THE COLLABORATIVE LONGITUDINAL PERSONALITY DISORDERS STUDY (CLPS): OVERVIEW AND IMPLICATIONS

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Abstract

The Collaborative Longitudinal Personality Disorders Study (CLPS; Gunderson et al., 2000) was developed to fill gaps in our understanding of the nature, course, and impact of personality disorders (PDs). Here, we review published findings to date, discuss their implications for current conceptualizations of PDs, and raise questions that warrant future consideration. We have found that PDs are more stable than major depressive disorder, but that meaningful improvements are possible and not uncommon. We have confirmed also that PDs constitute a significant public health problem, with respect to associated functional impairment, extensive treatment utilization, negative prognostic impact on major depressive disorder, and suicide risk. At the same time, we have demonstrated that dimensional models of PDs have clinical validity that categories do not, especially greater temporal stability. Furthermore, dimensional personality traits appear to be the foundation of behaviors described by many PD criteria. Taken together, our results lead us to hypothesize that PDs may be reconceptualized as hybrids of stable personality traits and intermittently expressed symptomatic behaviors.

The Collaborative Longitudinal Personality Disorders Study (CLPS) was developed to fill critical gaps in our understanding of the nature, course, and impact of personality disorders (PDs) (Gunderson et al., 2000). Unlike major Axis I disorders, little sound empirical knowledge existed regarding the short- or long-term course and outcome of PDs. Although PDs are among the most common disorders seen in mental health settings (Widiger & Rogers, 1989) and affect about 12 percent of the general population (Torgersen, 2005) valid estimates of their prognoses, with or without treatment, were nonexistent. Furthermore, stability or chronicity of personality psychopathology is a central defining feature of Axis II disorders in the DSM (American Psychiatric Association, 2000), yet there were few empirical data to support this assertion (Grilo, McGlashan, & Oldham, 1998; Grilo & McGlashan, 1999). Finally, PDs have been associated clinically with significant public health problems, such as criminal behavior, substance abuse and dependence, suicide, divorce, child abuse, occupational disability, and heavy use of mental and general health

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care, yet there were no longitudinal studies examining the persistence of such problems for patients with different types of PDs. The CLPS is now close to completing 7 years of prospective follow-up. The study has begun to make important strides in addressing these gaps in our knowledge, having produced many significant and sometimes unanticipated findings. In this article, we will review published findings to date, discuss their implications for current conceptualizations of personality disorders, and raise questions suggested by these findings that warrant future consideration.

STUDY DESIGN AND SAMPLE CHARACTERISTICS

Our design is a prospective, repeated measures study comparing four specific DSM-IV personality disorders with each other and to major depressive disorder (MDD) in the absence of personality disorder. Assessments were done at baseline, 6 months, 1 year, and annually until the present time. The four personality disorders selected for study represent each of the DSM personality clusters: schizotypal personality disorder (STPD) for Cluster A, borderline personality disorder (BPD) for Cluster B, avoidant personality disorder (AVPD) for Cluster C, and obsessive-compulsive personality disorder (OCPD) because factor-analytic studies have shown that it was separable from the three DSM clusters, despite its nominal assignment to Cluster C (Kass, Skodol, Charles, Spitzer, & Williams, 1985; Morey, 1986). The four personality disorders chosen also correspond to the four psychobiological dimensions of psychopathology proposed by Siever and Davis (1991), are the most prevalent from their respective clusters, and derive from different theoretical frameworks. By focusing on these four divergent personality types, we estimated that we excluded only about 15% of treatment-seeking patients who meet criteria for any Axis II disorder (Oldham et al., 1992; Zanarini, Frankenburg, Chauncey, & Gunderson, 1987). The selection of MDD as a comparison group was based on its prototypic episodic course, its prevalence, and the abundance of data available about its phenomenology and course, collected with many of the same measures used in our study.

