

## A Naturalistic Study of Dissociative Identity Disorder and Dissociative Disorder Not Otherwise Specified Patients Treated by Community Clinicians

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The goals of this naturalistic, cross-sectional study were to describe the patient, therapist, and therapeutic conditions of an international sample of dissociative disorder (DD) patients treated by community therapists and to determine if community treatment for DD appears to be as effective as treatment for chronic PTSD and conditions comorbid with DD. Analyses found that across both patient ( $N = 280$ ) and therapist ( $N = 292$ ) reports, patients in the later stages of treatment engaged in fewer self-injurious behaviors, had fewer hospitalizations, and showed higher levels of various measures of adaptive functioning (e.g., GAF) than those in the initial stage of treatment. Additionally, patients in the later stages of treatment reported lower symptoms of dissociation, posttraumatic stress disorder, and distress than patients in the initial stage of treatment. The effect sizes for Stage 5 versus Stage 1 differences in DD treatment were comparable to those published for chronic PTSD associated with childhood trauma and depression comorbid with borderline personality disorder. Given the prevalence, severity, chronicity, and high health care costs associated with DD, these results suggest that extended treatment for DD may be beneficial and merits further research.

*Keywords:* dissociation, dissociative disorders, dissociative identity disorder, trauma, treatment

The prevalence of dissociative disorders (DD) in clinical settings ranges between 5-20.7% among inpatients, (Friedl & Draijer, 2000; Gast, Rodewald, Nickel, & Emrich, 2001; Ross, Anderson, Fleisher, & Norton, 1991; Tut-

kun et al., 1998), 12-38% among outpatients (Foote, Smolin, Kaplan, Legatt, & Lipschitz, 2006; Garcia, Rico, & Agráz, 2006; Sar et al., 2003; Sar, Tutkun, Alyanak, Bakim, & Baral, 2000), and 34.9% among patients presenting to

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a psychiatric emergency room (Sar et al., 2007). A nationwide random sample of experienced clinicians found that 53% of patients treated in the community for borderline personality disorder (BPD) had a comorbid dissociative disorder (DD), including 11% meeting criteria for Dissociative Identity Disorder (DID; Zittel Conklin & Westen, 2005), although new research suggests that the overlap between these disorders is misleading because the disorders are distinguishable on many personality features (Brand, Armstrong, Loewenstein, & McNary, in press). A study with similar methodology found that up to 8.6% of the patients being treated for panic disorder were diagnosed with comorbid DD (Morrison, Bradley, & Westen, 2003). These data suggest that DDs are common among psychiatric samples in North American and Western and Eastern Europe.

Patients with dissociative disorders have complex presentations with high levels of comorbid psychiatric difficulties, including complex posttraumatic stress disorders (Courtois & Ford, 2009; Ford, 2009); treatment resistant depression and anxiety (Johnson, Cohen, Kasen, & Brook, 2006; Putnam, Guroff, Silberman, Barban, & Post, 1986); personality disorders and relational problems, including borderline personality disorder (Dell, 1998; Ellason, Ross, & Fuchs, 1996; Johnson et al., 2006; Zittel Conklin & Westen, 2005); active substance abuse (Dunn, Paolo, Ryan, & van Fleet, 1993; Karadag et al., 2005; Ross et al., 1992); eating disorders (Johnson et al., 2006); self destructiveness and suicidality (Foote, Smolin, Neft, & Lipschitz, 2008; Putnam et al., 1986). Due to their acute polysymptomatology, patients with dissociative disorders typically take multiple psychiatric medications (Loewenstein, 1991) and are almost always excluded from research, even in treatment outcome studies of chronic childhood abuse (Cloitre, Koenen, Cohen, & Han, 2002; McDonagh et al., 2005; van der Kolk & Courtois, 2005). As a result, information about treatment outcomes with dissociative disorder patients is limited.

At present, treatment outcome research on DID patients is limited to case studies (e.g., Kellett, 2005; Sar, Ozturk, & Kundakci, 2002), clinical series studies (e.g., Coons, 1986; Kluft, 1984, 1988), and acute stabilization following inpatient treatment (Ross & Ellason, 2001; Ross & Haley, 2004). Clinical case studies and case

series suggest that many DID patients improve with treatment, with up to two thirds of them eventually integrating personality states and becoming less symptomatic after years of treatment (Brand, Classen, McNary, & Zaveri, in press). Of the few quantitative studies that have been conducted, the longest study was of DID patients followed for two years after discharge from a specialized inpatient trauma and dissociation program (Ellason & Ross, 1997). At follow up, the patients met criteria for significantly fewer comorbid axis I and II disorders and used less psychotropic medication. Additionally, they demonstrated significantly decreased symptoms of depression, dissociation, amnesia, somatic symptoms, substance abuse, and Schneiderian first-rank symptoms (Ellason & Ross, 1995). Twenty-two percent had integrated their dissociated personality self-states (henceforward referred to as "self-states"). While this study's findings are encouraging, it did not have a control group and had a low retention rate (i.e., 46%). Decreases in depression, PTSD, global distress, and dissociation have been found following inpatient treatment in other studies of shorter follow-up duration (Ellason & Ross, 1997, 2004; Ross & Ellason, 2001; Ross & Haley, 2004).

Results from these preliminary studies suggest that many DD patients appear to respond to treatment with decreases in dissociation, depression, and PTSD, as well as decreases in self-destructiveness and comorbid axis I and II disorders (for a review, see Brand, Classen, et al., in press). However, these studies have methodological weaknesses, including a reliance on small samples, single therapists, and/or treatment sites. Additionally, most of the studies have used inpatient samples that may confound treatment effects with regression to the mean phenomena. The research has been primarily conducted with U.S. patients and expert therapists. Thus, the efficacy of outpatient treatment provided by community therapists is unknown. Rigorous research is needed using large samples, patients from within, as well as outside the United States, and a wider range of therapists to provide data indicating whether treatment helps this severely impaired population. If so, to what degree is it effective? Comparing effect sizes from DD treatment studies to those from studies of chronic PTSD or disorders that are comorbid with DD would help evaluate the efficacy of DD

treatment by providing a context for the magnitudes of treatment responses.

