

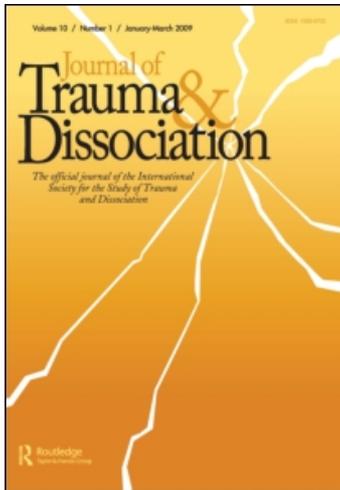
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Predicting Stabilizing Treatment Outcomes for Complex Posttraumatic Stress Disorder and Dissociative Identity Disorder: An Expertise-Based Prognostic Model

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Predicting Stabilizing Treatment Outcomes for Complex Posttraumatic Stress Disorder and Dissociative Identity Disorder: An Expertise-Based Prognostic Model

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The purpose of this study was to develop an expertise-based prognostic model for the treatment of complex posttraumatic stress disorder (PTSD) and dissociative identity disorder (DID). We developed a survey in 2 rounds: In the first round we surveyed 42 experienced therapists (22 DID and 20 complex PTSD therapists), and in the second round we surveyed a subset of 22 of the 42 therapists (13 DID and 9 complex PTSD therapists). First, we drew

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on therapists' knowledge of prognostic factors for stabilization-oriented treatment of complex PTSD and DID. Second, therapists prioritized a list of prognostic factors by estimating the size of each variable's prognostic effect; we clustered these factors according to content and named the clusters. Next, concept mapping methodology and statistical analyses (including principal components analyses) were used to transform individual judgments into weighted group judgments for clusters of items. A prognostic model, based on consensually determined estimates of effect sizes, of 8 clusters containing 51 factors for both complex PTSD and DID was formed. It includes the clusters lack of motivation, lack of healthy relationships, lack of healthy therapeutic relationships, lack of other internal and external resources, serious Axis I comorbidity, serious Axis II comorbidity, poor attachment, and self-destruction. In addition, a set of 5 DID-specific items was constructed. The model is supportive of the current phase-oriented treatment model, emphasizing the strengthening of the therapeutic relationship and the patient's resources in the initial stabilization phase. Further research is needed to test the model's statistical and clinical validity.

KEYWORDS *prognosis, DID, complex PTSD, DESNOS, stabilizing treatment, stabilization phase*

Prospective longitudinal and retrospective studies have demonstrated that chronic childhood abuse and neglect may have pervasive effects on adult functioning (e.g., Anda et al., 2006; MacMillan et al., 2001; Putnam, 2003; Springer, Sheridan, Kuo, & Carnes, 2007; Teicher, Andersen, Polcari, Anderson, & Navalta, 2002). Childhood abuse and neglect has been found to be associated with borderline personality disorder (Herman, Perry, & Van der Kolk, 1989; Ogata et al., 1990); somatization disorder (Saxe et al., 1994); eating disorders (Herzog, Staley, Carmody, Robbins, & Van der Kolk, 1993); sexual disorders (Putnam, 2003); *Diagnostic and Statistical Manual of Mental Disorders* (4th ed. [DSM-IV]) Axis I diagnoses of dissociative disorders (Boon & Draijer, 1993; Ross et al., 1991; Ross, Norton, & Wozney, 1989); posttraumatic stress disorder (PTSD; Bremner, Southwick, Johnson, Yehuda, & Charney, 1993; Widom, 1999); substance abuse disorders (Putnam, 2003); and a range of persistent symptoms more complicated than those of PTSD, often called complex PTSD (Herman, 1992) or disorders of extreme stress not otherwise specified (DESNOS; Pelcovitz et al., 1997; Roth, Newman, Pelcovitz, Van der Kolk, & Mandel, 1997). In this article, we refer to the DESNOS symptom clusters as the diagnosis of complex

PTSD; however, we note that complex PTSD is subsumed under “associated descriptive features and mental disorders” of PTSD in the *DSM-IV* classification (American Psychiatric Association, 1994, p. 425).

The current clinical standard of care for complex trauma-related disorders is phase-oriented treatment (e.g., Brown, Schefflin, & Hammond, 1998; Chu, 1998; Courtois, 1999; Herman, 1992; Van der Hart, Nijenhuis, & Steele, 2006). In most of these models, there are typically three phases of treatment involving (a) stabilization and symptom reduction, (b) integration of traumatic memories, and (c) reintegration of the personality and rehabilitation. This treatment model does not imply that the phases will occur strictly sequentially. Rather, Phase 2 treatment will periodically alternate with Phase 1 treatment, and later in the course of therapy Phase 2 and Phase 1 work will alternate with Phase 3 treatment (Courtois, 1999; Van der Hart, Brown, & Van der Kolk, 1989). Not all patients are able to reach Phase 2 (Boon, 1997). In contrast to the broad acceptance of this model in clinical practice, very little empirical evidence supports the validity of the phase-oriented model (Brand, Classen, Zaveri, & McNary, 2009; Cloitre, Koenen, Cohen, & Han, 2002). Much more empirical validation of the phase model is needed.

PROGNOSIS OF TREATMENT FOR CHRONIC CHILDHOOD ABUSE AND NEGLECT

Prognostic models have become increasingly important in clinical practice and research for assessing the potential outcomes of a treatment intervention. In clinical practice, prognostic models are most often used for the investigation of whether the response to treatment will be affected by the characteristics of the patient and/or the disorder (e.g., severity). In some instances, the relationship between caregivers and patients is also part of the model. Most often, a prognostic model enables a reliable classification of patients into two or more groups of different prognoses and allows for an estimation of an individual patient’s prognosis (Altman & Royston, 2000). Prognostic variables, by definition, modify treatment effects and therefore should be known, measured, analyzed, and subsequently corrected for in randomized and nonrandomized outcome studies. The integration of a valid prognostic model into outcome studies offers more precision in the statistical analysis of results. Knowledge of prognostic variables also offers the opportunity for prestratification of patients in outcome studies (McKee et al., 1999).