Participants in the study were treatment-seeking at intake or had recently been in treatment with a mental health professional and were between the ages of 18 and 45 years. They had no lifetime history of schizophrenia or schizoaffective disorder; no current substance intoxication or withdrawal, or other confusional state; and an estimated IQ greater than 85. The original baseline sample consisted of patients assigned to a primary PD diagnostic group on the basis of a semistructured diagnostic interview, the Diagnostic Interview for DSM-IV Personality Disorders (DIPD-IV; Zanarini, Frankenburg, Sickel, & Yong, 1996), with support from at least one of two other PD instruments: the self-report Schedule for Nonadaptive and Adaptive Personality (SNAP; Clark, 1993) or the clinician-rated Personality Assessment Form (PAF; Shea, Glass, Pilkonis, Watkins, & Docherty, 1987). The diagnostic distribution was as follows: STPD, $N = 86$ (or 13% of the total sample); BPD, $N = 175$ (26%); AVPD, $N = 158$ (24%); OCPD, $N = 154$ (23%). The MDD comparison group consisted of 95 patients (14%) who met criteria for current MDD according to the Structured Clinical Interview for DSM-IV Axis I Disorders/Patient Edition (SCID-I/P; First, Spitzer, Gibbon, & Williams, 1996), had no more than 2 criteria of any PD, and less than 15 PD criteria in total. The baseline sample was 76% Caucasian, 64% female, and 65% from Hollingshead and Redlich socioeconomic classes II or III. To provide the power to examine questions raised about minority groups, the original sample was supplemented 5 years after baseline with 65 African American or Hispanic patients, bringing the total sample to 733, of which 227 (31%) are minority. Subject retention has been excellent, with 86% of the 733 patients (88.5% of those not deceased) continuing to participate.

MEASUREMENT AND CONSTRUCT VALIDITY

Reliability

Both interrater and test-retest reliability of ten major Axis I and all Axis II disorders were assessed (Zanarini et al., 2000) using the SCID-I/P (First et al., 1996) and the DIPD-IV (Zanarini et al., 1996), respectively. Fair to good median interrater reliability (kappa = .40–.75) was found for all Axis II disorders diagnosed 5 times or more, except for antisocial PD, which was found to be excellent (kappa = 1.0). All of the test-retest kappas for Axis II disorders were also fair to good, except for narcissistic PD (kappa = 1.0) and paranoid PD (kappa = .39). Reliabilities for Axis II disorders measured dimensionally were generally higher than for the categories: most were excellent (>.75). For Axis I disorders, excellent median interrater reliability was found for six of the ten disorders diagnosed five times or more. Test-retest reliability figures for Axis I disorders were somewhat lower, with three excellent, six fair to good, and one poor. Taken together, these results indicate that most Axis II disorders, like most Axis I disorders, can be diagnosed reliably when well-trained clinical interviewers use appropriate semi-structured interviews. Longitudinal reliability between original raters and subsequent raters was also assessed using a library of videotapes made and rated by the original raters. Correlations for the number of PD criteria for each disorder between pairs of raters showed that correlations for new raters among themselves (mean range = .75–.92) and correlations of new raters with the original raters (mean range = .75–.94) were similar. Thus, we conclude that "rater drift" has been minimal.

Internal Consistency, Overlap, and Diagnostic Efficiency of Criteria

Convergent and discriminant validity of DSM-IV PD criteria sets were evaluated at baseline (Grilo et al., 2001). Within-category relatedness was evaluated by Cronbach's alpha and median intercriterion correlations (MIC). Cronbach's alphas ranged from 0.47 to 0.87 (median = 0.71); 7 of 10 PDs had alphas greater than 0.70. Between-category criterion overlap was evaluated by intercategory intercriterion correlations between all PD pairs (ICMIC). ICMIC values (median = 0.08) were lower than MIC values (median = 0.23). Because criteria for individual PDs correlated better with each other than with criteria from other PDs, the DSM-IV PD criteria sets appear to have some convergent and discriminant validity.