Designing treatment outcome studies for patients who have many comorbid conditions is challenging. Although regarded as the most rigorous design for evaluating treatment research, some researchers have expressed concern about some of the limitations of randomized controlled trial (RCT) studies that are relevant to the study of DD (Borkovec & Costonguay, 1998; Bradley, Greene, Russ, Dutra, & Westen, 2005; Morrison et al., 2003; Westen, Novotny, & Thompson-Brenner, 2004) and complex traumatic stress disorders (van der Kolk & Courtois, 2005). These authors' concerns include that RCTs typically have so many exclusion criteria that they are of limited generalizability because, rather than treating the typical community patient who suffers from multiple disorders and poly symptomatology, they focus on single "pure" disorders that are easier to treat. Consistent with this concern, a recent meta-analysis of RCTs for PTSD (Bradley et al., 2005) found that 62% of the studies excluded patients with current drug or alcohol use and 46% excluded patients at risk for suicide, leading the authors to question the generalizability results. Bradley and colleagues urged the field to investigate treatment for "poly symptomatic patients with repeated childhood traumas" (p. 222). In line with Bradley et al.'s findings, of the four studies of chronic PTSD in which at least one quarter of the sample reported childhood abuse, two specifically excluded DID (Cloitre et al., 2002; McDonagh et al., 2005) and the other two almost certainly excluded DD patients due to excluding patients with suicidal ideation or those taking psychiatric medications (Cohen & Hien, 2006; Cottraux et al., 2008).

Similarly, the American Psychological Association's Presidential Task Force on Evidence-Based Practice recommended that treatment researchers need to expand their focus to include interventions that are delivered in naturalistic settings because such studies possess strong ecological validity and generalize to patients with multiple symptoms and syndromes (American Psychological Association's Presidential Task Force on Evidence-Based Practice, 2006). This recommendation is particularly relevant to poly symptomatic and highly comorbid DD patients. Correlational data from naturalistic studies provide a methodology that complements

the potential limitations of brief, randomized studies (Westen et al., 2004). While correlational data cannot lead to conclusions about causality, they can generate hypotheses about potential moderators and possible treatment strategies that can be examined in future controlled experimental settings.

In consideration of the limitations of the existing research on treatment outcome of DD and the limitations of RCT methodology, a study of treatment provided to DD community patients is needed. The present study was designed for this purpose and is limited to the cross-sectional results of an ongoing longitudinal pilot study of treatment outcome for DD patients. It relied on practice network methodology, in which participants are community therapists who recruit a patient participant from among their caseload. Therapists were recruited via emails sent to professional organizations, telephone calls and emails to therapists who had graduated from the DD Psychotherapy Training Program of the International Society for the Study of Trauma & Dissociation (ISSTD; note that ISSTD was formerly known as the International Society for the Study of Dissociation or ISSD), and telephone calls and emails to therapists listed in *Psychology Today's* therapist directory. Practice network methodology has the advantage of increased generalizability to patients treated in the community while having the disadvantage of not being able to establish causality (e.g., Borkovec, Echemendia, Ragusea, & Ruiz, 2001; Zittel Conklin & Westen, 2005).

Westen and colleagues have been strong proponents for this methodology because of the increased generalizability of the findings, and have used this to determine clinically relevant findings about treatment for patients with eating disorders, depression, anxiety disorders, and BPD (Morrison et al., 2003; Thompson-Brenner & Westen, 2005a, 2005b; Wilkinson-Ryan & Westen, 2000; Zittel Conklin & Westen, 2005). For example, research using this methodology has found that patients treated in the community typically present with multiple, rather than single psychiatric disorders, and that these co-occurring disorders substantially lengthen treatment (Morrison et al., 2003). The present study adapted Westen's methodology and therapist questionnaire for use with DD patients (Zittel Conklin & Westen, 2005). Multiple studies have shown that clinicians' observations can be

highly reliable and valid, particularly when they use standardized measures (Dutra, Campbell, & Westen, 2004; Thompson-Brenner & Westen 2005a, 2005b; Westen & Muderrisoglu, 2003; Zittel Conklin & Westen, 2005).

The first goal of the current study was to determine if patients in later stages of treatment show higher levels of adaptive functioning and lower levels of symptoms than DD patients in the early stages of treatment. Specifically, patients in the early stages of treatment were expected to have higher levels of dissociation, distress, and PTSD, self harm, suicide attempts, and hospitalizations, as well as lower levels of adaptive functioning (e.g., GAF) compared to DD patients in the later stages of treatment. The second goal of the study was to determine if outpatient treatment for DD appears to be as effective in reducing symptoms of dissociation, distress, PTSD, self harm, suicide attempts, and hospitalizations, as well as increasing adaptive functioning as has been found for treatment for conditions that are often comorbid with DD, including chronic PTSD and borderline personality disorder.

## Method

### *Participants*

Participants were 292 therapists and 280 patients. The therapists were recruited from membership registers of the International Society for the Study of Trauma & Dissociation (ISSTD), the ISSTD's list of therapists who had graduated from its DD Psychotherapy Training Program (DDPTP), and listservs for mental health professionals, including those focused on psychoanalysis, dialectical behavioral therapy, and trauma-focused therapy. Initial email invitations sent to therapists described the study as a treatment outcome study of DD treatment in which they were invited to participate. We broadened our recruitment methods by a) making telephone calls to graduates of the DDPTP to invite them to participate; b) encouraging these professionals to forward the email invitation to colleagues who were treating DD and might be interested; and c) attempting to recruit therapists who were less well trained in treating DD by calling approximately 100 therapists from Maryland and Pennsylvania who listed themselves as general therapists in the electronic

directory of *Psychology Today*. The latter recruitment effort did not result in any additional participants. Unfortunately, our response rate cannot be determined because it is unknown what percentage of the recruitment emails were received and read by the intended recipients. At the time of recruitment, ISSTD had approximately 1300 members and approximately 700 individuals had graduated from its psychotherapy training program. However, email addresses were available for only approximately 100 of the most recent training program graduates; unfortunately, email addresses had not been requested from earlier graduating classes of the ISSTD therapist training program, resulting in not being able to reach them by email. Dozens of emails invitations sent to members of the ISSTD and its training program bounced back. Additionally, approximately 20 therapists wrote to indicate that they were not currently treating any dissociative patients.

Inclusion criteria required that the therapist be currently engaged in providing ongoing treatment of at least 3-months duration to one adult patient diagnosed with DID or DDNOS. Exclusion criteria for therapists were not having a current adult in treatment diagnosed with either DID or DDNOS and not being able to read English. We asked clinicians to invite a single DD patient from his or her caseload to participate. We did not provide therapists with any guidelines about how to select a patient other than to specify that the only exclusion criteria for patients were being younger than 18 and not being able to read English. To make our results most generalizable to community samples of DD patients, we did not exclude any patients regardless of substance use, eating disorders, active suicidality, psychosis, recent hospitalization or hospitalization during the study, or any other type of acuity or comorbidity, all of which are typical exclusion variables in treatment outcome studies.