In the past two decades several authors have described different treatment prognoses in adult patients who experienced chronic childhood abuse and neglect. For example, based on their clinical experiences, Horevitz and Loewenstein (1994) and Kluff (1997) made distinctions between three

subgroups of dissociative identity disorder (DID) patients with associated prognoses. The first subgroup consisted of highly functioning patients with a capacity to judge and handle situations adequately, reasonable to good social and vocational functioning, and minimal self-destructive behavior. They responded well to treatment, even if they had comorbid psychiatric problems. The second subgroup was characterized by affect dysregulation, problems with self-destructiveness, and impulsive behavior. Comorbid personality disorders were common, particularly borderline and avoidant personality disorders but also affective disorders, eating disorders, and substance abuse. Treatment of these patients was more difficult, prolonged, and marked by crises and clinical admissions. An extensive and long-term Phase 1 treatment was generally required before Phase 2 treatment could be considered. The third subgroup had the worst prognosis. The patients in this subgroup tended to have either an excessive dependence on the therapist or an ongoing detachment from the therapist. Many had sado-masochistic relationships and often showed severe, chronic, and almost untreatable self-destructive behavior. They often showed features of psychotic disorders, untreatable affective disorders, and severe personality disorders. As a rule, treatment for this subgroup was limited to Phase 1 treatment (Boon & Van der Hart, 1996). Boon (1997) developed a checklist for clinical practice in order to be able to decide whether DID patients would be able to make the transition from Phase 1 to Phase 2 treatment. The checklist encompasses the following domains: diagnostic assessment, psychiatric history and prior treatment, trauma history, ongoing abusive relationships, acceptance of diagnosis, current functioning, life cycle phase and interaction with current functioning, other problem areas interacting with current functioning (e.g., financial problems, general health problems, addiction), acceptance of treatment frame and boundaries, extent of cooperation with the therapist, specific problem areas in therapeutic relationship, and crises during treatment. Putnam (1990) estimated that one third of DID patients were not treatable. Some of the reasons cited by Putnam for this negative prognosis included the extent, length, and intensity of the traumatization; a propensity toward reenactment in adult life; the coexistence of medical and psychiatric conditions; a tendency toward dysfunctional secondary gain; an incapacity to attend to stimuli without cognitive or affective distortion; compromised intellectual capacity; and a lack of motivation to overcome past traumatic experiences. Kluff (1994) developed the Center for the Study of Dissociative States Dimensions of Therapeutic Movement Instrument in order to study the treatment progress of DID patients. This instrument has 12 dimensions: (a) therapeutic alliance, (b) integration, (c) capacity for adaptive change, (d) management of life stressors, (e) alters' responsibility for self-management, (f) restraint from self-endangerment, (g) quality of interpersonal relationships, (h) need for medication, (i) need for hospital care, (j) resolution of transference

phenomena, (k) inter-session contacts, and (l) subjective well-being. The results of his study, in which the scores of 31 DID patients on the 12 dimensions were monitored for 1 year, suggested that patients “can be distributed into several subgroups by virtue of the trajectories of their treatment, and that reasonable expectations for progress vary widely according to the trajectory subgroup to which a given patient proves to belong” (Kluft, 1994, p. 63).

Based on a review of the peer-reviewed literature on PTSD, Simon (1999) described several risk factors for chronicity, including the severity of the traumatic stressor, the number of traumatic stressors, the severity and duration of PTSD symptoms, preexisting PTSD, any lifetime anxiety or affective disorder, concurrent life stressors, a family history of anxiety or anti-social behavior, and the absence of support. In outcome studies on PTSD treatment, patients who did not respond well to treatment could be characterized by a specific cluster of symptoms, including (a) high initial levels of anger (Foa, Riggs, Massie, & Yarczower, 1995); (b) memories that reflected “mental defeat” or the absence of mental planning while reliving the trauma (Ehlers et al., 1998); (c) feelings of alienation or a sense of permanent damage from the trauma (Ehlers et al., 1998); and (d) the inability to develop a nonfragmented, coherent narrative in recounting traumatic experiences while reliving the trauma in treatment (Foa, Cashman, Jaycox, & Perry, 1997). Studying the treatment prognosis for war veterans with PTSD, Ford and Kidd (1998) found that DESNOS symptom clusters negatively predicted treatment outcome and quality-of-life measures over and above ethnicity, war zone trauma exposure severity, initial level of symptomatic severity or quality of life, PTSD, major depression, personality disorder, and early childhood trauma history.

Although several prognostic factors have been identified, to date there is no validated, coherent prognostic model to predict the outcome of each treatment phase. A prognostic model can be built after a process of identifying and subsequently defining the essential variables based on the literature and/or clinical expert knowledge. Then the model must be statistically and clinically validated. A statistically validated model must pass all appropriate statistical checks, including goodness of fit on the original data set (is the model the best that can be found?) and unbiased predictions on a new data set. A clinically valid model should perform satisfactorily on a new data set; the model’s predictions must be sufficiently accurate for clinical purposes. In addition, clinical purposes typically require a predictive model that is based on a small number of variables (Altman & Royston, 2000).

In this study, we initiated the development of a prognostic model designed to predict the outcomes for a Phase 1 stabilization-oriented treatment for complex PTSD and DID. In the absence of empirical prognostic studies in this field, we built an expertise-based model by systematically

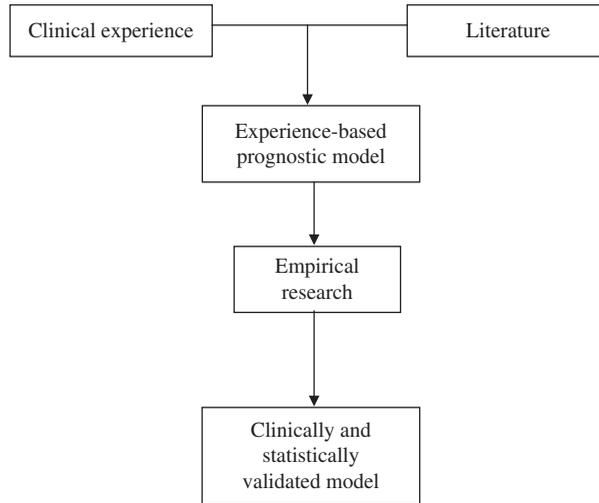


FIGURE 1 The validation process for prognostic models.

researching the knowledge of experienced therapists on this topic (see Figure 1).