The diagnostic efficiency of the criteria for the four targeted PDs was calculated at baseline (Grilo et al., 2001) and for OCPD also at the 2-year follow-up, using blinded assessments (Grilo, Skodol et al., 2004), to determine which criteria best predicted the presence or absence of the PDs both cross-sectionally and longitudinally. For example, the baseline criteria for OCPD that, if present, best predicted the diagnosis of OCPD at 2-year follow-up were *rigid and stubborn*, *preoccupied with details*, and *reluctant to delegate*. Longitudinal diagnostic efficiency analyses can be used to refine diagnostic criteria sets to emphasize their more stable elements.

Factor Analyses and Temporal Coherence

The diagnostic constructs implied by the DSM-IV Axis II personality disorders were tested using confirmatory factor analysis (Sanislow, Morey et al., 2002). Using both baseline and blind 2-year follow-up data, a unitary, generic PD model was tested, as well as models based on the three PD clusters and the four individual PDs. Goodness of fit for both the three-cluster and the four-disorder models was significantly better than for the undimensional model, and the fit for the four-disorder model was better than the three-cluster model at baseline. The results were replicated using the follow-up data. These results support the DSM-IV disorder-level classification of STPD, BPD, AVPD, and OCPD in a treatment-seeking sample. Of interest, the rank ordering of criteria as most prototypic of each disorder

in the DSM-IV was not supported. Thus, more study is needed to determine if criteria should be differentially weighted, because they are more central to the constructs than others.

Another confirmatory factor analysis was used to test a three-factor model of BPD consisting of disturbed relatedness, behavioral dysregulation, and affective dysregulation, proposed by Sanislow, Grilo, and McGlashan (2000). At baseline and 2-year follow-up, both a one-factor model of BPD as a unitary construct and the three-factor model fit the data, although the three-factor model offered a significantly better fit (Sanislow, Grilo et al., 2002). These results suggest that BPD is a statistically coherent construct, but that it is important to consider the possibility of an underlying multidimensional structure to the disorder consisting of three homogeneous components. These components may represent core phenotypic expressions of the disorder (Skodol, Gunderson, Pfohl et al., 2002).

The temporal coherence of the criteria for the four PDs was evaluated by examining the correlations of observed changes in each diagnostic criterion with changes in other criteria from baseline to independent evaluation 2 years later (Morey et al., 2004). The observed changes in criteria were consistent within syndrome (median alpha = 0.72 across the four disorders) and reasonably specific to that syndrome relative to the other disorders. The results support the validity of these criteria sets as coherent syndromes, which change together over time.

Alternative Representations of Personality Disorders

Attempts were made to describe and differentiate the four DSM-IV PDs according to alternative models of personality psychopathology, specifically the Five-Factor Model (FFM) (Costa & McCrae, 1992) and the dimensional model encompassed by the Schedule for Nonadaptive and Adaptive Personality (SNAP; Clark, 1993). CLPS patients were administered the NEO-PI-R, a questionnaire designed to assess the domains and facets of the FFM and results were compared among diagnostic groups and between patients and community norms (Morey et al., 2002). The results indicated that the four PD groups could be distinguished from community norms on the personality dimensions of the FFM. Differentiating among the four PD types proved more difficult, however, as each shared the configuration of high Neuroticism, low Agreeableness, and low Conscientiousness. Thus, it did not appear that the PDs represented extremes of different personality dimensions, but rather each appeared to be a variant of the same extreme configuration. When the results from the SNAP questionnaire were compared, it again appeared that the dimensions of the SNAP differentiated abnormal from normal personality, particularly in the propensity of individuals with PDs to manifest negative affects and interpersonal detachment (Morey et al., 2003). Furthermore, this model appeared to successfully distinguish specific PDs from each other.