To maximize the ease of participating and reduce loss of therapist data through postal mail, therapists completed their measures on an interactive, password-protected website. This methodology and the therapist survey were adapted from one used in a naturalistic nationwide community study of BPD that found no systematic differences between therapists' responses gathered via a web-based survey compared to those gathered via a paper and pencil

survey (Zittel Conklin & Westen, 2005). To protect patient confidentiality and recruit a wider range of participants, including those who did not have access to the Internet, the patient measures were sent via postal mail to the therapists' work addresses. The therapists gave the packet of measures to the patients who completed them outside of session without their therapist seeing their answers. Self-addressed stamped envelopes were provided for patients in the United States. All surveys were identified by code numbers so that matched pairs of patient and therapist data could be linked. Neither therapists nor patients were compensated for participating. The study received IRB approval from Towson University and Sheppard Pratt Health System and all participants provided informed consent prior to participation.

Of the 292 therapists, 74% ( $n = 220$ ) practiced in the US, 8% ( $n = 25$ ) in Canada, and the remaining 18% ( $n = 67$ ) from 17 countries outside North America (including  $n = 8$  from the United Kingdom,  $n = 7$  from the Netherlands,  $n = 4$  each from Germany and Australia,  $n = 3$  from Sweden,  $n = 2$  each from Scotland, Belgium, New Zealand, and Spain, and  $n = 1$  each from Argentina, Norway, Brazil, Finland, Taiwan, Singapore, Israel, Slovakia, and South Africa). Thus, we had participants from every continent except Antarctica. Therapists within

North America were from 37 states and 5 Canadian provinces. See Table 1 for therapist characteristics. Therapists provided data on a single DD patient whom they invited to participate. Among the patients diagnosed with any of the 5 DDs in their caseloads, therapists identified DID patients as the most frequent dissociative disorder ( $n = 277$ ; 98%) they were treating, with an average of 4.1 ( $SD = 4.6$ ) DID patients per therapist at the time of participation. Many of these therapists reported a considerable amount of experience treating patients with DD although 34.4% reported treating three or fewer DID patients throughout their career. We excluded 24 therapists who did not complete more than half of the survey or who had computer problems (e.g., consistent pattern of stuck computer keys).

Therapists provided background information on their patients. See Table 2 for patient demographics. Two therapists' identified patient preferred not to participate, two therapists preferred to not ask a patient to participate, and 32 patients who agreed to participate did not return data. The patients were well educated, with only 4% having less than a high school education ( $n = 12$ ), 17% having graduated from high school ( $n = 47$ ), and 78% having some college education ( $n = 217$ ). Therapists reported a high degree of axis I comorbidity, with PTSD in 89%

Table 1  
*Therapist Characteristics*

	%	(n)	M	SD	Min	Max
<b>Therapist Gender (N = 292)</b>						
Female	75	(223)				
Male	23	(69)				
<b>Therapist Orientation (N = 292)</b>						
Cognitive behavioral	17	(49)				
Psychodynamic	49	(144)				
Family systems	3	(8)				
Humanistic/experiential	8	(25)				
Other	22	(66)				
<b>Treatment Setting (N = 276)</b>						
Private practice	73	(216)				
Outpatient clinic	17	(49)				
Hospital inpatient/partial	2	(6)				
School	0.3	(1)				
Other	1	(4)				
<b>Therapist Experience (N = 285)</b>						
Years in practice	100	(285)	21.8	9.6	3	44
Years treating DD	99.6	(284)	12.8	7.6	0	41
DID patients integrated	98.9	(282)	3.9	9.1	0	75

Table 2  
*Patient Characteristics*

	%	(n)	<i>M</i>	<i>SD</i>	Min	Max
<b>Gender (N = 280)</b>						
Female	94	(264)				
Male	5	(14)				
Transgendered	1	(2)				
Age	95	(276)	43.7	10.7	18	72
<b>Race/Ethnicity (n = 280)</b>						
Caucasian	89	(248)				
African American	2	(7)				
Hispanic	2	(6)				
Asian	2	(5)				
Other	5	(14)				
<b>Abuse History (n = 272)</b>						
Was the patient physically abused as a child?	79	(215)				
Did the patient witness domestic violence as a child?	49	(133)				
Was the patient emotionally or psychologically abused as a child?	94	(255)				
Was the patient neglected as a child?	68	(184)				
Was the patient sexually abused as a child?	86	(233)				
<b>Perpetrator(s) (n = 275)</b>						
Father	55	(151)				
Stepfather/mother's lover	10	(28)				
Mother	21	(58)				
Brother	22	(62)				
Other relative	42	(117)				
Adoptive family member	3	(9)				
Nonrelative	58	(159)				
NA	8	(23)				

( $n = 242$ ), an anxiety disorder other than PTSD in 50% ( $n = 136$ ), mood disorder in 83% ( $n = 226$ ), an eating disorder in 30% ( $n = 81$ ), substance abuse/dependence disorder in 22% ( $n = 61$ ), a somatoform disorder in 22% ( $n = 59$ ), and a schizophrenia spectrum disorder in 2% of the patients ( $n = 5$ ). Therapists also reported high levels of axis II comorbid diagnoses with 54% of the patients having a personality disorder in the dramatic cluster ( $n = 72$ ), 51% in the anxious cluster ( $n = 69$ ), 21% in personality disorder not otherwise specified ( $n = 28$ ), and 5% in the odd cluster ( $n = 7$ ). Therapists' ratings of the percentage of patients receiving adjunctive treatments are in Table 3. The most prevalent adjunctive treatment was medication (80% of the sample,  $n = 222$ ). The most frequently prescribed psychiatric medications were antidepressants (76%,  $n = 209$ ) followed by antianxiety medications (74%,  $n = 202$ ).

Patients had been in treatment for an average of 5.0 years with the current therapist ( $SD = 4.1$ ;  $N = 220$ ) and had been formally diagnosed with a Dissociative Disorder for an average of 6.8

years ( $SD = 5.3$ ;  $N = 223$ ). As would be expected, patients in earlier stages of treatment had been in treatment with the current therapist fewer years than patients in later stages (Stage I,  $M = 2.8$ ,  $SD = 2.0$ ; Stage II,  $M = 4.1$ ,  $SD = 3.1$ ; Stage III,  $M = 4.1$ ,  $SD = 3.0$ ; Stage IV,  $M = 7.4$ ,  $SD = 5.4$ ; Stage 5,  $M = 8.4$ ,  $SD = 4.8$ ) and had also spent fewer years formally diagnosed with a Dissociative Disorder

Table 3  
*Number of Patients Who Received Adjunct Therapies*

	%	(n)
Individual therapy	100	(277)
Psychiatric medication	80	(222)
Group therapy	19	(52)
12 step groups	13	(35)
Family therapy	5	(15)
Couples therapy	13	(35)
Art therapy	22	(62)
Other expressive therapy	41	(114)

(Stage I,  $M = 3.5$ ,  $SD = 3.4$ ; Stage II,  $M = 6.5$ ,  $SD = 5.2$ ; Stage III,  $M = 7.2$ ,  $SD = 5.2$ ; Stage IV,  $M = 8.4$ ,  $SD = 5.2$ ; Stage 5,  $M = 8.5$ ,  $SD = 6.5$ ).

