Archives of General Psychiatry*, 38, 982-984.
- Kernberg, O. F. (1967). Borderline personality organization. *Journal of the American Psychoanalytic Association*, 15, 641-685.
- Kernberg, O. F. (1970). A psychoanalytic classification of character pathology. *Journal of the American Psychoanalytic Association*, 18, 800-822.
- Kernberg, O. F. (1975). *Borderline conditions and pathological narcissism*. New York: Jason Aronson.
- Kernberg, O. F. (1984). *Severe personality disorders: Psychotherapeutic strategies*. New Haven, CT: Yale University Press.
- Kramer, U., de Roten, Y., Perry, J. C., & Despland, J.-N. (2013). Beyond splitting: Observer-rated defense mechanisms in borderline personality disorder. *Psychoanalytic Psychology*, 30(1), 3-15.
- Kramer, U., Despland, J.-N., Michel, L., Drapeau, M., & de Roten, Y. (2010). Change in defense mechanisms and coping over the course of short-term dynamic psychotherapy for adjustment disorder. *Journal of Clinical Psychology*, 66(12), 1232-1241.
- Leichsenring, F., & Leibing, E. (2003). The effectiveness of psychodynamic therapy and cognitive behavior therapy in the treatment of personality disorders: A meta-analysis. *American Journal of Psychiatry*, 160, 1223-1232.
- Lingiardi, V., Lonati, C., Delucchi, F., Fossati, A., Vaanzulli, L., & Maffei, C. (1999). Defense mechanisms and personality disorders. *Journal of Nervous and Mental Disease*, 187, 224-228.
- McGlashan, T. H., Grilo, C. M., Skodol, A. E., Gunderson, J. G., Shea, M. T., Morey, L. C., ... Stout, R. L. (2000). The Collaborative Longitudinal Study of Personality Disorders: Baseline Axis I/II and II/II diagnostic co-occurrence. *Acta Psychiatrica Scandinavica*, 102, 256-264.
- Millon, T. (1986). Personality prototypes and their diagnostic criteria. In T. Millon & G. L. Klerman (Eds.), *Contemporary directions in psychopathology: Toward the DSM-IV* (pp. 671-712). New York: Guilford.
- Perry, J. C. (1986). *Defense Mechanism Rating Scales*, 4th edition. Cambridge, MA: Author.
- Perry, J. C. (1988). A prospective study of life stress, defenses, psychotic symptoms and depression in borderline and antisocial personality disorders and Bipolar Type II Affective Disorder. *Journal of Personality Disorders*, 2, 49-59.
- Perry, J. C. (1992). Problems and considerations in the valid assessment of personality disorders. *American Journal of Psychiatry*, 149, 1645-1653.
- Perry, J. C., Banon, L., & Ianni, F. (1999). The effectiveness of psychotherapy for personality disorders. *American Journal of Psychiatry*, 156, 1312-1321.
- Perry, J. C., Beck, S. M., Constantinides, P., & Foley, J. E. (2009). Studying change in defensive functioning in psychotherapy, using the Defense Mechanism Rating Scales: Four hypotheses, four