Three alternative dimensional representations of PDs were compared with respect to their associations with psychosocial functioning at baseline: the FFM, the Three-Factor Model (TFM), and a model that converts DSM PD categories into dimensions (Widiger, 1993; Oldham & Skodol, 2000). Both the standard categorical and the dimensional representations of DSM-IV PDs had stronger relationships to impairment in functioning in the domains of employment, social relationships with parents and friends, global social adjustment, and Axis V ratings than the Three- and Five-Factor Models (Skodol, Oldham et al., 2005). DSM-IV dimensions predicted functional impairment best of the four approaches. It will be important to determine whether these findings hold up over periods of follow-up.

The published studies on the psychometric properties of the DSM-IV PD categories studied in the CLPS and on their construct validity lend some support to the DSM categories. They can be reliably diagnosed and distinguished from one another both on cross-section and

longitudinally. They have replicable structures and temporal coherence as syndromes, at least over the relatively short-term. They also capture the pathological nature of personality disorder better than measures of general personality functioning, at least at the time patients seek treatment. We continue to evaluate the validity of alternative models in relationship to other antecedent, concurrent, and outcome domains.

DEMOGRAPHICS

Although the majority of patients in the CLPS are Caucasian and female, there are sufficient numbers of minority patients and males to enable examination of ethnic and gender differences in aspects of personality psychopathology. The distribution of the four personality disorders, as well as of the individual criteria comprising each disorder's criteria set, were compared across Caucasian, African American, and Hispanic patients (Chavira et al., 2003). The diagnoses were measured by both the clinician-administered DIPD-IV and the self-report SNAP, and the individual criteria were assessed with the DIPD-IV. Disproportionately higher rates of BPD were found in Hispanic than in Caucasian and African American patients and higher rates of STPD were found among African Americans compared to Caucasians by both methods. Hispanic patients had higher rates of BPD criteria reflecting *intense anger*, *affective instability*, and *unstable relationships* than Caucasians. African American patients had higher rates of STPD criteria of *social anxiety*, *no close friends*, *odd beliefs*, and *paranoia* than Caucasians.

Gender differences among patients with BPD in comorbid disorders, BPD criteria, trauma histories, psychosocial functioning, and personality traits were also examined at baseline (Johnson et al., 2003). Men with BPD were more likely to present with comorbid substance use disorders and with schizotypal, narcissistic, and antisocial PDs, while women with BPD were more likely to present with PTSD and eating disorders. The only difference at the criterion level was that women were more likely to display *identity disturbance*. Generally speaking, women and men with BPD were more similar than different.

With the recruitment and follow-up of additional minority patients over the past several years, we will be able to make further ethnic comparisons on important outcomes such as the stability versus instability of the PDs and the types and amounts of psychosocial and psychopharmocological treatment received. We also plan to examine the effects of age on both diagnostic and functional remissions in the patients with PDs.

COMORBIDITY

The mean number of co-occurring lifetime Axis I disorders in the CLPS sample was 3.4; STPD and BPD had more co-occurring disorders than AVPD, OCPD, or MDD (McGlashan et al., 2000). Significant associations were found for social phobia with AVPD, and for PTSD and substance use disorders with BPD. In comparison with other DSM-IV personality disorders, AVPD, BPD, and dependent PD were most associated with mood disorders, particularly depressive disorders (Skodol et al., 1999). Severity and recurrence of major depressive disorder and comorbid dysthymic disorder predicted co-occurrence with BPD. These results are consistent with the view that a mood disorder with an insidious onset and recurrence, chronicity, and progression in severity leads to a personality disorder diagnosis in young adults. In most cases, co-occurrence patterns between Axis I disorders and PDs in our sample conform to patterns found in existing literature (Dolan-Sewell, Krueger, & Shea, 2001). The distribution of lifetime diagnoses of anorexia nervosa, bulimia, and eating disorder not otherwise specified, however, did not differ across the five primary study groups, between the MDD group versus all PD groups, or among the four PD study groups, demonstrating the influence of base rates of these disorders in the sample (Grilo, Sanislow, Skodol et al., 2003).