### *Clinician Measures*

*Progress in Treatment Questionnaire (PITQ).* This measure was developed for this study and was based in the ISSTD's Guidelines for Treating Dissociative Identity Disorder in Adults (International Society for the Study of Dissociation [ISSD], 2005) that were developed via consensus among a panel of expert DD clinicians and researchers. The questionnaire measures capacities which the treatment guidelines suggest need to be developed in the course of treating patients with DD. The guidelines recommend that treatment follows a carefully paced, staged approach over the course of three or more stages (e.g., Courtois, 1999; Herman, 1992; ISSD, 2005; Putnam, 1989). A very condensed overview of the stages follows (for more information, see Herman, 1992; ISSD, 2005; Putnam, 1989). As described by the Treatment Guidelines, the first stage of treatment involves developing safety of self and stabilizing self- and other-destructive behaviors, teaching affect regulation, educating the patient about their diagnoses and symptom management, and developing a good treatment alliance. When DD patients are able to stabilize and develop a good working relationship with their therapist, they can proceed to the next stages of treatment (that were identified in this study as stages 2–4) that entail identifying, accepting, and talking about their histories of abuse and trauma; cognitive processing of trauma-related themes and misattributions (e.g., believing that they were and are “bad” and that the childhood maltreatment was deserved); emotional processing, including the grieving of related losses (such as the loss of innocence, loss of potential); and creating a cohesive rather than a disjointed and dissociative narrative. Over the course of treatment, patients become increasingly aware of their tendency to dissociate and the functions that dissociation and their dissociative states of mind or self-states served in the past and in the present. Patients develop more awareness of their inner states and what is usually a conflicted agenda among them and learn to develop internal dialogue and cooperation. As this process contin-

ues and deepens over the middle states, it results in less amnesia between the disparate parts of self and as these self-states increasingly understand the similarity of their motivations and become more accepting of each other, they begin to blend and integrate. Not all DD patients can manage the intense work involved in the middle and later stages of treatment and some choose not to integrate. In the last stage of treatment, self-states continue to be integrated, patients learn to cope with stress and emotions without dissociating, and they work to develop healthy relationships, an enhanced ability to work, and an increased sense of purpose in life.

The PITQ measures capacities developed throughout the stages of treatment for DD, including affect tolerance; impulse control; PTSD and dissociative symptom management skills; internal communication and cooperation among self-states; ability to tolerate fully knowing about and experiencing emotional and sensory experiences related to trauma; integrating self-states; and increasing ability to view self and others in an integrated, realistic way that is not dominated by trauma-based perceptions. Therapists estimated what percentage of the time (0 – 100%) their patient is capable of demonstrating each capability. Sample items included “The patient is aware that the abuse was not his or her fault,” “knows and uses containment strategies (hypnotic or imagery techniques used to contain intrusive PTSD symptoms) when they are needed,” “keeps oriented in the present,” “shows good affect tolerance,” and “does not engage in self-injurious behavior.” The PITQ shows acceptable reliability (Cronbach's alpha = .94 in this sample). The PITQ is available from the first author.

*Clinical data form.* This form, adapted from Zittel Conklin and Westen (2005), assessed variables relevant to the therapists' and patients' demographics; therapists' training and degree of expertise in treating trauma and DD; the patient's axis I and II diagnoses; information about the patient's adaptive functioning; frequency of self-injurious behaviors, suicide attempts, and hospitalizations; stage of treatment (one through five); Global Assessment of Functioning (GAF; American Psychiatric Association, 2000); developmental history, including history of trauma exposure in childhood and adulthood; medications; and adjunctive treatments. Westen and colleagues developed this

measure over years of conducting community studies. Prior research indicates that therapists' ratings on this survey correlate strongly with ratings made by independent interviewers (see Zittel Conklin & Westen, for a review). Therapists were asked to select the stage of treatment that most characterized the focus of the patient's work in treatment in the last six months. Descriptors of the focus in sessions were offered as anchors in the question about stage of treatment with Stage one described as "stabilization and establishing safety," stage three as "processing memories of trauma with full emotion and grieving related losses," and stage five as "integration and reconnection within self and with others" (see PITQ description above for a more detailed discussion of the focus of treatment provided across the stages of treatment). Although stages of treatment are the focus of this study, therapists were neither informed of this focus nor the hypotheses related to stage of treatment.

### *Patient Measures*

*Behavioral checklist.* This format for behavioral questions were modeled after those used in the National Health and Nutrition Examination Survey (National Center for Health Statistics, 2006). Patients reported how often in the last 30 days they had engaged in risk-taking and destructive behaviors, including self-injurious behavior, suicide attempts, behaviors that were dangerous enough to result in death, alcohol and drug consumption, and "very impulsive behaviors." Patients reported the frequency of engaging in adaptive behaviors in the last 30 days, including volunteering or attending school, working for pay, using symptom management techniques, socializing, and feeling good "even if for a brief period." They also reported the days hospitalized at inpatient and day treatment programs in the last month. Each of these behavioral measures was recoded to indicate whether it had occurred/did not occur.

*Dissociative Experiences Scale-II (DES-II; Bernstein & Putnam, 1986).* The DES-II is a widely used 28-item self-report measure for assessment of dissociative experiences (Carlson et al., 1993). In a meta-analysis, the DES-II was found to have a test-retest reliability of 0.78–0.93 (6 studies), an internal reliability (alpha) of 0.93 (16 studies), and a convergent validity

( $r$ ) of 0.67 (26 studies; van Ijzendoorn & Schuengel, 1996). An average score of 30 is frequently used as a cutoff suggesting the possibility of a DD (Cardeña, 2008; Carlson, 1994). Cronbach's alpha calculated on the sample for the DES-II was 0.95.

*Posttraumatic Stress Checklist-Civilian (PCL-C; Weathers, Litz, Huska, & Keane, 1994).* The PCL-C is a 17-item measure of PTSD symptomatology and severity. It queries directly about the symptoms included in the *DSM-IV* PTSD criteria B (reexperiencing), C (avoidance and numbing), and D (increased arousal; American Psychiatric Association, 2000). Respondents rate how much each symptom has bothered them in the past month using a 5-point scale (1 *not at all* to 5 *extremely*). A total score can be calculated by summing all of the items. A total score of 50 points is frequently used as a cutoff that is consistent with a PTSD diagnosis (e.g., Weathers & Ford, 1996). Test-retest reliability for the PCL-C is 0.96 with a retest interval of two to three days (Weathers et al., 1994) and its overall diagnostic efficiency has been found to be high at 0.90 (Blanchard, Jones-Alexander, Buckley, & Forneris, 1996). Cronbach's alpha calculated on the sample for the PCL-C was 0.89.