METHODS

Participants: The Experienced Therapists

A total of 110 therapists worldwide who were experienced in the treatment of DID and complex PTSD were approached for participation in the study. The first group was selected by the research team¹ on the basis of, according to the team, their generally known expertise on DID and/or complex PTSD. Other therapists were selected based on recommendations from the responding therapists. A total of 23 therapists experienced in the treatment of DID (12 men and 11 women) and 21 therapists experienced in the treatment of complex PTSD (4 men and 17 women) responded. Therapists were trained in psychology (25), psychiatry (16), psychotherapy (2), and clinical social work (1). Therapists worked in the United States (25), The Netherlands (9), Canada (4), the United Kingdom (2), Australia (1), Germany (1), Israel (1), and New Zealand (1). All therapists had been engaged in the treatment of DID or complex PTSD for more than 5 years (highest answer category). Of the therapists, 95% (DID group) and 90% (complex PTSD group) were experienced in individual psychotherapeutic treatment, 50% (DID group) and 55% (complex PTSD group) were experienced in group treatment, and 100% (DID group) and 95% (complex PTSD group) were treating patients in an outpatient treatment setting. Moreover, 50% (DID group) and 35% (complex PTSD group) were also

treating patients in an inpatient setting. The average number of complex trauma patients treated was more than 20 for both groups of therapists. Two recruited therapists were excluded because they completed their questionnaires incorrectly. Thus, the analyses were performed on 22 (DID group) and 20 (complex PTSD group) questionnaires.

Procedure

The procedure was based on concept mapping methodology, a methodology that is used to map the main elements of a complex concept relatively rapidly and easily based on the domain-specific expert knowledge of participants in two rounds. In the first round, participants are asked to describe, according to their own experience, the most important aspects of the chosen concept. In the second round, the total list of aspects described by all participants is presented and each participant is asked to prioritize each aspect (range = *not important* to *most important* for the concept) and to cluster aspects that, according to their own experience, belong together content-wise. In order to obtain a concept that is based on all judgments of all participants, the results of the second round are analyzed by means of specific statistical procedures, for example using the Ariadne program for concept mapping (Nederlands Centrum Geestelijke Volksgezondheid, 1995). Concept map analyses include principal components analysis (PCA), hierarchical cluster analysis, and calculation of mean ratings. PCA creates a concept map on which the aspects can be plotted. First the statistical program creates a matrix for each participant, indicating whether a given pair of aspects was grouped together during the structuring (1 = yes, 0 = no). Next the statistical program transforms all of these individual matrices into a group matrix, which is then used as input for the PCA. The first two dimensions of the PCA solution are displayed as the concept map. The more frequently aspects are grouped together, the closer they are plotted on the map. Hierarchical cluster analysis is then used to cluster the aspects, using the coordinates of the aspects as input. In concept mapping, it is common to start with a 50-cluster solution and then keep clustering until the clusters no longer make sense conceptually. The last meaningful clustering is then the final solution (Trochim, 1989; see Figure 2 for an example). Finally, mean ratings are calculated for both the aspects and the clusters. The final solution and the mean ratings are then discussed with the research group, and the clusters are labeled.

In the first round of this study, experienced therapists were asked to complete a questionnaire that included two parts. In the first part, they were asked to provide a list of 5 to 10 aspects of patients that, according to their own clinical judgment, would best predict negative treatment outcomes in Phase 1 treatment (stabilization and symptom reduction). In the second part, the participants were given a list of several categories of possible prognostic

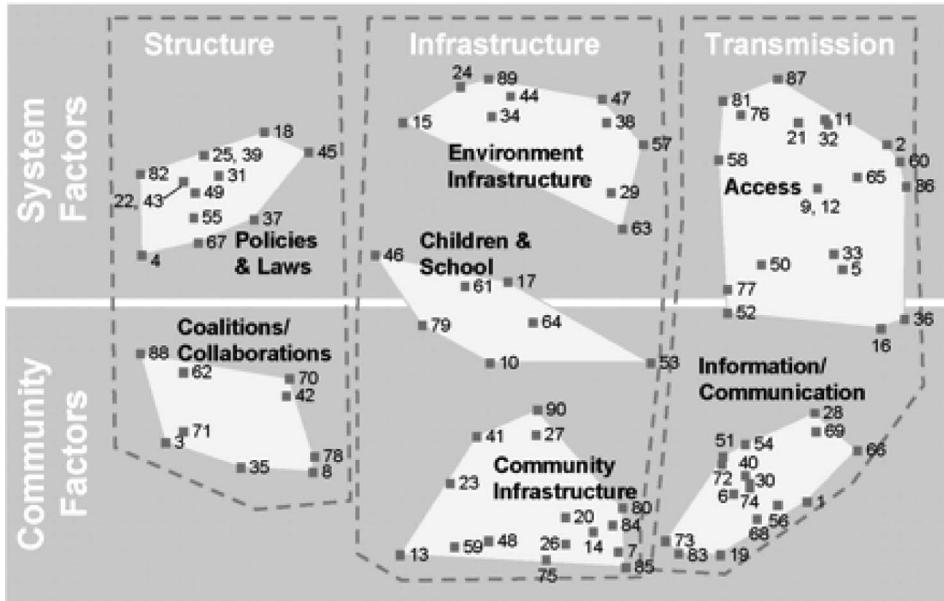


FIGURE 2 A point-cluster map showing 90 ideas arranged by multidimensional scaling and grouped into seven nonoverlapping partitions by hierarchical cluster analysis. This map was used to help in statewide planning for the public health spending of tobacco settlement money in Hawaii and provides a framework for subsequent follow-up evaluation (Trochim & Kane, 2005).

variables (based on the first survey conducted with experienced therapists and the literature chosen by the research team). Participants were asked to rate how well each presumed prognostic variable would predict treatment outcomes in the stabilization phase. Variables were rated in terms of the size of the prognostic effect: 1 = *no effect*, 2 = *little effect*, 3 = *medium effect*, 4 = *large effect*, and 5 = *very large effect*.