Differences in clinical features, associated functional impairment, and types of childhood trauma were examined in more detail in women with BPD, women with BPD and PTSD, and women with other PDs and PTSD (Zlotnick et al., 2003). The additional diagnosis of PTSD in borderline women did not significantly increase the degree of borderline pathology or psychiatric morbidity, but did increase general dysfunction and the occurrence of hospitalization. The additional diagnosis of BPD in women with PTSD significantly increased the features of suicide proneness and impulsiveness. Both groups of women with PTSD reported more types of childhood trauma relative to borderline women without PTSD. These findings suggest that comorbid PTSD, although associated with increased impairment, does not alter the central features of BPD.

The mean number of co-occurring PDs in our sample was 1.4 (McGlashan et al., 2000). STPD was significantly associated with paranoid and schizoid PDs, BPD was associated with antisocial and dependent PDs, and OCPD had a negative association with antisocial PD.

ANTECEDENTS

The association between trauma and PDs has not been previously comprehensively examined for multiple types of trauma and different PD types. Overall, we have found that rates of childhood maltreatment of various kinds are high in patients with PDs, with 73% reporting some kind of abuse and 82% reporting neglect (Battle et al., 2004).

In the CLPS, patients with BPD reported higher rates of traumatic exposure (particularly to sexual traumas, including childhood sexual abuse) and PTSD, and younger age at experiencing a first traumatic event than patients with STPD, AVPD, or OCPD (Yen et al., 2002). Patients with either STPD or BPD reported more types of traumatic exposure and higher rates of being physically attacked, either as a child or as an adult, compared to the other groups. Overall, these results support an association between the severity of PD and the severity of traumatic exposure, as indicated by an earlier onset of trauma that is more diverse, personal, and violent.

Early social functioning and pathological childhood experiences were examined specifically also for patients with AVPD (Rettew et al., 2003). Adults with AVPD reported poorer child and adolescent athletic performance, less involvement in hobbies during adolescence, and less adolescent popularity than patients with other PDs or with MDD and no PD. Various forms of childhood abuse were not found to be specific for AVPD. Taken together with the results for BPD, these findings suggest that different adverse psychosocial experiences in childhood contribute to the development of different types of adult personality disorder.

Although considerable attention has been given to the effects of adverse childhood experiences on the development of personality disorders, we know far less about how recent life events impact the course of functioning in these patients. We examined the extent to which patients with different PD types experienced different numbers of life events and the extent to which these life events affected psychosocial functioning over the first 3 years of follow-up (Pagano et al., 2004). Patients with BPD reported significantly more negative life events than patients with other PDs or with MDD. Negative events, especially interpersonal events, predicted decreased psychosocial functioning over time.

In the future, we will continue to track the course of stress, personality psychopathology, and functioning over time. We will also specifically examine the relationship of adverse and positive childhood experiences on the stability versus instability of PDs.

COURSE OF PERSONALITY DISORDERS

A major goal of the CLPS has been to empirically test the stability of personality disorders. We have found that fewer than half of PD patients remain at or above full criteria every month over intervals as short as 1 or 2 years (Shea et al., 2002; Grilo, Shea et al., 2004). More than half of PD patients show what we have called a "remission," defined as at least 12 consecutive months with no more than two criteria of their baseline disorder within the first 2 years of follow-up. Ten percent of patients with BPD remitted in the first 6 months, most often in association with situational changes, such as leaving stressful relationships, raising questions about whether certain PDs are more temporally fluctuating than previously assumed (Gunderson et al., 2003). Personality disorders were, however, more stable than MDD. These changes in PD diagnoses have been examined to see if they were the result of methodological artifacts, such as the effects of concurrent MDD, measurement by interview versus self-report, the influence of repeated interviews, or rater unreliability or drift. None of these accounted for the degree of improvement observed.