*Symptom Checklist 90-Revised (SCL-90-R; Derogatis, 1994).* The 90 items of the SCL-90-R comprise nine subscales: somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, anger-hostility, phobic anxiety, paranoid ideation, and psychoticism. Items are rated on a 5-point scale of symptom distress, ranging from *not at all* (0) to *extremely* (4). Psychometric evaluations have reported good internal consistency (alpha coefficients .77 to .90); good test-retest reliability; and good concurrent, construct, and discriminant validity (e.g., Derogatis, 1994). The Global Severity Index (GSI), the average score for all 90 items, is an overall measure of psychiatric distress with established reliability and validity (Derogatis, 1994). DD patients typically score higher on the SCL-90-R than other psychiatric outpatients and inpatients (Ellason & Ross, 2004; Steinberg, Barry, Sholomskas, & Hall, 2005). Cronbach's alpha calculated on the sample for both the GSI and the depression subscale were 0.96 and 0.88, respectively.

*Data analysis.* Descriptive statistics for continuous variables include mean, standard de-



Table 5  
Dichotomous Outcomes by Stage of Therapy

	Stage						Odds ratios				
	1	2	3	4	5	All	2 vs. 1	3 vs. 1	4 vs. 1	5 vs. 1	
	<i>N</i>	<i>n</i> (%)									
<b>Patient Response</b>											
Past 30 days											
Hurt self	213	18 (53)	34 (42)	15 (38)	19 (44)	1 (6)	87 (41)	0.64 (0.28–1.44)	0.56 (0.22–1.41)	0.70 (0.28–1.74)	0.06 (0.01–0.50) <sup>1</sup>
Attempted suicide	216	6 (16)	6 (7)	1 (3)	2 (5)	1 (6)	16 (7)	0.41 (0.12–1.38)	0.14 (0.02–1.19)	0.25 (0.05–1.33)	0.34 (0.04–3.12)
Did something dangerous	213	16 (43)	30 (38)	11 (28)	15 (36)	2 (13)	74 (35)	0.79 (0.36–1.74)	0.52 (0.20–1.34)	0.73 (0.29–1.80)	0.20 (0.04–1.02)
Did something impulsive	207	29 (81)	49 (63)	25 (66)	28 (70)	11 (73)	142 (69)	0.41 (0.16–1.05)	0.46 (0.16–1.34)	0.56 (0.19–1.64)	0.66 (0.16–2.72)
Drank alcohol	214	17 (47)	43 (54)	16 (41)	18 (42)	7 (44)	101 (47)	1.30 (0.59–2.86)	0.78 (0.31–1.94)	0.80 (0.33–1.96)	0.87 (0.27–2.84)
Got high (street/prescription)	215	9 (25)	12 (15)	7 (18)	8 (19)	1 (6)	37 (17)	0.52 (0.20–1.38)	0.66 (0.22–2.00)	0.69 (0.23–2.01)	0.20 (0.02–1.73)
Worked for pay	212	16 (44)	39 (50)	17 (45)	28 (64)	9 (56)	109 (51)	1.25 (0.56–2.76)	1.01 (0.40–2.53)	2.19 (0.89–5.38)	1.61 (0.49–5.26)
Worked volunteer	214	8 (23)	31 (38)	16 (41)	23 (53)	9 (56)	87 (41)	2.09 (0.84–5.18)	2.35 (0.85–6.48)	3.88 (1.44–10.45) <sup>1</sup>	4.34 (1.23–15.36)
Self managed symptoms	213	32 (89)	75 (96)	34 (87)	36 (82)	15 (94)	192 (90)	3.12 (0.66–14.78)	0.85 (0.21–3.45)	0.56 (0.15–2.05)	1.88 (0.19–18.24)
Had good feelings	213	31 (86)	73 (91)	38 (100)	43 (98)	15 (100)	200 (94)	1.68 (0.50–5.71)	NA	6.93 (0.77–62.35)	NA
Participated in social activities	215	27 (77)	69 (85)	36 (92)	35 (79)	16 (100)	183 (85)	1.70 (0.63–4.63)	3.56 (0.86–14.68)	1.15 (0.36–3.38)	NA
Past 6 months											
Hospitalized	217	14 (38)	14 (17)	1 (3)	2 (4)	1 (6)	32 (15)	0.34 (0.14–0.83)	0.04 (0.005–0.35) <sup>1</sup>	0.08 (0.02–0.37) <sup>1</sup>	0.11 (0.01–0.92)
In day treatment	217	9 (24)	9 (11)	3 (8)	1 (2)	1 (6)	23 (11)	0.39 (0.14–1.08)	0.26 (0.06–1.05)	0.07 (0.01–0.60)	0.21 (0.02–1.80)
<b>Therapist Response</b>											
Past 6 months											
Hospitalized	274	21 (40)	21 (22)	3 (6)	2 (4)	1 (5)	48 (17)	0.42 (0.20–0.88)	0.09 (0.03–0.35) <sup>1</sup>	0.06 (0.01–0.27) <sup>1</sup>	0.08 (0.01–0.68)
Self harm attempt	263	28 (56)	49 (53)	26 (54)	14 (26)	3 (17)	120 (46)	0.87 (0.44–1.75)	0.93 (0.42–2.06)	0.27 (0.12–0.63) <sup>1</sup>	0.16 (0.04–0.61) <sup>1</sup>
Past year											
Attempted suicide	273	20 (38)	14 (14)	8 (16)	2 (4)	0 (0)	44 (16)	0.28 (0.13–0.61) <sup>1</sup>	0.31 (0.12–0.80)	0.06 (0.01–0.29) <sup>1</sup>	NA

Note. Stage 2–5 odds are compared to Stage 1 odds.

<sup>1</sup> Odds ratio statistically significantly different from 1,  $p < .01$ . Odds ratios were not possible to calculate for cells when either 0% or 100% of therapists or patients reported the event.

different with an effect size of 0.50 or greater and with differences in the direction indicating less dissociation at Stage 5. Three of the nine items are on the taxon indicating pathological dissociation (Waller, Putnam, & Carlson, 1996). Items indicate less amnesia (two items), derealization/depersonalization (two items), absorption and trance (three items), and flashbacks (one item). Only one item on the PCL and two on the SCL-90-R showed a difference of 0.50 or larger effect size. These items related to flashbacks and anxious arousal.