The variables were grouped into five categories: (a) comorbid Axis I + II *DSM-IV* diagnoses, (b) psychological variables (e.g., hostility, little motivation to lead a normal life; 32 items covered DID, 34 items covered complex PTSD), (c) patients' history of adversities (e.g., history of abuse at an early age, frequent admissions to psychiatric hospitals; 4 items), (d) features of patients' current lives (e.g., ongoing sexual abuse, little social support from their partner; 9 items), and (e) features of patients' therapy systems and therapeutic processes (e.g., repetitive use of mental health institutions, inability or diminished ability to learn from crises; 14 items). In addition, there was one category for DID-specific symptoms (e.g., frequent dysfunctional switching, little cooperation between the therapist and perpetrator alters; 9 items, only for DID therapists). Participants were also invited to add new variables to each category that in their view

constituted major predictors of treatment outcomes in the first treatment phase.

In the second round, another questionnaire was constructed on the basis of the first-round results; it included 80 items (DID) and 63 items (complex PTSD). A total of 13 DID therapists and 9 complex PTSD therapists who had participated in the first round also completed the second-round questionnaire. This number of respondents allowed for further data analysis as it surpassed the minimum of eight participants that was methodologically required to have sufficient statistical power to build an expertise-based concept (Nederlands Centrum Geestelijke Volksgezondheid [NCGV], 1995).

Participants were asked first to estimate the size of the prognostic effect for each variable that had been added to the list during the first round. Next they were invited to cluster the variables that, in their opinion, were related content-wise. Finally, they were asked to name the clusters.

Data Analyses

Data from the second-round survey were entered into the software program Ariadne (NcGV, 1995). The program processed the input from the prioritizing and clustering procedures and produced a model that featured the clusters or domains of items that, according to the participants, belonged together in terms of content. Per-item mean scores were calculated. We considered the most influential factors as those with mean scores greater than 3.5 (1 = *no effect*, 2 = *little effect*, 3 = *medium effect*, 4 = *large effect*, and 5 = *very large effect*; NcGV, 1995).

RESULTS

The first round of the concept mapping procedure resulted in two lists of prognostic variables: one list with 316 items (DID) and one with 419 items (complex PTSD). We used four methodological criteria—overlap with other items, ambiguity (i.e., an item has more than one meaning), singularity (i.e., an item is not a compound of more than one content), and concreteness (i.e., an item is specific, not vague or general)—and a minimum cutoff score of 3.5 to reduce the number of items to 80 for DID and 63 for complex PTSD. These items were presented to the participants in the second round.

The second round resulted in two prognostic models: one with eight clusters and 46 items (DID; see Table 1) and one with eight clusters and 38 items (complex PTSD; see Table 2). Five items were specific to DID because they were related to the presence of dissociative parts of the personality (see Table 1). A total of 28 items overlapped in the DID and the complex PTSD

TABLE 1 DID Clusters of Prognostic Factors

Cluster	Items
Cluster 1	Schizophrenia (4.58) Organic mental disorder (4.09) Psychotic disorder (4.08) Schizotypal or schizoid personality disorder (3.83) More than one severe Axis I disorder in addition to an Axis II disorder (3.77) Current addiction (substance abuse [alcohol and/or drugs], sexual addiction, addiction to crises, etc.) (3.69)
Cluster 2	Antisocial personality disorder (4.31) Paranoid personality disorder (4.31) Narcissistic personality disorder (3.77) Borderline personality disorder (3.62) Lack of empathy (for self and others) (3.54)
Cluster 3	Strong investment in secondary gain from having DID (4.15) Lack of motivation to lead a normal life (3.95) History of severe, chronic trauma, especially when ritualized and sadistic (3.85) Lack of development of coping skills (3.67) Lack of interpersonal skills (3.52)
Cluster 4	Amnesia for ongoing abuse (as victim and/or perpetrator) (4.38) Severe resistance against constructive communication among dissociative parts of the personality (4.08)* Severe inability to distinguish between past and present (3.92) Little or no social support in general (3.86) Lack of resources as precondition for therapy (e.g., financial, housing) (3.83) Little or no work, school, or other daily employment (3.81) Patient's current significant others resist patient's attempts to be more independent (3.65) Poorly functioning alters in daily life (3.65)* Lack of "psychological energy" due to advanced age, physical disease, stressful events, involvement with legal system, etc. (3.60) Extreme avoidance of trauma-related material (3.57) Current or recent traumatizing events (other than mentioned in Items 71 and 72) (3.55) Undue dominance of child alters in daily life (3.54)* Frequent dysfunctional switching (3.53)* Frequent uncontrollable reexperiencing of trauma (3.50)
Cluster 5	Current ongoing abusive relationships, including sexual and/or physical abuse (4.29) Current abuse, suicide, murder, or molestation of family member (4.09) Hindrances of therapy by therapist and/or (mental health care) staff (3.92) Prior treatment with abusive therapist(s) (3.75) High dependence on mental health care workers between therapy sessions (3.70)
Cluster 6	Severely impaired ability to build a therapeutic relationship (4.52) Poor "closeness of fit" between patient and therapist (4.35) Severely impaired ability to abide by treatment rules (4.10) Lack of responsibility for own share in the therapeutic process (4.05) Little cooperation between therapist and dissociative parts of the personality (4.05)* Inability/diminished ability to handle transference situations (3.71) Dishonesty (3.69)
Cluster 7	Strongly involved in self-destructiveness (3.54)
Cluster 8	Strongly involved in antisocial behavior (4.33) Severe attachment problems (4.17) History of no positive attachment experiences in general (3.77)

Notes: Prognostic scores are in parentheses (range = 0–5). Asterisks denote DID-specific features. DID = dissociative identity disorder.