Viewed as dimensions, however, PDs showed considerably more stability. Although the mean number of criteria decreased over time for each group, a continuous measure of number of criteria met was highly correlated across assessments during the first 2 years of follow-up. These findings suggest that PDs may be characterized by maladaptive trait constellations that are stable in their structure (individual differences), but can change in severity or expression over time.

Furthermore, some diagnostic criteria for PDs are more stable than others—findings that are important in the search for phenotypes. For example, *affective instability* was the most stable of the BPD criteria over the first 2 years of follow-up, followed by *inappropriate, intense anger* (McGlashan et al., 2005). The least stable BPD criteria were *frantic efforts to avoid abandonment* and *self-injury*. For AVPD, the most stable criteria were *feels socially inept* and *feels inadequate* and the least stable was *avoids jobs with interpersonal contact*. These findings have led us to hypothesize that PDs may be reconceptualized as hybrids of two elements: (1) stable personality traits that may have normal variants, but that in PDs are pathologically skewed or exaggerated, and (2) dysfunctional behaviors that are attempts at adapting to, defending against, coping with, or compensating for these pathological traits (e.g., self-cutting to reduce affective tension, avoiding work situations involving many people because of shyness).

We have also demonstrated that traits of general personality functioning (e.g., Five-Factor traits) tend to be stable, with stability estimates in the $r = .70$ to .80 range over 2 years (Warner et al., 2004). However, when study patients change on these traits, the changes are followed by lagged changes in PD psychopathology across the spectrum of PDs. Importantly, these relationships are nonreciprocal, in that changes in PD features are not predictive of subsequent changes in personality traits.

The association in the course of co-occurring personality disorders and Axis I disorders over time was examined to test predictions of specific longitudinal associations derived from the model of psychobiological dimensions hypothesized by Siever and Davis (1991) to cut across the psychopathology represented by both Axis I and II (Shea et al., 2004). Using time varying analyses, we showed that despite substantial comorbidity with Axis I disorders, the timing of course changes in PDs has been relatively independent of changes in the course of Axis I disorders. The exceptions are BPD and both MDD and PTSD, and AVPD and social phobia. These disorders may share fundamental underlying dimensions of psychopathology in the affective and anxiety domains, respectively. Although changes in both Axis I and Axis II disorders could each be shown to precede changes in the other, improvements in

BPD were considerably more often followed by improvements in MDD than vise versa (Gunderson et al., 2004). Therefore, clinicians should not ignore BPD in hopes that treatment of MDD will be followed by improvement of borderline psychopathology.

These findings lead to several critical questions to answer in the future. Among those patients with PDs who "remit," what is the probability of "relapsing?" If relapse rates are low, this would suggest that a substantial proportion of individuals, who meet criteria for a PD using state of the art measures, cannot be characterized by the general DSM PD criterion of an "enduring" or "stable" pattern of maladaptive behaviors or traits. Our ability to characterize patients who turn out to be "false positives," using the traditional definition of a PD, would be valuable, particularly for family or genetic studies. On the other hand, if relapse rates are substantial, this would suggest a subgroup of PDs with a fluctuating course, in contrast to one that is uniformly stable. Such relapses would also provide the opportunity to examine the role of mediating factors, such as positive and negative life events or minority status, in altering the course of PDs.

A second critical question is, do subjects who have not yet remitted remain ill indefinitely, or do they simply remit more slowly? If future rates of remission are low, this observation would be consistent with the notion of an enduring pattern of maladaptive traits and behaviors at least for a core group of patients with PDs.

Finally, will the initial longitudinal relationships of pathological traits, PDs, and Axis I psychopathology hold up over time? Such relationships point strongly toward shared endophenotypes, whose identification is critical for genetic studies, treatment development, and classification.

IMPACT OF PERSONALITY DISORDERS

The CLPS has provided unique, prospective data on the impact of PDs. These data demonstrate the costs of PDs to the individual and to society and contribute to a better understanding of the course of Axis I disorders and suicidal behavior.