*Therapist report.* Therapists of patients in Stage 2–5 reported their patients had significantly larger mean Progress in Therapy Questionnaire (PITQ) scores and Global Assessment of Functioning scores than Stage 1 patients (see Table 4). Therapists reported that Stage 5 patients also had higher adaptive functioning scores compared to Stage 1 patients,  $t(272) = 3.51$ ;  $p = .001$ .

Consistent with patient self report, therapists of Stage 5 patients reported their patients were significantly less likely to have engaged in self-harm ( $OR = 0.16$ ,  $0.04–0.61$ ,  $p = .008$ ), but therapists also reported fewer Stage 4 patients had engaged in self-harm relative to Stage 1 patients ( $OR = 0.27$ ,  $0.21–0.63$ ,  $p = .002$ ), whereas the patients did not report this same Stage 4 versus 1 difference. Therapists reported patients in Stages 3 and 4 were less likely to have been hospitalized in the previous six months than patients in Stage 1 (see Table 5). Therapists reported patients in Stages 2 and 4 were less likely to have made a suicide attempt than Stage 1 patients. No therapist reported a suicide attempt in a Stage 5 patient in the last six months, although one Stage 5 patient reported having made an attempt during that time period. Among the continuous variables, of 28 effect sizes calculated, 25 (59%) were 0.20 or above and half (14) exceeded 0.50 (see Table 4), indicating that half of the effects were in the moderate or large range.

*Patient age as covariate.* All outcome analyses were conducted using age as a covariate to estimate the impact of maturation on symptom and behavioral outcomes. Later stage patients are older than patients in Stage 1 on average, and it is possible that outcomes are attenuated by age such that older patients are less symptomatic and/or report fewer disruptive life events. If it is true that maturation wholly or

partially explains the differences between Stage 1 and later stages, it would be expected that these differences would be reduced in size when controlling for patient age.

In addition to stage of therapy, age was a significant predictor of some outcomes. Older patients were significantly less likely to report engaging in self-management of symptoms than younger patients ( $OR = 0.95$ ,  $0.90–0.997$ ,  $p = .04$ ). Therapists were less likely to report their older patients' had been hospitalized ( $OR = 0.95$ ,  $0.92–0.98$ ,  $p = .004$ ) or had engaged in self harm ( $OR = 0.95$ ,  $0.92–0.97$ ,  $p < .001$ ) compared to therapists with younger patients. Older patients reported significantly lower DES-II scores ( $B = -0.28$   $SE = 0.13$ ,  $t(210) = -2.14$ ,  $p = .03$ ).

When age was controlled for, group differences on some outcomes that were statistically significant prior to adjustment by age were no longer different at the Bonferoni adjusted significance level of 0.0125. The size of the odds ratios for Stages 4 and 5 versus Stage 1 therapist-reported self-harm attempts decreased (Stages 4 vs. 1  $OR = 0.40$ ,  $0.17–.95$ ,  $p = .04$ ; Stage 5 vs. 1  $OR = 0.27$ ,  $0.07–1.10$ ,  $p = .07$ ). Similarly, the size of the odds ratio for Stage 5 versus Stage 1 patient report of self-harm decreased after adjustment by age ( $OR = 0.07$ ,  $0.01–0.63$ ,  $p = .02$ ). This suggests maturation affects self-harm in this sample, contrary to data in the general population. None of the other significant differences between stages were affected by age adjustment (i.e., PCL-C, SCL-90, PITQ, Adaptive Functioning Score, GAF, patient and therapist report of hospitalization, and patient report of volunteer work and/or attending school).

### *Therapist and Patient Agreement*

Due to concerns about the impact of DD patients' potential for amnesia, shorter time intervals (i.e., past 30 days) were used for patient reports of behavior than for therapist reports (i.e., past 6 months). Because of the difference in time frames used in the questions for therapists and patients, the correlations between patient and therapist reports would necessarily be smaller than if the questions were identical. Despite the difference in time frames, patient self report of suicide attempts in the past 30 days correlated significantly with therapist re-

port of suicide attempts in the past year ( $r = .35, p < .001$ ). Similarly, patient self report of self-harm attempts in the past 30 days correlated significantly with therapist reports of self harm attempts in the past six months ( $r = .26, p < .001$ ). Patient self report of days spent in inpatient and day hospitals in the past six months also correlated significantly with therapist report of number of inpatient hospitalizations in the past six months ( $r = .34, p < .001$ ). (Note that we did not include day hospitalizations in the therapist question and that we asked patients about “days” whereas we asked therapists about “number” of hospitalizations; these differences likely reduced the size of the correlations.) Each of these behavioral reports was dichotomized for analysis purposes and the dichotomous versions of patient and therapist reports were also correlated:  $r = .35$  for suicide attempts,  $r = .47$  for self-harm attempts, and  $r = .88$  for hospitalizations. These relationships suggest that both patients and therapists agree to a moderate extent on the occurrence of suicide attempts and self-harming behaviors (despite using different time frames for assessment) and have strong concurrence in their reports of hospitalizations.

### Discussion

The data reported here suggest four primary yet preliminary findings about the contemporary treatment of DD patients. First, the current study’s participants have a high degree of acuity, are highly symptomatic, and most have had a long-term course within the mental health system. This finding is consistent with studies conducted over the last two decades that have found DD patients struggle with entrenched depression, self-destructiveness, suicidality, substance abuse, posttraumatic stress symptoms, problems in relationships, and features of mixed personality disorders, as well as with pronounced dissociative symptoms that interfere with their ability to maintain personal continuity and functioning (e.g., Foote et al., 2008; Putnam et al., 1986). The average distress scores of these outpatients are higher than those of general psychiatric inpatients (mean GSI for stage 1 DD = 2.1 vs. 1.3; Derogatis, 1994) yet comparable to those for inpatients with complex posttraumatic stress disorders (2.2; Allen, Coyne, & Console, 2000) and inpatients with BPD and complex posttraumatic stress disor-

ders (1.7; Sachsse, Vogel, & Leichsenring, 2006). The DD’s average GAF score in the first stage of treatment is in the “serious” range, consistent with those of outpatients with chronic PTSD associated with childhood abuse (mean GAF for stage 1 DD = 44.1 vs. 48.03 in Cottraux et al., 2008) and BPD patients receiving community treatment (47.6 in Zittel Conklin & Westen, 2005). The DD patients have comparable rates of hospitalization to those of BPD patients treated in the community (69% vs. 63% in Zittel Conklin & Westen, 2005). Unsurprisingly, the average dissociation score is much higher than that found among studies of inpatient and outpatient women with complex traumatic stress disorders (mean DES for stage 1 DD = 43.3 vs. 20.44 in Cohen & Hien, 2006; 16.5 in McDonagh et al., 2005; 28.30 in Sachsse et al., 2006). These comparisons suggest that outpatients with DD struggle with severe polysymptomatology and have high rates of hospitalization.

