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Disorders of Extreme Stress: The Empirical Foundation of a Complex Adaptation to Trauma

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Children and adults exposed to chronic interpersonal trauma consistently demonstrate psychological disturbances that are not captured in the posttraumatic stress disorder (PTSD) diagnosis. The *DSM-IV* (American Psychiatric Association, 1994) Field Trial studied 400 treatment-seeking traumatized individuals and 128 community residents and found that victims of prolonged interpersonal trauma, particularly trauma early in the life cycle, had a high incidence of problems with (a) regulation of affect and impulses, (b) memory and attention, (c) self-perception, (d) interpersonal relations, (e) somatization, and (f) systems of meaning. This raises important issues about the categorical versus the dimensional nature of posttraumatic stress, as well as the issue of comorbidity in PTSD. These data invite further exploration of what constitutes effective treatment of the full spectrum of posttraumatic psychopathology.

In the late 1970s, when hundreds of thousands of Vietnam veterans presented with serious psychiatric problems, a new diagnosis, posttraumatic stress disorder (PTSD) was created in an attempt to capture their psychopathology for inclusion in the *Diagnostic and Statistical Manual of Mental Disorders, 3rd Edition* (*DSM-III*; American Psychiatric Association [APA], 1980). At that time, only a sparse literature on "traumatic neuroses" was available to guide the formulation of diagnostic criteria. Hence, the *DSM* committee had to rely on the clinical descriptions of war neuroses, particularly those by Kardiner (1941), on Horowitz' studies of the biphasic stress response (Horowitz, Wilner, & Kaltreider, 1980), and on a few small studies of predominantly male burn victims (Andreasen & Norris, 1972) and Vietnam veterans (Shatan, Smith, & Haley, 1977) to arrive at meaningful diagnostic criteria. Despite these humble origins, PTSD has been found to be an enormously useful diagnostic construct with wide applicability to different victim populations and with its own unique neurobiology and therapeutics.

Prior to the conceptualization of PTSD, other posttraumatic syndromes were proposed, such as a rape trauma syndrome (Burgess & Holstrom, 1974) and a battered women's syndrome (Walker, 1984). These highlighted problems not captured in the PTSD diagnosis: the effects of assaults on victims' sense of safety, trust, and self-worth; their frequent revictimization; and their loss of a coherent sense of self.

Epidemiological research has shown that, whereas men—the initial population studied to establish the diagnostic criteria for PTSD—most frequently are traumatized by accidents, war, assaults, and natural disasters, childhood abuse is by far the most frequent cause of traumatization in women (Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995). Between 17 and 33% of women in the general population report histories of sexual–physical abuse

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(Finkelhor, Hotaling, Lewis, & Smith, 1990; Kessler et al., 1995), and in mental health settings, the rates range from 35 to 50% (Cloitre, Cohen, Han, & Edelman, 2001). More than twice as many women report histories of childhood sexual abuse than of (adult) rape, which occurs in approximately 10% of the general population (Breslau, Davis, Andreski, Peterson, & Schultz, 1997; Kessler et al., 1995).

Women are much more likely to be traumatized in the context of intimate relationships than men are; 63% of the almost 4 million reported assaults on males are by strangers, whereas 62% of the almost 3 million reported attacks on women in the US are by persons they know (Acierno, Resnick, Kilpatrick, Saunders, & Best, 1999). In the United States, 61% of all rapes occur before victims reach age 18; 29% of forcible rapes occur before the age of 11 (Acierno et al., 1999), usually by family members. Studies of physically and sexually abused children, as well as of women who are exposed to prolonged interpersonal violence consistently report a range of psychological sequelae that are not captured in the PTSD diagnostic criteria.

Developmental and Relational Issues

Abuse and neglect of children are extremely common in our society, and their effects are well documented to persist over time. Each year over 3 million children are reported for abuse–neglect in the United States (Wang & Daro, 1997). Posttraumatic stress disorder may not be the most common psychiatric diagnosis in children with histories of abuse and neglect (Putnam, 2003). For example, in one study of 364 abused children (Ackerman, Newton, McPherson, Jones, & Dykman, 1998), the most common diagnoses in order of frequency were separation anxiety disorder, oppositional defiant disorder, phobic disorders, PTSD, and attention-deficit hyperactivity disorder (ADHD).