TABLE 2 Complex PTSD Clusters of Prognostic Factors

Cluster	Items
Cluster 1	Lack of motivation to lead a normal life (4.50) Current addiction (substance abuse [alcohol and/or drugs], sexual addiction, addiction to crises, etc.) (4.30)
Cluster 2	Schizophrenia (4.00) Bipolar disorder (3.70) Schizotypal of schizoid personality disorder (3.70)
Cluster 3	More than one severe Axis I disorder in addition to an Axis II disorder (4.20) Antisocial personality disorder (4.20) Narcissistic personality disorder (4.10) Borderline personality disorder (3.80) Paranoid personality disorder (3.80)
Cluster 4	Current ongoing abusive relationships, including sexual and/or physical abuse (4.84) History of severe, chronic trauma, especially when ritualized and sadistic (4.30) Prior treatment with abusive therapist(s) (4.20) Lack of responsibility for own share in the therapeutic process (4.20) Hindrances of therapy by therapist and/or (mental health care) staff (4.10) Current abuse, suicide, murder, or molestation of a family member (4.10) Strong investment in secondary gain from having complex PTSD/DESNOS (4.00) Frequent crises (3.90) Dishonesty (3.70)
Cluster 5	Current of recent traumatic life event (other than in Items 52 and 53) (3.63) History of no positive attachment experiences in general (4.60) Severely impaired ability to build a therapeutic relationship (4.45) Strongly involved in antisocial relationships (including abusing others) (4.35) Lack of empathy (for self and others) (4.22) History of complaints and lawsuits against prior therapists (4.20) Inability to trust others (4.20) Severely impaired ability to abide by treatment rules (4.00)
Cluster 6	Strongly involved in self-destructiveness (4.30) Severe and persistent self-blame (3.67)
Cluster 7	Lack of resources as precondition for therapy (e.g., financial, housing) (3.80) Patient's current significant others resist patient's attempts to be more independent (3.74) Absence of development of personal resources (e.g., friends, career, or religious affiliation) (3.70) Little or no social support in general (3.70) Little or no work, school, or other daily employment (3.70) Lack of ego strength and ego resources (3.70) History of lack of basic resources (education, poverty, homelessness) (3.64) Lack of interpersonal skills (3.50)
Cluster 8	Severe cognitive disorganization or distortion (4.00)

Notes: Prognostic scores are in parentheses (range = 0–5). PTSD = posttraumatic stress disorder; DESNOS = disorders of extreme stress not otherwise specified.

prognostic models (see Table 3), including 61% (28/46) of the DID and 74% (28/38) of the complex PTSD factors. However, 28 other items were specific to either DID or complex PTSD, including 39% (18/46) of the DID and 26% (10/38) of the complex PTSD factors (see Table 4).

TABLE 3 Overlapping Factors of the DID and the Complex PTSD Prognostic Models

Item (<i>n</i> = 28)	Prognostic score (0–5)	
	DID	Complex PTSD
Schizophrenia	4.58	4.00
Severely impaired ability to build a therapeutic relationship	4.52	4.45
Antisocial personality disorder	4.31	4.20
Paranoid personality disorder	4.31	3.80
Current ongoing abusive relationships, including sexual and/or physical abuse	4.29	4.84
Strong investment in secondary gain from having DID/complex PTSD	4.15	4.00
Severely impaired ability to abide by treatment rules	4.10	4.00
Current abuse, suicide, murder, or molestation of family member	4.09	4.10
Lack of responsibility for own share in the therapeutic process	4.05	4.20
Lack of motivation to lead a normal life	3.95	4.10
Hindrance of therapy by therapist and/or (mental health care) staff	3.92	4.10
Little or no social support in general	3.86	3.70
History of severe, chronic trauma, especially when ritualized and sadistic	3.85	4.30
Lack of resources as precondition for therapy (e.g., financial, housing)	3.83	3.80
Schizotypal or schizoid personality disorder	3.83	3.70
Little or no work, school, or other daily employment	3.81	3.70
Narcissistic personality disorder	3.77	4.10
History of no positive attachment experience in general	3.77	4.60
More than one severe Axis I disorder in addition to an Axis II disorder	3.77	4.20
Prior treatment with abusive therapist(s)	3.75	4.20
Borderline personality disorder	3.62	3.80
Lack of empathy (for self and others)	3.54	4.22
Current addiction (substance abuse [alcohol and/or drugs], sexual addiction, addiction to crises, etc.)	3.69	4.30
Dishonesty	3.69	3.70
Patient's current significant others resist patient's attempts to be more independent	3.65	3.74
Current or recent traumatizing events	3.55	3.63
Strongly involved in self-destructiveness	3.54	4.30
Lack of interpersonal skills	3.52	3.50

Notes: DID = dissociative identity disorder; PTSD = posttraumatic stress disorder.

Finally, three considerations led us to construct an overall prognostic model for DID and complex PTSD. First, 23 factors that did not overlap for DID and PTSD (13 DID items [all items besides the 5 DID-specific items] and 10 complex PTSD items) in the initial models were found to overlap when a lower prognostic effect cutoff score was imposed (3.0 instead of 3.5). Second, initial experience-based prognostic models require clinical and statistical validation in which less relevant items (presumably those with

TABLE 4 Nonoverlapping Factors of the DID and the Complex PTSD Prognostic Models

DID (18 items)	Complex PTSD (10 items)
Amnesia for ongoing abuse (as victim and/or perpetrator) (4.38)	Strongly involved in antisocial relationships (including abusing others) (4.35)
Poor “closeness of fit” between patient and therapist (4.35)	History of complaints and lawsuits against prior therapists (4.20)
Strongly involved in antisocial behavior (4.33)	Inability to trust others (4.20)
Severe attachment problems (4.17)	Severe cognitive disorganization or distortion (4.00)
Organic mental disorder (4.09)	Frequent crises (3.90)
Psychotic disorder (4.08)	Bipolar disorder (3.70)
Severe resistance against constructive communication among dissociative parts of the personality (4.08)*	Absence of development of personal resources (e.g., friends, career, or religious affiliation) (3.70)
Little cooperation between therapist and dissociative parts of the personality (4.05)*	Lack of ego strength and ego resources (3.70)
Severe inability to distinguish between past and present (3.92)	Severe and persistent self-blame (3.67)
Inability/diminished ability to handle transference situations (3.71)	History of lack of basic resources (education, poverty, homelessness) (3.64)
High dependence on mental health care workers between therapy sessions (3.70)	
Lack of development of coping skills (3.67)	
Poorly functioning alters in daily life (3.65)*	
Lack of “psychological energy” due to advanced age, physical disease, stressful events, involvement with legal system, etc. (3.60)	
Extreme avoidance of trauma-related material (3.57)	
Undue dominance of child alters in daily life (3.54)*	
Frequent dysfunctional switching (3.53)*	
Frequent uncontrollable reexperiencing of trauma (3.50)	