Our sample’s demographics and treatment modalities are also consistent with other research on DD patients. Similar to the demographics of DD patients found in other surveys (Putnam et al., 1986; Putnam & Loewenstein, 1993), this patient cohort was predominantly female, Caucasian, well educated, and middle-aged. The therapists in this study rated individual psychotherapy as the most effective modality for treating DD, followed by (or concurrent with) psychotropic medications (especially antidepressants and anxiolytics) and expressive therapies. These findings are consistent with efficacy ratings found in the only other survey of therapist practices with DD patients (Putnam & Loewenstein, 1993). On average, these therapists were quite experienced with almost 22 years experience treating general patients and 12.8 years treating dissociative patients. Due to our means of recruiting therapists, most of them were very well trained in treating dissociative patients, such that 87% reported having specialized training in treating DD as a student, resident, intern, or postdoctoral fellow. Furthermore, more than a quarter (26.8%) had completed one of the ISSTD’s specialized DD therapy training programs.

The second finding from this study is that, despite severe poly symptomatology and long-term mental health difficulties, in this sample, there are consistent declines in symptomatology and improvements in functioning in the ex-

pected direction from stages one to five. In some instances, the differences between stages 1 and 5 were not significant, likely due to power limitations (or possibly due to the entrenched nature and difficult course of some patients' symptoms), yet the effect sizes and odds ratios indicate consistency with the pattern of better functioning in later stages of treatment. The consistency of the findings indicates that the treatment for DD patients provided by these outpatient community therapists appears to be beneficial across domains of functioning according to both patient and therapist assessments. Patients in the later stages of treatment report lower levels of symptoms of dissociation, PTSD and distress, as well as fewer instances of self-harm and hospitalization compared to those in the first stage of treatment. According to patients, those in the last stage were also more likely to have worked at volunteer jobs and/or attended school than were patients in the first stage, indicating a better level of functioning. Therapist reports portray a similar pattern of better functioning across the stages of treatment. According to therapist reports, patients in the later stages had fewer instances of self-injurious behavior and suicide attempts and fewer recent hospitalizations compared to Stage 1 patients, also a major indication of improvement. Therapists indicated later stage patients also showed higher overall functioning (i.e., GAF), better social and work functioning, and greater capacity to manage affect, impulses, symptoms, dissociated self-states, and relationships (i.e., higher PITQ scores). Moreover, treatment delivered by this international sample of clinicians resulted in between-stage differences with many medium to large effect sizes. Although longitudinal analyses of treatment improvement are needed, these findings are consistent with the interpretation that these DD patients benefited from treatment provided by these clinicians.

The finding of fewer hospitalizations and suicide attempts merits additional attention and discussion. According to therapists, 38% of Stage 1 patients attempted suicide in the previous year, whereas no Stage 5 patient made attempts. Furthermore, 40% of Stage 1 patients required hospitalization in the prior year, whereas only 5% of Stage 5 patients needed such intensive and expensive treatment. Given that hospitalizations are the most objective measure of patient acuity and decompensation, the finding that DD patients require fewer hospital-

izations across the stages of treatment gives strong indication that DD treatment has a stabilizing effect on patients. This finding has important policy and research implications. Writers in the insurance industry have warned that DD patients have extremely high medical and mental health treatment costs, as well as elevated morbidity and mortality rates (Galbraith & Neubauer, 2000). Patients suffering from DID were found to have the highest psychiatric treatment costs among patients receiving Medicare in Massachusetts (van der Kolk, 2008). While our results indicate that treatment is lengthy, the data suggest that DD treatment may be associated with reduced rates of suicide attempts and hospitalizations over time, in addition to significant differences in a wide range of symptoms and adaptive functioning. Future longitudinal research needs to address the comparative costs of DD treatment to the potential cost savings in terms of reduced disability and social security payments, lost income, mental health and medical costs, hospitalizations, emergency room visits, and related costs of untreated or poorly DD, as well as hidden costs such as the potential for some DD patients to neglect or abuse their children (e.g., Loewenstein, 1994). Research suggests that cost savings can occur within a few years of DD diagnosis for many, if not most, patients (Fraser & Raine, 1992; Loewenstein, 1994; Ross & Dua, 1993). In addition, longitudinal research, including follow-up of this study, needs to assess whether patients in the early stages of treatment progress into the later stages, and when they do, if they achieve the levels of lower hospitalizations and symptoms observed in the latter stages of treatment with this cross-sectional sample.

The third finding from this study relies on comparisons between the effect sizes from this study and other treatment studies of chronic PTSD associated with childhood abuse. In the current study, the magnitude of the differences in the continuous variables between the stage 1 and stage 5 patients were primarily large with the exception of depression in the medium range. To the best of our knowledge, no published naturalistic studies of treatment of PTSD by outpatient community therapists exist. The magnitude of the current effect sizes compare favorably with four outpatient individual treatment studies of chronic PTSD in which at least a quarter of the sample reported having experi-

enced childhood abuse (Cloitre et al., 2002; Cohen & Hien, 2006; Cottraux et al., 2008; McDonagh et al., 2005). The effect sizes comparing Stage 1 versus Stage 4 and 5 patients on dissociation were in the medium range in this study ( $g = -0.62$  and  $-0.64$ , respectively), whereas it was in the small range in a RCT of chronic PTSD ( $g = -0.36$ ; McDonagh et al., 2005) and in an uncontrolled study of women with comorbid substance use disorders and complex PTSD ( $g = -0.24$ ; Cohen & Hien, 2006), although Cloitre et al.'s (2002) effect size for dissociation in a RCT was in the large range although DD were excluded from that study ( $g = -1.64$ ). This study's large effect between Stage 1 and 5 ( $g = -1.00$ ) for self-reported PTSD symptoms is consistent with the large effects of two RCTs for women with childhood abuse ( $g = -1.76$ ; Cloitre et al., 2002;  $g = -1.26$ ; Cottraux et al., 2008). The Stage 1 versus 5 effect size for depression in this study approached medium magnitude ( $g = -0.42$ ), whereas the effect sizes for depression in similar samples have varied with larger effect sizes found in studies using RCT design and a greater number of exclusion criteria ( $g = -1.83$ ; Cloitre et al., 2002;  $g = -0.54$ ; Cottraux et al., 2008;  $g = -0.76$ ; McDonagh et al., 2005), and a small effect found in a study that did not exclude patients with substance abuse or dissociative comorbidity ( $g = -0.26$ ; Cohen & Hien, 2006). The magnitude of the outcomes in this study is also comparable with those found in a naturalistic study of patients with major depression comorbid with BPD treated in the community ( $g = 0.41$  for rates of remission of major depression in Grilo et al., 2005). This similarity in effect sizes is important because many of the current sample's participants would have been excluded from the comparison studies due to their severe symptomatology, suicidality, high rates of psychiatric drug usage, and high comorbidity. Given that effect sizes of RCTs are generally larger than those achieved in community treatment studies (e.g., Westen et al., 2004), it is encouraging that this study found results of generally similar magnitude to RCTs of individual therapy for chronic PTSD with child abuse survivors and for depression comorbid with BPD, although the DD treatment was quite lengthy.