- cases. In R. A. Levy & J. S. Ablon (Eds.), *Handbook of evidence-based psychodynamic psychotherapy: Bridging the gap between science and practice* (pp. 121-153). New York: Humana.
- Perry J. C., & Bond, M. (2005). Defensive functioning [in personality disorders]. In J. Oldham, A. E. Skodol, & D. Bender (Eds.), *The American Psychiatric Publishing textbook of personality disorders* (pp. 589-609). Washington, DC: American Psychiatric Press.
- Perry, J. C., Bond, M., & Roy, C. A. (2007). The natural history of long-term dynamic psychotherapy: Predictors of treatment duration. *Journal of Psychiatric Practice*, 13, 221-232.
- Perry, J. C., & Cooper, S. H. (1985). Psychodynamics, symptoms, and outcome in borderline and antisocial personality disorders and Bipolar Type II Affective Disorder. In: T. H. McGlashan (Ed.), *The borderline: Current empirical research* (pp. 21-41). Washington, DC: American Psychiatric Press.
- Perry, J. C., & Cooper, S. H. (1986). A preliminary report on defenses and conflicts associated with borderline personality disorder. *Journal of the American Psychoanalytic Association*, 34, 865-895.
- Perry, J. C., & Cooper, S. H. (1989). An empirical study of defense mechanisms: I. Clinical interview and life vignette ratings. *Archives of General Psychiatry*, 46, 444-452.
- Perry, J. C., Fowler, J. C., & Greif, A. (2008). Determinants of the adequacy of the dynamic interview. *Journal of Nervous and Mental Disease*, 196, 612-619.
- Perry, J. C., & Körner, A. C. (2011). Impulsive phenomena, the impulsive character and personality disorders. *Journal of Personality Disorders*, 25, 586-606.
- Perry, J. C., O'Connell, M. E., & Drake, R. (1984). An assessment of the Schedule for Schizotypal Personalities and the DSM-III criteria for schizotypal personality disorder. *Journal of Nervous and Mental Disease*, 172, 674-680.
- Perry, J. C., Petraglia, J., Olson, T. R., Presniak, M. D., & Metzger, J. (2012). Accuracy of defense interpretation in three character types. In R. Levy, S. Ablon, & H. Kächele (Eds.), *Psychodynamic psychotherapy research: Evidenced-based practice and practice-based evidence* (pp. 417-447). New York: Springer.
- Perry, J. D., & Perry, J. C. (1996). Reliability and convergence of three concepts of narcissistic personality. *Psychiatry*, 59, 4-19.
- Perry, J. D., & Perry, J. C. (2004). Conflicts, defenses and the stability of narcissistic personality features. *Psychiatry*, 67, 310-330.
- Presniak, M. D., Olson, T. R., & MacGregor, M. W. (2010). The role of defense mechanisms in borderline and antisocial personalities. *Journal of Personality Assessment*, 92, 137-145.
- Reich, W. (1975). The impulsive character. In *Wilhelm Reich: Early writings*, Volume 1 (P. Schmitz, Trans.). New York: Farrar, Strauss, & Giroux. (Original work published in 1925)
- Roy, C., Perry, J. C., & Banon, E. (2009). Changes in defensive functioning in completed psychoanalyses: The Penn Psychoanalytic Treatment Collection. *Journal of the American Psychoanalytic Association*, 57, 399-415.
- Skodol, A. E., Pagano, M. E., Bender, D. S., Shea, M. T., Gunderson, J. G., Yen, S., et al. (2005). Stability of functional impairment in patients with schizotypal, borderline, avoidant, or obsessive-compulsive personality disorder over two years. *Psychological Medicine*, 35, 443-451.
- Spitzer, R. L., & Endicott, J. (1978). Research diagnostic criteria. *Archives of General Psychiatry*, 35, 773-782.
- Stone, M. H. (1985). The schizotypal personality: Psychotherapeutic aspects. *Schizophrenia Bulletin*, 11, 576-589.
- Vaillant, G. E. (1994). Ego mechanisms of defense and personality psychopathology. *Journal of Abnormal Psychology*, 103, 44-50.
- Vaillant, G. E., & Drake, R. E. (1985). Maturity of ego defenses in relation to DSM-III Axis II personality disorders. *Archives of General Psychiatry*, 42, 597-601.
- van der Kolk, B. A., Perry, J. C., & Herman, J. L. (1991). Childhood origins of self-destructive behavior. *American Journal of Psychiatry*, 148, 1665-1671.

Winston, B., Winston, A., Samstag, L. W., & Muran, J. C. (1994). Patient defense/therapist interventions. *Psychotherapy*, 31, 478-491.

Zanarini, M. C., Frankenburg, F. R., Hennen, J., & Silk, K. R. (2004). Mental health service utilization of borderline patients and axis II comparison subjects followed prospectively for six years. *Journal of Clinical Psychiatry*, 65, 28-36.

Zanarini, M. C., Weingeroff, J. L., & Frankenburg, F. R. (2009). Defense mechanisms associated with borderline personality disorder. *Journal of Personality Disorders*, 23, 113-121.

Zanarini, M. C., Yong, L., Frankenburg, F. R., Hennen, J., Reich, D. B., Marino, M. F., et al. (2002). Severity of reported childhood sexual abuse and its relationship to severity of borderline psychopathology and psychosocial impairment among borderline inpatients. *Journal of Nervous Mental Disease*, 190, 381-387.

Zetzel, E. (1968). The so-called good hysteric. *International Journal of Psychoanalysis*, 49, 256-260.