From its inception it has been clear that PTSD captures only a limited aspect of posttraumatic psychopathology, particularly in children (e.g., Brett, Spitzer, & Williams, 1988; Briere, 1988; Cole & Putnam, 1992; Scheeringa, Zeanah, Drell, & Larrieu, 1995; Scheeringa, Zeanah, Meyers, & Putnam, 2003; Summit, 1983; Terr, 1979). Many studies of traumatized children find problems with unmodulated aggression and impulse control (e.g., Burgess, Hartman, & McCormack, 1987; Cole & Putnam, 1992; Lewis & Shanok, 1981; Steiner, Garcia, & Matthews, 1997; Van der Kolk, Perry, & Herman, 1991); attentional and dissociative problems (e.g., Teicher et al., 2003); and difficulty negotiating relationships with caregivers, peers, and subsequently, marital partners (e.g., Finkelhor, Hotaling, Lewis, & Smith, 1989; Schneider-Rosen & Cicchetti, 1984).

Histories of childhood physical and sexual assaults also are associated with a host of other psychiatric problems in adolescence and adulthood: substance abuse, borderline and antisocial personality, as well as eating, dissociative, affective, somatoform, cardiovascular, metabolic, immunological, and sexual disorders (e.g., Breslau et al., 1997; Cloitre, Tardiff, Marzuk, Leon, & Portera, 2001; Dube et al., 2001; Felitti et al., 1997; Finkelhor & Kendall-Tackett, 1997; Herman, Perry, & Van der Kolk, 1989; Kilpatrick et al., 2000, 2003; Lyons-Ruth & Jacobovitz, 1999; Margolin & Gordis, 2000; Putnam & Trickett, 1997; Van der Kolk, Perry, & Herman, 1991; Wilson, Van der Kolk, Burbridge, Fisler, & Kradin, 1999; Zlotnick et al., 1996).

Complicated adaptations to severe and prolonged trauma are not confined to children; research with rape victims (Burgess & Holstrom, 1974), battered women (Rollstin & Kern, 1998; Walker, 1984), and concentration camp survivors (Krystal, 1968) has shown significant long-term problems in the areas of attention, self-regulation, and personality structure.

Despite the ubiquitous occurrence of numerous posttraumatic problems other than PTSD, the relationship between PTSD and these multiple other symptoms associated with early and prolonged trauma has received surprisingly little attention. In the PTSD literature, psychiatric problems that do not fall within the framework of PTSD are generally referred to as "comorbid conditions," as if they occurred independently from the PTSD symptoms. By relegating them to seemingly unrelated "comorbid" conditions, fundamental trauma-related disturbances may be lost to scientific investigation, and clinicians may run the risk of applying treatment approaches that are not helpful (see Spinazzola, Blaustein, Van der Kolk, 2005). These concerns gave rise to an attempt to carefully delineate posttraumatic adaptations in the *DSM-IV* field trial.

The DSM-IV Field Trial

The *DSM-IV* field trial for PTSD was conducted between 1990 and 1992 to (a) investigate the correct definition of the A criterion and the placement of various PTSD symptoms in the proper symptom clusters (Kilpatrick et al., 1998), and (b) to explore whether victims of chronic interpersonal trauma as a group tended to meet diagnostic criteria for PTSD or whether their psychopathology was more accurately captured by another constellation of symptoms, those commonly mentioned in the research literature on child abuse, concentration camp victims, and domestic battering that were not captured by the PTSD

criteria. The committee thoroughly reviewed the research on these populations and organized the most frequently studied symptoms under the rubric of disorders of extreme stress not otherwise specified (DESNOS; Herman, 1992).