Notes: Prognostic scores are in parentheses (range = 0–5). Asterisks denote DID-specific features. DID = dissociative identity disorder; PTSD = posttraumatic stress disorder.

lower prognostic scores) are eliminated. Third, it is advantageous to have an overall prognostic model for DID and complex PTSD: Using one prognostic model, one can compare data for the two diagnostic groups and assemble data in larger datasets during subsequent statistical and clinical validation.

Thus, an overall prognostic model containing 51 items for both DID and complex PTSD was constructed (see Figure 3). In addition, a set of five DID-specific items was constructed that can be added to Clusters 5 and 8 of the final model (see Figure 3) for DID patients.

Cluster Names

The names of the eight clusters of the overlapping model were formulated on the basis of the cluster names proposed by the respondents and subsequent discussion within the research group. The first cluster, *lack of*

Cluster	Items	Absent (4)	Minimally present (3)	Moderately present (2)	Strongly present (1)	Very strongly present (0)	Total scores
Cluster 1: Lack of motivation	Strong investment in secondary gain from having DID/complex PTSD Lack of motivation to lead a normal life Lack of development of coping skills						
Cluster 2: Serious Axis I comorbidity	Schizophrenia Psychotic disorder Bipolar disorder More than one severe Axis I disorder in addition to an Axis II disorder Current addiction (substance abuse [alcohol and/or drugs], sexual addiction, addiction to crises, etc.) Severe cognitive disorganization or distortion Organic mental disorder						
Cluster 3: Serious Axis II comorbidity	Antisocial personality disorder Paranoid personality disorder Narcissistic personality disorder Schizotypal or schizoid personality disorder Borderline personality disorder Current ongoing abusive relationships, including sexual and/or physical abuse						
Cluster 4: Lack of healthy relationships	Current abuse, suicide, murder, or molestation of family member Hindrances of therapy by therapist and/or (mental health care) staff Prior treatment with abusive therapist(s) History of severe, chronic trauma, especially when ritualized and sadistic Frequent crises Dishonesty						

FIGURE 3 Checklist of prognostic variables predicting stabilizing treatment outcomes for complex PTSD and DID. The italicized texts concern the DID-specific items. DID = dissociative identity disorder; PTSD = posttraumatic stress disorder.

Cluster	Items	Absent (4)	Minimally present (3)	Moderately present (2)	Strongly present (1)	Very strongly present (0)	Total scores
Cluster 5: Lack of healthy therapeutic relationships	Severely impaired ability to build a therapeutic relationship Poor "closeness of fit" between patient and therapist Severely impaired ability to abide by treatment rules Lack of responsibility for own share in the therapeutic process Inability/diminished ability to handle transference situations <i>Little cooperation between therapist and dissociative parts of the personality</i>						
Cluster 5: <i>Lack of healthy therapeutic relationships (DID)</i>							
Cluster 6: Poor attachment	Severe attachment problems Inability to trust others Strongly involved in antisocial behavior Strongly involved in antisocial relationships (including abusing others) Lack of empathy (for self and others) History of complaints and lawsuits against prior therapists History of no positive attachment experiences in general Strongly involved in self-destructiveness Severe and persistent self-blame						
Cluster 7: Self-destruction							

FIGURE 3 Continued.

Cluster	Items	Minimally present				Total scores
		(4)	(3)	(2)	(1)	
Cluster 8: Lack of other internal and external resources	Lack of interpersonal skills Severe inability to distinguish between past and present Frequent uncontrollable reexperiencing trauma Extreme avoidance of trauma-related material Amnesia for ongoing abuse (as victim and/or perpetrator) Current or recent traumatizing events Little or no social support in general Patient's current significant others resist patient's attempts to be more independent High dependence on mental health care workers between therapy sessions Lack of resources as precondition for therapy (e.g., financial, housing) Absence of development of personal resources (e.g., friends, career, or religious affiliation) Lack of ego strength and ego resources Lack of "psychological energy" due to advanced age, physical disease, stressful events, involvement with legal system, etc. Little or no work, school, or other daily employment History of lack of basic resources (education, poverty, homelessness)					
Cluster 8: Lack of other internal and external resources (DID)	<i>Severe resistance against constructive communication among dissociative parts of the personality</i> <i>Undue dominance of child alters in daily life</i> <i>Frequent dysfunctional switching</i> <i>Poorly functioning dissociative parts of the personality in daily life</i>					

FIGURE 3 Continued.

Cluster	Items	Absent (4)	Minimally present (3)	Moderately present (2)	Strongly present (1)	Very strongly present (0)	Total scores
TOTAL SCORE PER CLUSTER							
	1. Lack of motivation:						
	2. Serious Axis I comorbidity:						
	3. Serious Axis II comorbidity:						
	4. Lack of healthy relationships:						
	5. Lack of healthy therapeutic relationships:						
	6. Poor attachment:						
	7. Self-destruction:						
	8. Lack of other internal and external resources:						
TOTAL SUM SCORE OF ALL CLUSTERS:							
Minimum and maximum scores per cluster:							
	1. Lack of motivation: 0–12						
	2. Serious Axis I comorbidity: 0–28						
	3. Serious Axis II comorbidity: 0–20						
	4. Lack of healthy relationships: 0–28						
	5. Lack of healthy therapeutic relationships: 0–20 (complex PTSD); 0–24 (DID)						
	6. Poor attachment: 0–28						
	7. Self-destruction: 0–8						
	8. Lack of other internal and external resources: 0–60 (complex PTSD); 0–76 (DID)						
Minimum and maximum total sum scores:							
	- Complex PTSD: 0–204						
	- DID: 0–224						

