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A Longitudinal Naturalistic Study of Patients With Dissociative Disorders Treated by Community Clinicians

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Severe dissociative disorders (DD) are associated with high levels of impairment, treatment utilization, and treatment costs, yet relatively little systematic research has focused on treatment for these challenging patients. The goal of this naturalistic observational 30-month follow-up study of an international sample of patients with dissociative disorders was to determine if treatment provided by community providers was associated with improvements in symptoms and adaptive functioning. The patients were diagnosed with dissociative identity disorder (DID) and dissociative disorder not otherwise specified (DDNOS). The patients and their therapists completed surveys at study entry and at 6-, 18-, and 30-month follow-up. At the 30-month follow-up, 119 of the original 226 patients completed the surveys. According to patients' reports, they showed decreased levels of dissociation, posttraumatic stress disorder symptoms, general distress, drug use, physical pain, and depression over the course of treatment. As treatment progressed, patients reported increased socializing, attending school or volunteering, and feeling good. According to therapists' reports, patients engaged in less self-injurious behavior and had fewer hospitalizations as well as increased global assessment of functioning scores (American Psychiatric Association, 2000) and adaptive capacities over time. These results suggest that treatment provided by therapists who have training in treating DID/DDNOS appears to be beneficial across a number of clinical domains. Additional research into the treatment of DD is warranted.

Keywords:dissociation, dissociative identity disorder, trauma, PTSD, treatment

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Dissociative disorders (DD) are common among psychiatric samples in North America as well as Western and Eastern Europe with ranges between 1 to 20.7% among inpatients (e.g., Friedl & Draijer, 2000; Gast, Rodewald, Nickel, & Emrich, 2001; (Rifkin,

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Ghisalbert, Dimatou, Jin, & Sethi, 1998; Ross, Anderson, Fleisher, & Norton, 1991; Tutkun et al., 1998) and 12 to 29% among outpatients (e.g., Foote, Smolin, Kaplan, Legatt, & Lipschitz, 2006; Şar et al., 2003; Şar, Tutkun, Alyanak, Bakim, & Baral,

2005). Therapists invited one patient to participate in the study from their caseload of those diagnosed with either DID or dissociative disorder not otherwise specified (DDNOS).

Therapists completed password-protected, web-based surveys. The methodology and therapist survey were adapted from a naturalistic community study of borderline personality disorder (BPD; Zittel Conklin & Westen, 2005). To protect patient confidentiality and to recruit a wider range of participants—including those who did not have access to the Internet—patient measures were sent via postal mail to therapists' work addresses. Therapists gave packets of measures to their patients, who completed them outside of treatment and without the presence of the therapist. Patients returned the packets directly by mail to the researchers. All surveys were identified by code numbers to match pairs of patient and therapist surveys. The study received institutional review board approval and all participants (therapists and patients) provided informed consent prior to participation. Neither therapists nor patients were compensated for participation.

Follow-up rates/retention. Sample sizes for therapist interviews are as follows: Time 1, n 295; Time 2, n 189, (189/295 64% follow-up); Time 3, n 174 (59%); and Time 4, n 135 (46%). Sample sizes for patients at each follow-up were: Time 1, n 226; Time 2, n 171 (76%); Time 3, n 131 (58%); and Time 4, n 111 (49%). Two patients completed the Time 2 follow-up only and four completed the Time 4 only. None of these patients were included in the follow-up rate calculation (n 173 and n 115 total interviews at Time 2 and 4, respectively). Data were missing due to either attrition or patient termination. Length of time to the first follow-up averaged 205.9 days (SD 44.8), 584.5 (SD 64.0) to the second follow-up, and 936.9 (SD 59.8) to the final follow-up.

Therapists and/or patients who completed at least two protocols,

chiatric symptoms. Items are rated on a 5-point scale of symptom distress ranging from 0 (not at all) to 4 (extremely). The Global Severity Index (GSI), the average score for all 90 items, patients with DD typically score higher on the SCL–90–R than other psychiatric outpatients and inpatients (Ellason & Ross, 2004; Steinberg, Barry, Sholomskas, & Hall, 2005). In addition to the GSI, the depression subscale was used in this study. Across the four follow-ups, Cronbach's alpha coefficients in the current study ranged from .96 to .98 for the GSI and from .88 to .93 for the depression subscale.

Data analysis. Descriptive statistics reported for continuous variables included the mean, standard deviation, minimum, and maximum. Percentages are reported for categorical variables. Statistical analyses were conducted using the statistical programming environment R (R Development Core Team, 2011) and random effects models were implemented using lme4 package (Bates, Maechler, & Bolker, 2011) within R. In addition to the intercept, time in months since baseline interview (Month), and the square of time ($Month^2$) were assessed as both fixed and random effects. In no case was the random effect of time squared a plausible effect. If the random linear effect of time did not appreciably improve model fit, it was dropped. All models thus have random intercepts and a few have random linear effects of time, but none have random curvilinear time effects.