The field trial workgroup hypothesized that (a) chronic interpersonal trauma starting at an early age gives rise to a greater prevalence of DESNOS symptomatology than either interpersonal trauma later in the life cycle or in victims of accidents and natural disasters; and (b) a substantial number of individuals with histories of childhood trauma would meet criteria for DESNOS but not for PTSD. This entire DESNOS data set has not been previously published, though other parts of the field trial—the empirical rationale for criteria A, B, C, and D (Kilpatrick et al., 1998), the interrelation of dissociation, somatization and affect dysregulation (Van der Kolk et al., 1996), the development of a rating scale to measure DESNOS (Pelcovitz et al., 1997), and the relation of childhood physical and sexual abuse to DESNOS versus borderline personality disorder (Roth, Newman, Pelcovitz, Van der Kolk, & Mandel, 1997) have been published.

Methods

Item Construction

The DESNOS symptom constellation was the result of a collaborative effort between two groups, one based in New York (Spitzer, Kaplan, & Pelcovitz as cited in Pelcovitz et al., 1997), the other in Boston (see Herman & Van der Kolk, 1987). They reviewed the existing research literature on trauma in children, women victims of domestic violence, and concentration camp survivors, and generated a list of 27 symptoms frequently described in, but not addressed by *DSM-IIIR* criteria for PTSD. Judith Herman (1992) arranged these 27 symptoms into seven categories (see Table 1): Dysregulation of (a) affect and impulses, (b) attention or consciousness, (c) self-perception, (d) perception of the perpetrator, (e) relations with others; (f) somatization, and (g) systems of meaning. Items were put in a structured interview format that was revised by the field trial coordinators prior to inclusion of the instrument in the field trial protocol. The measure consists of 48 items measuring lifetime and current alterations in the seven areas. Items were scored dichotomously; each question is answered with either a "yes" or "no" (Pelcovitz et al., 1997).

Sample Selection

The PTSD field trial assessed adults and adolescents (age 15 or older) with regard to lifetime prevalence of exposure to "high magnitude" events and past year prevalence of "low magnitude" events, and the relation between exposure to these stressors and the emergence of individual PTSD and DESNOS symptoms. Most

Table 1. DESNOS Subcategories

I. Alteration in Regulation of Affect and Impulses	
A. Affect Regulation	D. Suicidal Preoccupation
B. Modulation of Anger	E. Difficulty Modulating Sexual involvement
C. Self-Destructive	F. Excessive Risktaking
II. Alterations in Attention or Consciousness	
A. Amnesia	
B. Transient Dissociative Episodes and Depersonalization	
III. Somatization	
A. Digestive System	D. Conversion Symptoms
B. Chronic Pain	E. Sexual Symptoms
C. Cardiopulmonary Symptoms	
IV. Alterations in Self-Perception	
A. Ineffectiveness	D. Shame
B. Permanent Damage	E. Nobody Can Understand
C. Guilt and Responsibility	F. Minimizing
V. Alterations in Perception of the Perpetrator	
A. Adopting Distorted Beliefs	
B. Idealization of the Perpetrator	
C. Preoccupation with Hurting Perpetrator	
VI. Alterations in Relations with Others	
A. Inability to Trust	
B. Revictimization	
C. Victimizing Others	
VII. Alterations in Systems of Meaning	
A. Despair and Hopelessness	
B. Loss of Previously Sustaining Beliefs	

participants in the sample ($n = 400$) were seeking mental health treatment after exposure to high- or low-magnitude stressful life events (the treatment-seeking sample). The treatment-seeking sample was obtained through the assessment of psychiatric patients at five outpatient mental health treatment sites specializing in the provision of mental health treatment for victims of psychological trauma. These were the Medical University of South Carolina/V.A. Medical Center, Crime Victim Center, Charleston, South Carolina; the Trauma Clinic, Massachusetts General Hospital, Harvard Medical School, Boston, Massachusetts; the Departments of Psychology and Psychiatry, Duke University and Duke University Medical Center, Durham, North Carolina; North Shore University Hospital/Cornell University Medical College Division of Child and Adolescent Psychiatry, Manhasset, New York; and the Community Psychological Services, University of Missouri, St. Louis, Missouri.

The community sample ($n = 128$) was recruited from 704 adults from Charleston and St. Louis via telephone interviews using random digit dialing (RDD) (Kilpatrick et al., 1998). Participants in the community sample were biased towards having experienced high-magnitude stressors. They completed the same assessment protocol administered to participants in the treatment-seeking sample. More detailed participant characteristics have been reported elsewhere (Kilpatrick et al., 1998; Pelcovitz et al., 1997).