Impairment in Psychosocial Functioning

Patients were compared on an array of domains of psychosocial functioning, as measured by the clinician-administered Longitudinal Interval Follow-up Evaluation (LIFE; Keller et al., 1987) and the self-report Social Adjustment Scale (SAS-SR; Weissman & Bothwell, 1976) at baseline (Skodol, Gunderson, McGlashan et al., 2002). Patients with STPD and BPD were found to have significantly more impairment at work, in social relationships, and at leisure than patients with OCPD or MDD; patients with AVPD were intermediate. These differences were found across assessment modalities and remained significant after covarying for demographic differences and comorbid Axis I psychopathology.

The diagnostic instability of PDs found in the CLPS and other studies (Lenzenweger, 1999; Zanarini, Frankenburg, Hennen, & Silk, 2003) raises the question of what about personality disorder is stable? In a prospective study of impairment in psychosocial functioning over the first 2 years of follow-up (Skodol, Pagano et al., 2005), we found significant improvement in only three of seven domains of functioning: social relationships with spouse or mate (in the minority of patients who had one), recreation, and global social adjustment. These improvements occurred largely in the MDD (with no PD) group. Patients with BPD or OCPD showed no improvement in any domain of functioning overall, but patients with BPD who experienced change in personality psychopathology showed some improvement in functioning. Of the different domains of functioning examined, impairment in social relationships appeared most stable in patients with PDs. Future studies will address the

effects of changes in individual PD criteria, both pathological traits and symptomatic behaviors, on functioning.

Treatment Utilization

The histories of mental health treatment collected at baseline were compared between the CLPS diagnostic groups (Bender et al., 2001). Patients with PDs were found to have more extensive histories of psychiatric outpatient, inpatient, and psychopharmacologic treatment than patients with MDD. Compared to the MDD group, patients with BPD were more likely to have received virtually every type of psychosocial treatment and patients with OCPD reported greater use of individual psychotherapy. Patients with BPD were also more likely to have used antianxiety, antidepressant, and mood stabilizer medications, and patients with BPD or STPD had a greater likelihood of having received antipsychotic medications. At baseline, patients with BPD were also found to have used most treatments in greater amounts than depressed patients or patients with other PDs. These retrospective findings are now being confirmed using prospectively collected data.

The CLPS has also begun to explore other influences on the treatment received by this PD sample. One analysis showed that medication utilization by patients with BPD assessed prospectively over a 2-year period (Oldham et al., 2004) only loosely conformed to the subsequently published APA Practice Guideline for the Treatment of Patients with Borderline Personality Disorder (Work Group on Borderline Personality Disorder, 2001) algorithms. Physicians appeared to be influenced in their prescribing by considerations in addition to BPD symptom clusters, including levels of functional impairment and the presence of comorbid Axis I conditions.

Another study examined the qualities of patient groups' mental representation of their therapists (Bender et al., 2003). Interestingly, patients with STPD reported the highest level of mental involvement with therapy outside the session, missing their therapists and wishing for friendship, while also feeling aggressive or negative. Patients with BPD exhibited the most difficulty experiencing their therapists as benign and helpful. The importance of considering how PD pathology affects relationships with treaters was underscored. Future studies will examine the effects of other factors, such as minority status, on treatment utilization, both psychiatric and medical.

Effects on Outcome of Axis I Disorders

The 24-month natural course of remission from major depressive disorder as a function of PD comorbidity was examined prospectively (Grilo, Sanislow et al., 2005). The overall remission rate for MDD was 73.5%. Patients with MDD who had STPD, BPD, or AVPD as their primary PD diagnosis had a significantly longer time to remission from MDD than did patients with MDD without a co-occurring PD. These PDs were robust predictors of slowed remission from MDD even when controlling for other negative prognostic factors, such as co-occurring dysthymia, other Axis I disorder comorbidity, early age at onset of MDD, and a pattern of MDD recurrence. Research criteria for depressive personality disorder also resulted in a lower likelihood of remission of baseline MDD at 2-year follow-up, while comorbid dysthymic disorder did not (Markowitz et al., 2005).