Correlates of missingness. Missing data were accommodated by using full information maximum likelihood (FIML) supplemented with auxiliary variables (Collins, Schafer & Ham, 2001; Enders, 2005). Auxiliary variables are correlates of missingness status. Cases that are missing observations in later follow-ups have systematically different values for auxiliary variables than cases that are observed at each time point. By including auxiliary variables in the models for the outcomes, the process of missingness is incorporated, potentially reducing bias in the estimation due to exclusion of cases lost to follow-up. The search for auxiliary variables was conducted with data at each follow-up point. Background characteristics of patients and therapists were correlated with missingness at all three follow-up points. Although several variables were correlated with missingness at each time point, only number of previous patients treated and graduation from the Dissociative Disorders training program were significantly associated with missingness at all three follow-ups with both therapist and patient missing data status (rs (|0.11| – |0.22|). Cases with observed data tended to have therapists who had treated more patients and who had graduated from the ISSTD's DDPTP, a therapist training program, compared to cases with no follow-up data. The consistency of these associations and representation in both categorical and continuous domains suggested these as good candidates for auxiliary variables in the FIML maximum likelihood method approach to missing data. Auxiliary variables "number of patients treated" and "DDPTP program graduate" were subsequently included as covariates in all longitudinal models.

Results

Patient-Rated Symptoms and Dysfunctional Behaviors

Patient reports of dissociative symptoms, general psychiatric symptoms, depression, and PTSD symptoms decreased significantly over the course of the study (see Table 1). Except for DES, the decreases attenuated over time as indicated by statistically significant positive quadratic effects. For each of the symptom outcomes, variance components for intercepts were large. Intraclass correlations (ICC) ranged from .78 (DES) to .65 (SCL–Depression). ICCs for month slope coefficients were much smaller, ranging from .0005 (SCL–90) to .0003 (DES).

Patient self-report of days spent more than 10 hr or more in bed did not significantly change, whereas patient report of any pain significantly decreased over time.[3] This decrease became less sharp over time as indicated by a significant and positive quadratic effect of time. Patients reported significant decreases over time in 30 day rates of self-harm, doing something dangerous, and doing something very impulsive. These correspond to decreases of 4%, 5%, and 6% in the odds of engaging in self destructive behavior for self-harm, dangerous activity, and impulsive activity, respectively. Patient report of suicide attempts past 30 days did not significantly decrease. None of the models for self-destructive behaviors that contained quadratic effects fit better than models without, so only models with linear terms are reported for these behaviors. Self-reported alcohol use in the past 30 days did not decrease over time, but using prescription and street drugs to become intoxicated in the past 30 days decreased by 44% in the odds of use by month.

Therapist Report of Patient Destructive and Suicidal Behaviors

Similar to patient reports, the number of therapist-reported patient self-harm episodes decreased significantly over time (5% decrease in odds of self-harm report by month).[4] Unlike patient reports, therapist report of suicide attempts did significantly decrease with time; the odds of suicide attempts, as reported by therapists, decreased by 6% each month.

Hospital Use

Patients reported no change in probability of patient hospitalization or use of psychiatric day programs. In contrast, therapists reported a significant decrease in probability of hospitalization; the odds of hospitalization decreased by 31% each month.

Adaptive Functioning

Patient report. The odds of volunteering/going to school, feeling good feelings, and participating in social activities increased each month 3%, 10%, and 5%, respectively. However,

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Table 1

intercepts were much larger than those for the random effect of month.

Therapist report of transition across stages of therapy at adjacent follow-ups (Time 1 to Time 2, Time 2 to Time 3, and Time 3 to Time 4) are found in Supplemental Table 5. An ordinal regression with stage of treatment as the outcome and time in months as a predictor revealed that there was statistically significant change in stage over time (B .023 SE .006, Z 4.09; p .001), such that the odds of progressing to a later stage increased by 2% per month.

Discussion

We found that treatment for the patients with DD in this international prospective, naturalistic study was associated with improvements in symptoms and adaptive functioning, as well as a decreased need for hospitalization at follow-ups at 6, 18, and 30 months. Patients with DID/DDNOS showed declines in dissociation, depression, general distress, using drugs to get high, engaging in dangerous behavior, physical pain, and posttraumatic symptomatology over the course of 30 months of treatment. Furthermore, patients reported more frequent involvement in volunteer jobs and/or attending school, socializing with friends, and feeling good as treatment progressed. These improvements were generally consistent with the therapists' reports. Therapists rated the patients as improving in their functioning (i.e., GAF scores) and increasing adaptive capacities (i.e., PITQ scores) over 30 months of treatment. Therapists indicated that patients engaged in less self-

injurious behavior, fewer suicide attempts, and required less frequent hospitalizations at the follow-ups compared to baseline. Furthermore, there was significant change from baseline to 30 month follow-up in terms of the number of patients who progressed to higher stages of treatment, as reported by the therapists, compared to the number who regressed to a lower stage of treatment. The differences in reports of suicide attempts and hospitalizations may have been due to the therapists and patients completing their surveys independently so they may have been referring to different months in treatment.

Whereas patients in this study show numerous important changes in symptoms and functioning over time, symptom relief was by no means complete. For example, the 30-month follow-up mean dissociation score, although lower than that at baseline (

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