Instruments

The High Magnitude Stressor Events Structured Interview (Kilpatrick et al., 1998) comprehensively screened for lifetime history of high-magnitude events: completed rape, other sexual assault, physical assault, other violent crimes, homicide of family members or close friends, serious accidents, natural or manmade disasters, and military combat. The field trial obtained information about up to three high-magnitude and one low-magnitude potentially traumatic events per person.

Posttraumatic stress disorder was assessed by using (a) a version of the Diagnostic Interview Schedule (DIS) PTSD (*DSM-III*) module modified for the National Women's Study PTSD (Robins, Helzer, Croughan, Williams, & Spitzer, 1981); and (b) the PTSD module of the Structured Clinical Interview for *DSM-III* (SCID-PTSD) (Spitzer & Williams, 1986).

The prevalence of each of the DESNOS symptom items (see Table 1) was examined with the SCID-DESNOS instrument specifically designed for this purpose (Pelcovitz et al., 1997). To summarize, the interrater reliability kappas for current and past DESNOS in the field trial participants ranged from .88 to 1.00, with three of the five sites having perfect interrater reliability. The Cronbach coefficient alphas of the overall DESNOS measure was .96, and the individual DESNOS categories (with the exception of the item measuring alterations in perception of the perpetrator, which therefore was dropped as a requirement for meeting the diagnosis of DESNOS) had internal consistencies ranging from .76 to .90, meaning that the symptoms described in the DESNOS construct had a high degree of internal cohesion, and that these symptoms were likely to occur together in the same individuals.

Results

Validity: Relationship Between PTSD and DESNOS Items

Table 2 shows the percentage of lifetime endorsement for each the 27 DESNOS subcategories, for participants with and without current and lifetime PTSD. These data show that the differences in positive endorsement on each of the DESNOS items between groups with and without PTSD, both lifetime and current, were statistically significant. When participants who met diagnostic criteria for PTSD were compared to those who met DESNOS criteria, lifetime DESNOS without PTSD occurred in only a very small percentage of both the treatment sample (6.2%) and the community sample (4%). Hence, this constellation of symptoms was rare in participants who did not also suffer from PTSD.

Nature of Trauma

In an attempt to elucidate the role of age of onset and the nature of the traumatic experience (interpersonal vs. instrumental trauma) in the clinical presentation, the sample was divided into three mutually exclusive trauma groups: (a) participants reporting interpersonal violence (sexual assault and physical assault or no physical assault) starting before age 14 (some of whom also reported subsequent traumas), (b) participants reporting interpersonal violence starting after age 14, and (c) victims of natural disasters who did not report histories of interpersonal victimization. Table 2 shows the percentage of lifetime endorsement for the three groups for 26 of the 27-item subcategories, all of which produced statistically significant effects. Because of the number of statistical tests employed, we accepted a minimum p level of .005. For

Table 2. DESNOS Categories (% positive) in Participants With and Without PTSD: Current and Lifetime

	PTSD Lifetime			PTSD Current		
Subcategories	Yes ($n = 275$)	No ($n = 208$)	χ^2 ($df = 1$)	Yes ($n = 194$)	No ($n = 326$)	χ^2 ($df = 1$)
Affect Regulation	84	31	144.15*	89	42	112.31*
Anger	81	29	133.23*	87	39	115.02*
Self-Destructive	56	19	66.62*	62	26	65.21*
Suicidal	61	18	90.90*	69	25	97.11*
Sexual Involvement	75	32	87.86*	84	39	100.13*
Shame	57	10	112.39*	64	18	111.95*
Nobody Understands	84	30	145.75*	90	41	121.61*
Minimizing	29	11	22.95*	31	14	21.20*
Distorted Beliefs	24	0	57.82*	25	6	38.31*
Idealiz. Perpetrat.	23	2	43.66*	25	7	33.46*
Loss of Trust	88	41	120.32*	96	49	119.63*
Revictimization	56	15	84.64*	64	21	96.82*
Victimizing Others	23	5	30.25*	25	9	25.26*
Risk Taking	47	14	58.47*	50	21	47.68*
Amnesia	70	18	129.30*	78	27	126.58*
Dissociation	83	28	148.46*	87	21	215.24*
Ineffective	58	23	58.93*	63	30	53.69*
Permanent Damage	73	20	132.56*	83	28	147.71*
Guilt	64	19	96.01*	69	34	59.87*
Digestive Problems	72	24	109.05*	77	26	126.47*
Chronic Pain	57	20	66.56*	63	39	27.91*
Cardiopulmonary	79	27	130.24*	82	18	203.72*
Conversion	54	12	90.72*	63	21	92.65*
Sexual Dysfunction	52	15	70.71*	59	41	15.20*
Hopelessness	84	29	150.42*	89	33	153.82*
Loss of Beliefs	73	22	123.16*	79	33	101.77*