In contrast to their effects on MDD, the presence, severity, or time-varying changes of co-occurring PDs did not significantly influence the natural course of either bulimia nervosa or eating disorder not otherwise specified (EDNOS) (Grilo, Sanislow, Shea et al., 2003). Future studies will address the potential impact of PDs and alternative conceptualizations of PDs (e.g., Five-Factor Model) on the course of these and other Axis I disorders, notably

substance use disorders and anxiety disorders, including new onsets, recurrences, and time in episodes.

Suicide

During the first 2 years of follow-up, 9% of study participants reported at least one definitive suicide attempt and 44% of these had multiple suicidal behaviors (Yen et al., 2003). Baseline diagnoses of BPD and drug use disorders predicted prospective suicide attempts. Controlling for baseline BPD diagnosis, we found that worsening in the course of MDD and of substance use disorders in the month preceding the attempt were also significant predictors. Furthermore, with the *self-injury* criterion excluded, we found that the BPD criteria of *affective instability*, *identity disturbance*, and *impulsivity* significantly predicted future suicidal behaviors (Yen et al., 2004). Only affective instability and childhood sexual abuse were significantly associated with suicide attempts (i.e., behavior with some intent to die). Twelve percent of PD subjects attempted suicide by the 3-year follow-up (Yen et al., 2005). Controlling for baseline diagnoses of BPD, MDD, substance use disorders, and a history of childhood sexual abuse, negative life events, particularly those pertaining to love/marriage or crime/legal matters, were significant predictors of suicide attempts. In the future, we will examine whether rates of first and repeated suicide attempts increase or decrease with advancing age of PD patients.

A NEW DIRECTION FOR DIAGNOSING PERSONALITY PSYCHOPATHOLOGY?

In the CLPS study to date, we have confirmed that personality psychopathology constitutes a significant public health problem with respect to associated functional impairment, extensive treatment utilization, negative prognostic impact on MDD, and suicide risk. Our findings further show that PDs are more serious forms of psychopathology by many impact indicators than MDD without PD. At the same time, we have begun to document some limitations in the DSM system for conceptualizing PDs. The next stages are to work on major modifications of the DSM definitions and to further explore and develop alternative systems. In the volume *A Research Agenda for DSM-V* (Kupfer, First, & Regier, 2002), the question of whether mental disorders in general, not simply PDs, should be represented by a set of dimensions, instead of multiple categories, was identified as one of seven basic nomenclature issues needing clarification. Rounsaville and associates stated, "There is a clear need for dimensional models to be developed and their utility compared to that of existing typologies in one or more limited fields, such as personality. If a dimensional system performs well and is acceptable to clinicians, it might be appropriate to explore dimensional approaches in other domains" (Rounsaville 2002, p. 13).

Perhaps the most important goal of the CLPS has been to examine the comparative validities of various models of PD, both categorical and dimensional, those developed from personality psychology and those developed from clinical psychiatry. Published and forthcoming results provide two important and heretofore undemonstrated findings. First, despite considerable validity of PD categories as presented in the DSM-IV in terms of functional impairment, treatment utilization, negative prognostic impact on MDD, and suicide risk, dimensional models of PD have types of clinical validity that categories do not, most notably, greater temporal stability. Second, dimensional personality traits appear to be the foundation of the behaviors described by many PD criteria of the DSM. Traits are more enduring, perhaps because they are more innate and proximal to genetic and biological mechanisms (Skodol, Siever, Livesley et al., 2002). Symptomatic behaviors are more intermittent in expression, more a product of development and learning, and probably linked to life situations and stress.

If future editions of the DSM move to a dimensional representation of personality disorder phenomena, much remains to be learned about the pathological variants of general personality functioning. The inherent stability of the traits underscores the need for data collected over considerable time periods, as noteworthy changes are more likely to be manifest over the course of a decade than over the course of a few years.

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