FIGURE 3 *Continued.*

motivation, comprised items related to a lack of motivation to become a healthier person and the underdevelopment of coping skills learned in therapy; the latter was considered an expression of the lack of motivation. The second cluster, *serious Axis I comorbidity*, comprised items related to severe Axis I disorders that had been diagnosed. The third cluster, *serious Axis II comorbidity*, comprised items related to specific personality disorders that had been diagnosed that have a large impact on adult functioning. The fourth cluster, *lack of healthy relationships*, comprised items related to a lack of both current and past supportive relationships and the expression of a lack of healthy relationships (e.g., frequent crises). The fifth cluster, *lack of healthy therapeutic relationships*, comprised items related to several aspects regarding the inability to develop a healthy therapeutic relationship. The sixth cluster, *poor attachment*, comprised items related to both current and past attachment problems and aspects that express the quality of attachment (e.g., antisocial relationships). The seventh cluster, *self-destruction*, comprised items related to a tendency for self-destructive behavior. Finally, the eighth cluster, *lack of other internal and external resources*, comprised items related to the presence or absence of past and current internal and external resources that are deemed important for adequate daily functioning but that are not part of previously described clusters.

DISCUSSION

In this study, we initiated the development of a prognostic model designed to predict the outcomes for Phase 1 stabilization-oriented treatment for complex PTSD and DID. Many items in the eight clusters of this model are described in the literature on clinical experience and outcome studies (e.g., Boon, 1997; Brand et al., 2009; Cloitre et al., 2002; Foa et al., 1995; Ford & Kidd, 1998; Horevitz & Loewenstein, 1994; Kluff, 1994, 1997; Simon, 1999; Van der Hart et al., 2006), suggesting that the model is not only expertise based but also embedded in and coherent with the literature on this topic.

The model will contribute further to the treatment of complex PTSD and DID patients if the future validation process is successfully finished. Then it will enable clinicians to make a reliable classification of patients into two or more groups with different prognoses and will allow for an estimation of an individual patient's prognosis. However, in the current stage of the development of the model, clinicians can use the model as a checklist (see Figure 3). Each item can be rated in terms of the extent to which it is present in the patient: absent (4), minimally present (3), moderately present (2), strongly present (1) or very strongly present (0). Thus, a total score (range: complex PTSD = 0–204, DID = 0–224) and cluster scores can be calculated. Therapists can use the results of the checklist to focus their therapeutic attention toward specific treatment goals related to the prognostic categories

(e.g., improving treatment motivation), or, in the case of a low total score, they can be aware that treatment goals might be limited to the stabilization phase only.

One limitation of this study is that the final results are based on the judgments of only 13 DID therapists and 9 complex PTSD therapists. Although from a methodological point of view a minimum of eight therapists is required for sufficient power (NcGV, 1995), the small number of respondents might have led to selection bias.

Another limitation of this study is that the model presented here is rationally derived (expertise based) and not yet clinically or statistically based. Future work should empirically test the questionnaire to determine whether it is empirically able to predict patients' responses to treatment. Further research is necessary to clarify the relationships between prognostic variables and to validate the model statistically and clinically.

NOTE

1. The research team consisted of medical doctors and psychologists, all with more than 10 years of experience in treating and researching chronic traumatization.

REFERENCES

- Altman, D. G., & Royston, P. (2000). What do we mean by validating a prognostic model? *Statistics in Medicine*, *19*, 453–473.
- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.
- Anda, R. F., Felitti, V. J., Bremner, J. D., Walker, J. D., Whitfield, C., & Perry, B. D. (2006). The enduring effects of abuse and related adverse experiences in childhood: A convergence of evidence from neurobiology and epidemiology. *European Archives of Psychiatry and Clinical Neuroscience*, *256*, 174–186.
- Boon, S. (1997). The treatment of traumatic memories in DID: Indications and contra-indications. *Dissociation*, *10*, 65–79.
- Boon, S., & Draijer, N. (1993). Multiple personality disorder in The Netherlands: A clinical investigation of 71 patients. *American Journal of Psychiatry*, *150*, 489–494.
- Boon, S., & Van der Hart, O. (1996). Stabilisatie en symptoomreductie in de behandeling van patiënten met een meervoudige persoonlijkheidsstoornis [Stabilization and symptom reduction in the treatment of patients with a multiple personality disorder]. *Tijdschrift voor Psychiatrie*, *38*, 159–171.
- Brand, B. L., Classen, C. C., Zaveri, P., & McNary, S. (2009). A review of dissociative disorders treatment studies. *Journal of Nervous and Mental Disease*, *197*, 646–654.