Note. All differences in positive endorsement on each of the DESNOS items between PTSD + vs. PTSD − groups, both life time and current, were significant at the $p < .0001$ level utilizing x^2 analysis.
* $p < .0001$.

the 27th subcategory, Ineffectiveness (IIIA), there was no evidence of a reliable difference in the percentage of endorsement among the three groups.

To establish group discriminations according to age of onset and duration of the trauma, the sample was analyzed for both lifetime and current prevalence of PTSD alone, and PTSD + DESNOS. The groups were divided (a) according to age and nature of traumatic experience (Early Onset Interpersonal, < age 14; Late Onset Interpersonal, 14 and up; and Disaster), (b) according to age of first high-magnitude stressor, and (c) according to duration of longest high-magnitude stressor. Early Onset versus Late Onset Interpersonal abuse had significantly different endorsement on at least one item in each of the seven major categories. Late Onset Interpersonal abuse and Disaster were discriminated by items in all categories. These patterns of endorsement confirm that early interpersonal traumatization gives rise to more complex posttraumatic psychopathology than later interpersonal victimization (Table 3).

Nature of Posttraumatic Symptoms According to Type, Age, and Duration of the Trauma

Highly significant differences in posttraumatic symptoms emerged between the Early Onset and Late Onset Interpersonal abuse groups (see Table 4). In the Early Onset Interpersonal abuse group, more participants had a lifetime prevalence of PTSD + DESNOS (61%) than of PTSD alone (16%), $\chi^2(2, N = 148) = 63.20$, $p < .01$. Of the Late Onset Interpersonal abuse group, 33% had PTSD + DESNOS compared to 26% who met criteria for PTSD alone, $\chi^2(2, N = 87) = .99$, *ns*. In the Disaster group, 15% had PTSD only, and 8% had PTSD + DESNOS, $\chi^2(2, N = 59) = 1.47$, *ns*.

The relationship between age of onset of the trauma and prevalence of DESNOS and PTSD was calculated with the Permutation Exact Test (Luger, 2004). There was no trend in regards to age of onset and the development of lifetime PTSD. However, there was a trend between the diagnosis of lifetime PTSD + DESNOS and age of onset

Table 3. Percent Endorsement of DESNOS Items by Trauma Category

Subcategories	Early onset abuse (<14). ($n = 149$)	Late onset Abuse (14>) ($n = 87$)	Disaster ($n = 58$)	$\chi^2(df = 1)$ early onset vs. late onset	$\chi^2(df = 1)$ late onset vs. disaster
Affect Regulation	77	66	38	3.78	10.68*
Anger	77	61	33	7.08	11.04*
Self-destructive	62	36	21	15.01*	3.72
Suicidal	66	39	12	15.88*	12.52*
Sexual Involvement	81	66	9	7.30	46.03*
Risk Taking	54	26	16	16.59*	2.41
Amnesia	78	46	15	24.91*	14.43*
Dissociation	80	59	44	12.31*	2.66
Permanent damage	72	53	26	8.64*	10.42*
Guilt	69	49	24	9.04*	9.33*
Shame	60	39	17	9.39*	7.85*
Nobody can understand	80	57	38	13.55*	5.32
Minimizing	28	23	3	0.77	10.32*
Distorted beliefs	30	12	NA	10.75*	—
Idealiz. Perpetrator	36	8	NA	22.78*	—
Loss of trust	71	56	26	5.35	13.09*
Revictimization	54	38	NA	5.47	—
Victimizing others	27	8	+	12.17*	—
Digestive problems	69	60	29	2.13	12.95*
Chronic pain	54	43	28	2.74	3.35
Cardiopulmonary	71	60	33	3.21	10.16*
Conversion	54	30	14	12.58*	5.02
Sexual Problems	58	45	10	3.66	19.33*
Hopelessness	75	64	38	3.12	9.79*
Loss of beliefs	71	46	21	56.07*	9.67*