In contrast to the current study that found dissociation was lower in the later stage of DD

treatment, two of the short-term studies for chronic PTSD related to childhood abuse did not find statistically significant improvement in dissociation (Cohen & Hien, 2006; McDonagh et al., 2005). Three studies with DD patients have not found changes in dissociation during short-term inpatient treatment even when the treatment focused on dissociation (Choe & Kluff, 1995; Ross, & Ellason, 1997, 2001). This study's stage five patient group had been in DD treatment for an average of 8.4 years (95%  $CI = 6.7-10.1$ ). We interpret these findings to mean that patients with high levels of dissociation may require extended treatment to reduce dissociative symptoms and that, as per the ISSTD Guidelines for Treating DID in adults, treatment that is directed specifically at identifying and reducing the use of dissociation appears to be effective (ISSD, 2005). Future studies should compare treatments of DD patients that focus specifically on reducing dissociation to those that do not, as well as longitudinal studies that investigate the length of time required for the majority of DD patients to decrease their habitual use of dissociation.

Despite the suggestion that long-term treatment may be needed to reduce levels of dissociation among severely dissociative patients, our analyses controlling for age did not indicate that maturational processes caused the reduction in dissociative symptoms. Furthermore, maturation did not cause any of the significant differences in outcome across the stages of treatment with the exception of self-harm. For this single variable, we found that maturation significantly contributed to reductions in self-harm observed over the stages of treatment.

Given the focus on treating dissociation in this study, it is not surprising that the items on the DES-II showed greater specificity than those on the PCL and SCL-90-R in detecting differences between patients across the stages. The DES-II items that were different between the groups with an effect size of .50 or greater came from the subscales of amnesia, depersonalization/derealization, and absorption. The items that were different on the PCL and SCL-90-R related to hyperarousal and flashbacks, suggesting patients in advanced stages of treatment experienced fewer of these symptoms.

The fourth finding is that, despite the findings of lower levels of symptoms and higher levels of adaptive functioning, the DD patients in the

last stage of treatment still had some symptoms in ranges higher than typical clinical cutoffs, thus indicating high levels of clinically elevated symptoms, despite having been in treatment for years. The stage five patients were above cutoffs on dissociation, PTSD, and general distress, indicating that their problems, while significantly improved, remain at clinically significant levels. While on the one hand this is not surprising because the Stage 5 patients are still in treatment, it is sobering to recognize how long it takes to treat the damaging and pervasive sequelae of chronic childhood maltreatment and trauma. This lengthy treatment may consume significant resources to achieve an incomplete cure in some cases, a conclusion that has been drawn by DD experts (e.g., Putnam & Loewenstein, 2000), as well as experts in the treatment of complex traumatic stress disorders (Courtois & Ford, 2009). Kessler (2000) drew a similar conclusion when he determined that the average person with PTSD endures active symptoms for more than 20 years. Kessler warned that the individual and society pay a high price for PTSD, noting that “. . . the most extreme adverse effects of traumatic events are associated with complex ongoing traumas that occur in childhood . . .” (pp. 9). Our results highlight the social costs and the cost to the individual by demonstrating that lengthy treatment is needed to create moderate to large effect sizes in outcome. Similar results have emerged from rigorous longitudinal studies of BPD patients that have found, despite significant improvements that are maintained for many years, their functioning typically remains moderately impaired (e.g., Bateman & Fonagy, 2008). Although specialized treatment for DD appears to be beneficial, it does not quickly or completely ameliorate the suffering of individuals who have already suffered through years of reported childhood abuse and aftereffects and a long course of treatment.

There are a number of design issues that limit the interpretation and generalizability of the results. The recruitment method used here likely resulted in a group of nonrepresentative motivated, well-trained, and experienced DD outpatient therapists, as well as a nonrepresentative group of DD patients, selected by their therapists for this study, who agreed to participate and who may be healthier and/or more motivated than typical DD patients. The absence of

a control group and the reliance on cross-sectional data additionally limit the interpretation of change as it is possible that our patients may have made these positive changes over time without treatment. Furthermore, we cannot assume that the patients in the early stages of treatment eventually will show lower levels of symptoms similar to the findings regarding late stage patients in this study, nor can we assume that treatment was solely responsible for these differences across the stages.

Despite these limitations, our promising results are still quite informative about DD patients because we used so few exclusion criteria compared to other treatment studies and our patients were, despite possible selection bias, highly symptomatic. A randomized treatment study of DD patients compared to a DD control group would constitute a more stringent test of the effectiveness of treatment, although finding an ethical way to create a control group of such severely symptomatic patients presents a considerable ethical and research design challenge, particularly in light of the accumulating research that documents that treatment for DD patients is effective, albeit long. A study comparing specific treatment modalities of treatment, such as individual alone versus individual plus group (with or without use of psychotropic medications), and utilizing specific interventions, such as cognitive-behavioral versus relationally oriented would also be beneficial, as would be comparing the treatment outcomes of therapists with varying types of training (e.g., those who have completed the ISSTD training program to those who have not completed it). Future research should use standardized diagnostic interviews, a random selection of patients from within therapists' caseloads, and assessments about treatment approach, specific modalities, and interventions used by the therapist. A longer period of observation and following patients from the beginning of treatment would help establish the long-term efficacy of DD treatment. The longitudinal results from this cohort of patients are currently being gathered in an attempt to clarify whether the early stage patients are able to gradually move to the later stages of treatment and whether they achieve the stabilization in safety and hospitalization observed in the current Stage 5 patients.

This observational study, which compared an international sample of DD patients across the

stages of treatment, strongly suggests that the type of treatment utilized by these clinicians for DD patients is associated with considerably better functioning and lower symptoms over the stages of treatment in a broad range of domains as assessed by both patients and therapists. The present findings are inconsistent with the claims that DD treatment is harmful (Piper & Merskey, 2004; Lilienfeld & Lambert, 2007). Furthermore, treatment of DD is associated with improvements in symptoms at about the same magnitude as for chronic PTSD related to childhood trauma and depression comorbid with BPD, although DD treatment appears to take years to achieve similar outcomes. Given the prevalence, severity, chronicity, and high costs associated with DD, and that treatment is associated with significant improvement among these patients, further treatment outcome research on DD is indicated.

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