- Bremner, J. D., Southwick, S. M., Johnson, D. R., Yehuda, R., & Charney, D. S. (1993). Childhood physical abuse and combat-related posttraumatic stress disorder in Vietnam veterans. *American Journal of Psychiatry*, *150*, 235–239.
- Brown, D. P., Schefflin, A. W., & Hammond, D. C. (1998). *Memory, trauma, treatment and the law*. New York, NY: Norton.
- Chu, J. A. (1998). *Rebuilding shattered lives: The responsible treatment of complex post-traumatic and dissociative disorders*. New York, NY: Wiley.
- Cloitre, M., Koenen, K. C., Cohen, L. R., & Han, H. (2002). Skills training in affective and interpersonal regulation followed by exposure: A phase-based treatment for PTSD related to childhood abuse. *Journal of Consulting and Clinical Psychology*, *70*, 1067–1074.
- Courtois, C. (1999). *Recollections of sexual abuse: Treatment principles and guidelines*. New York, NY: Norton.
- Ehlers, A., Clark, D. M., Dunmore, E., Jaycox, L. H., Meadows, E. A., & Foa, E. B. (1998). Predicting response to exposure treatment in PTSD: The role of mental defeat and alienation. *Journal of Traumatic Stress*, *11*, 457–471.
- Foa, E. B., Cashman, L., Jaycox, L. H., & Perry, K. J. (1997). The validation of a self-report measure of posttraumatic stress disorder: The Posttraumatic Diagnostic Scale. *Psychological Assessment*, *9*, 445–451.
- Foa, E. B., Riggs, D. S., Massie, E. D., & Yarczower, M. (1995). The impact of fear activation and anger on the efficacy of exposure treatment for posttraumatic stress disorder. *Behavior Therapy*, *26*, 487–499.
- Ford, J. D., & Kidd, P. (1998). Early childhood trauma and disorders of extreme stress as predictors of treatment outcome with chronic posttraumatic stress disorder. *Journal of Traumatic Stress*, *11*, 743–759.
- Herman, J. L. (1992). *Trauma and recovery*. New York, NY: Basic Books.
- Herman, J. L., Perry, J. C., & Van der Kolk, B. A. (1989). Childhood trauma in borderline personality disorder. *American Journal of Psychiatry*, *146*, 490–495.
- Herzog, D. B., Staley, J. E., Carmody, S., Robbins, W. M., & Van der Kolk, B. A. (1993). Childhood sexual abuse in anorexia nervosa and bulimia nervosa: A pilot study. *Journal of the American Academy of Child and Adolescent Psychiatry*, *32*, 962–966.
- Horevitz, R., & Loewenstein, R. J. (1994). The rational treatment of multiple personality disorder. In S. J. Lynn & J. W. Rhue (Eds.), *Dissociation: Clinical and theoretical perspectives* (pp. 289–316). New York, NY: Guilford Press.
- Kluft, R. P. (1994). Treatment trajectories in multiple personality disorder. *Dissociation*, *1*, 63–76.
- Kluft, R. P. (1997). On the treatment of traumatic memories: Always? Never? Sometimes? Now? Later? *Dissociation*, *10*, 80–90.
- MacMillan, H. L., Fleming, J. E., Streiner, D. L., Lin, E., Boyle, M. H., Jamieson, E., . . . Beardslee, W. R. (2001). Childhood abuse and lifelong psychopathology in a community sample. *American Journal of Psychiatry*, *158*, 1878–1883.
- McKee, M., Britton, A., Black, N., McPherson, K., Sanderson, C., & Bain, C. (1999). Methods in health services research: Interpreting the evidence: Choosing between randomised and non-randomised studies. *British Medical Journal*, *319*, 312–315.

- Nederlands Centrum Geestelijke Volksgezondheid. (1995). *Handboek Concept Mapping met Ariadne* [Handbook concept mapping with Ariadne]. Utrecht, The Netherlands: Author/Talbot.
- Ogata, S. N., Silk, K. R., Goodrich, S., Lohr, N. E., Westen, D., & Hill, E. M. (1990). Childhood sexual and physical abuse in adult patients with borderline personality disorder. *American Journal of Psychiatry*, *147*, 1008–1013.
- Pelcovitz, D., Van der Kolk, B. A., Roth, S. H., Mandel, F. S., Kaplan, S. J., & Resick, P. A. (1997). Development of a criteria set and a structured interview for disorders of extreme stress (SIDES). *Journal of Traumatic Stress*, *10*, 3–16.
- Putnam, F. (1990). *Dissociation in MPD: An update on progress and developments*. Presentation at the Fifth Regional Conference on Multiple Personality and Dissociation, Akron, OH.
- Putnam, F. W. (2003). Ten-year research update review: Child sexual abuse. *Journal of the American Academy of Child and Adolescent Psychiatry*, *42*, 269–278.
- Ross, C. A., Miller, S. D., Bjornson, L., Reagor, P., Fraser, G. A., & Anderson, G. (1991). Abuse histories in 102 cases of multiple personality disorder. *Canadian Journal of Psychiatry*, *36*, 97–101.
- Ross, C. A., Norton, G. R., & Wozney, K. (1989). Multiple personality disorder: An analysis of 236 cases. *Canadian Journal of Psychiatry*, *34*, 413–418.
- Roth, S., Newman, E., Pelcovitz, D., Van der Kolk, B. A., & Mandel, F. S. (1997). Complex PTSD in victims exposed to sexual and physical abuse: Results from the *DSM-IV* Field Trial for Posttraumatic Stress Disorder. *Journal of Traumatic Stress*, *10*, 539–556.
- Saxe, G. N., Chinman, G., Berkowitz, R., Hall, K., Lieberg, G., Schwartz, J., & van der Kolk, B. A. (1994). Somatization in patients with dissociative disorders. *American Journal of Psychiatry*, *151*, 1329–1334.
- Simon, R. I. (1999). Chronic posttraumatic stress disorder: A review and checklist of factors influencing prognosis. *Harvard Review of Psychiatry*, *6*, 304–312.
- Springer, K. W., Sheridan, J., Kuo, D., & Carnes, M. (2007). Long-term physical and mental health consequences of childhood physical abuse: Results from a large population-based sample of men and women. *Child Abuse & Neglect*, *31*, 517–530.
- Teicher, M. H., Andersen, S. L., Polcari, A., Anderson, C. M., & Navalta, C. P. (2002). Developmental neurobiology of childhood stress and trauma. *Psychiatric Clinics of North America*, *25*, 397–426.
- Trochim, W. M. K. (1989). An introduction to concept mapping for planning and evaluation. *Evaluation and Program Planning*, *12*, 1–16.
- Trochim, W., & Kane, M. (2005). Concept mapping: An introduction to structured conceptualization in health care. *International Journal for Quality in Health Care*, *17*, 187–191.
- Van der Hart, O., Brown, P., & Van der Kolk, B. A. (1989). Pierre Janet's psychological treatment of posttraumatic stress. *Journal of Traumatic Stress*, *2*, 379–395.
- Van der Hart, O., Nijenhuis, E. R. S., & Steele, K. (2006). *The haunted self: Structural dissociation and the treatment of chronic traumatization*. New York, NY: Norton.
- Widom, C. S. (1999). Childhood victimization and the development of personality disorders: Unanswered questions remain. *Archives of General Psychiatry*, *56*, 607–608.