Note. Significant early vs. late onset comparisons are noted by a "+", and significant late onset abuse vs. disaster comparisons are noted by a "*". The minimum p level accepted for all these comparisons was .005, rather than the customary .05, in order to avoid spurious results.
* $p < .005$.

(Permutation Exact Test = 1680, $p < .001$): the younger the age of onset of the trauma, the more likely one is to suffer from the cluster of DESNOS symptoms, in addition to PTSD (Table 5). Comparing current diagnosis of PTSD to age of onset of the trauma yielded a significant trend (Permutation Exact Test = 1057, $p < .001$). Thus, the younger the age of onset, the higher the likelihood the individual currently had DESNOS. The relationship between age of onset and current PTSD + DESNOS showed the same trend (Permutation Exact Test = 783, $p < .001$).

The relationships between duration of the longest high-magnitude stressor (in years) and lifetime diagnoses were calculated by subtracting age of onset from age of offset. Although there was no trend in the proportion of those developing PTSD alone across groups, there was a trend between the diagnoses of lifetime PTSD + DESNOS and duration of the trauma (Permutation Exact Test = 916, $p < .001$). Similar results were obtained for current diagnoses and duration of the trauma: There was no significant trend for PTSD alone, but the relationship between PTSD + DESNOS and duration of the trauma revealed a significant trend (Permutation Exact Test = 528, $p < .001$). This finding demonstrates that the longer people were exposed to traumatic events, the more likely they were to develop both PTSD and DESNOS (Table 6).

Table 4. Percentage of Various Trauma Groups With PTSD Only and With PTSD + DESNOS

Subcategories	Early onset abuse ($n = 148$)	Late onset abuse ($n = 87$)	Disaster ($n = 59$)	Other ($n = 226$)
Lifetime				
PTSD Only	16	26	15	20
PTSD + DESNOS	61	33	8	25
Current				
PTSD Only	27	28	8	15
PTSD + DESNOS	35	16	2	11

Discussion

The *DSM-IV* Field Trial for PTSD supported the notion that trauma, particularly trauma that is prolonged, that first occurs at an early age and that is of an interpersonal nature, can have significant effects on psychological functioning above and beyond PTSD symptomatology. These effects include problems with affect dysregulation,

Table 5. Age of First High Magnitude Stressor by Diagnosis

Subcategories	0–4 ($n = 83$)	5–8 ($n = 108$)	9–13 ($n = 90$)	14–19 ($n = 94$)	20–25 ($n = 38$)	26+ ($n = 44$)
Lifetime						
PTSD	19	21	14	20	13	30
PTSD + DESNOS	66	46	29	40	24	9
Current						
PTSD	28	26	17	20	13	16
PTSD + DESNOS	41	21	14	19	11	2

aggression against self and others, dissociative symptoms, somatization, and character pathology. These various symptoms tend to cluster into distinct patterns and to be highly interrelated.

The field trial demonstrated that (a) early interpersonal traumatization gives rise to more complex posttraumatic psychopathology than later interpersonal victimization; (b) these symptoms occur in addition to PTSD symptoms and do not necessarily constitute a separate cluster of symptoms; (c) the younger the age of onset of the trauma, the more likely one is to suffer from the cluster of DESNOS symptoms, in addition to PTSD; (d) The longer individuals were exposed to traumatic events, the more likely they were to develop both PTSD and DESNOS; and (e) although the community sample and the treatment-seeking sample had approximately the same prevalence of PTSD symptoms, almost half of the treatment-seeking sample also met criteria for DESNOS, suggesting that DESNOS symptoms, rather than PTSD, may cause patients to seek treatment.

Subsequent studies on both veteran and civilian samples (Ford, 1999; McDonagh-Coyle et al., 1999; Vielhauer, 1996) found DESNOS in a sizable subset of trauma patients (25–45%) who failed to meet criteria for PTSD. This finding contrasts with the *DSM-IV* field trial in which the vast majority of participants with DESNOS also met criteria for PTSD.

The finding that the traumatized participants whose high-magnitude traumatic stressors started before age 14 were most likely to meet criteria for DESNOS is not surprising in view of the fact that the formulation of the DESNOS syndrome was largely based on the research literature on childhood trauma. The prevalence estimates of childhood trauma histories in general psychiatric populations range from 40 to 70%. Patients with these histories are consistently found to have high degrees of problems with affect dysregulation, loss of impulse control, dissociative, somatization, and severe character pathology (e.g., Bryer, Nelson, Miller, & Krol, 1987; Chu & Dill, 1989; Herman et al., 1989; Mueser et al., 1998; Saxe et al., 1993, 1994; Van der Kolk, 2003).

The results of the *DSM-IV* Field Trial suggested that trauma has its most pervasive impact during the first decade of life and becomes more circumscribed, i.e., more like "pure" PTSD, with age. However, participants' DESNOS symptoms may have been a function of not only the age at which they were first traumatized, but also the number of traumatic experiences they subsequently suffered. The field trial did not analyze the data according to the number of separate A criterion events across the participants' life span.

The presence of comorbid trauma-related psychiatric problems excludes a large number of traumatized individuals from treatment outcome studies (see Spinazzola et al., 2005). Lack of assessment of other sequelae, or worse, the systematic exclusion of individuals with complex adaptations to trauma from PTSD outcome studies, is likely to interfere with exploring the most effective treatments for the most severely affected traumatized individuals. For example, there is increasing evidence that having a history of child abuse may significantly change treatment outcome in other psychiatric conditions (e.g., Ford & Kidd, 1998; Keller et al., 2000; Nemeroff et al., 2003).

Table 6. Duration (in Years) of High Magnitude Stressor by Diagnosis

Subcategories	<1 ($n = 240$)	1–3 ($n = 68$)	4–10 ($n = 70$)	11–17 ($n = 26$)	18+ ($n = 20$)
Lifetime					
PTSD only	18	21	23	15	20
PTSD + DESNOS	29	35	51	77	70
Current					
PTSD Only	17	28	27	27	30
PTSD + DESNOS	12	21	27	54	62

Comorbidity or Pervasive Impact of Trauma?

Although the *DSM-IV* Subcommittee on PTSD favored the creation of a separate diagnosis to capture the psychiatric symptomatology related to chronic exposure

to interpersonal trauma, the *DSM-IV* lists the DESNOS symptoms not as a distinct diagnosis, but under the rubric of "associated and descriptive features" of PTSD (APA, 1994, p. 425). The PTSD diagnosis is likely to fit some of the psychiatric problems of many psychiatrically impaired traumatized individuals. However, focusing on PTSD symptoms and, at best, relegating other posttraumatic sequelae to comorbidities may interfere with a comprehensive and effective treatment approach. For example, the Treatment Guidelines of the International Society for Traumatic Stress Studies (Foa, Keane, & Friedman, 2000), while recognizing that over 80% of PTSD patients suffer from comorbid conditions, including depression, phobias, anxiety, dissociative and somatoform disorders, refers readers to the "rich empirical literature of these comorbid conditions" (p. 375) for treatment guidance. This statement is puzzling because there is no evidence that other treatment manuals are, in fact, applicable to these comorbid conditions in patients with PTSD.

Numerous studies have shown that PTSD consistently co-occurs with other disorders. The National Comorbidity Survey (Kessler et al., 1995) found that approximately 84% of people with PTSD had another lifetime diagnosis, with PTSD typically being the primary disorder. The odds ratios that individuals with PTSD meet criteria for three or more additional disorders range from 8 to 14. The Australian National Comorbidity study (Creamer, Burgess, & McFarlane, 2001) assessed 10,600 individuals and found that 88% of the sample with PTSD had at least one other diagnosis: most commonly major depressive disorder (48%) and alcohol abuse (52%). Of persons with PTSD, 59% had three or more disorders, and 51% (versus 6% of non-PTSD) met criteria for an Axis II diagnosis. In most cases, PTSD was the initiating disorder in all comorbid disorders, including personality disorders. The study concluded that it is rare, even in a community sample, to find pure PTSD and that traumatized individuals present with a variable constellation of depression, anxiety, and somatization.

In studies of psychiatric populations in which trauma is not a central concern, PTSD is rarely assessed. Yet, histories of trauma consistently show up in studies of (a) various personality disorders (e.g., Herman et al., 1989; Oates, 1984; Yen et al., 2003; Zanarini, Ruser, Frankenburg, Hennen, & Gunderson, 2000), (b) affective disorders (e.g., Kendall-Tackett, 2002; Levitan et al., 1998; Nemeroff et al., 2003; Schneider-Rosen & Cicchetti, 1984); (c) impulse disorders (e.g., Barahal, Waterman, & Martin, 1987; Green, 1983; Romano & deLuca, 1997), (d) antisocial disorders (e.g., Adshead, 1994; Steiner et al., 1997; Widom, 1987; Zlotnick, 1999), (e) substance abuse (e.g., Creamer et al., 2001; Kilpatrick et al., 2000), (f) somatization (e.g., Resnick, Acierno, & Kilpatrick, 1997; Saxe et al., 1994), and (g) dissociative disorders (e.g., Bremner et al., 1992; Chu & Dill, 1989; Marshall et al., 2000). The *DSM-IV* Field Trial did not specifically assess for other *DSM-IV* Axis I and Axis II diagnoses, leaving the overlap between DESNOS and these various disorders open to further investigation.

It seems of paramount importance to address critically the fact that psychiatric disorders, categorically defined, frequently occur together, and that many disorders, in particular PTSD, seem to occur rarely in pure form, without comorbidities. It is clear that traumatized individuals develop a range of shifting maladaptive patterns, depending on their stage of development, social support, and relationship to the origin of the trauma.

This implies that the focus of trauma research needs to extend beyond the traditional preoccupation with PTSD as the sole outcome of traumatization and more closely attend to the full range of disordered psychological domains, including disturbances in perception, information processing, affect regulation, impulse control, and personality development, that are now relegated to various other comorbidities. The DESNOS construct, although still a work in progress, is an attempt to capture the multidimensional nature of breakdown of adaptation in the face of trauma.

Treatment Implications

The presence of DESNOS has been shown to be a powerful negative prognostic indicator of PTSD treatment outcome and behavioral disturbance in diverse clinical samples (Ford & Kidd, 1998; McDonagh-Coyle et al., 1999; Zlotnick, 1999). The phenomenological differences between DESNOS and PTSD have important treatment implications. The diagnosis of PTSD focuses on the memory imprint of particular experiences. Posttraumatic stress disorder as the central psychological consequence of traumatization implies treatment that focuses on the impact of specific past events and the processing of specific traumatic memories. In contrast, in traumatized patients with histories of early abuse and DESNOS, the treatment of other problems, such as loss of emotion regulation, dissociation and interpersonal problems, may be the first priority because they cause more functional impairment than the PTSD symptoms (Cloitre, Koenen, Cohen, & Han, 2002; see Briere & Spinazzola, 2005; Ford, Courtois, Steele, Van der Hart, & Nijenhuis, 2005; Pearlman & Courtois, 2005; all in this issue).

Issues of affect regulation and dissociation have been largely neglected in the treatment research literature for

PTSD. For example, in the International Society for Traumatic Stress Studies (ISTSS) treatment guidelines for PTSD, there is no mention of techniques to deal with loss of self-regulation or dissociative problems. In recent years, an emerging research literature has started to demonstrate the importance of helping patients with the management of current problems with dissociation, affect regulation, and altered relationships with themselves and others prior to engaging them in trauma exposure (Cloitre, Chase Stovall-McClough, Miranda, & Chemtob, 2004; Ford et al., 2005; Ford, Fisher, & Larson, 1997; Ford & Frisman, 2002).

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