Published by:

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The National Center for Post-Traumatic Stress Disorder

# PTSD Research Quarterly

VOLUME 8, NUMBER 3 ISSN 1050-1835 SUMMER 1997

## TRAUMA AND DISSOCIATION

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The past decade has witnessed an intense reawakening of interest in the study of trauma and dissociation. In particular, the contributions of Janet, which had been largely eclipsed by developments within modern ego psychology and cognitive behavioral therapy, have enjoyed a resurgence of interest. Putnam (1989) and van der Kolk and van der Hart (1989) have provided a contemporary reinterpretation of the contributions of Janet to the understanding of traumatic stress and dissociation. Recent research on the interrelations among trauma, memory, and dissociation is presented in a forthcoming book by Bremner and Marmar.

Paralleling the resurgence of interest in theoretical studies of trauma and dissociation, there has been a proliferation of research studies addressing the relationship of trauma and general dissociative tendencies. Chu and Dill (1990) reported that psychiatric patients with a history of childhood abuse reported higher levels of dissociative symptoms than those without histories of child abuse. Carlson and Rosser-Hogan (1991), in a study of Cambodian refugees, reported a strong relationship between the amount of trauma the refugees had experienced and the severity of both traumatic stress response and dissociative reactions. Spiegel and colleagues (1988) compared the hynotizability of Vietnam combat veterans with PTSD to patients with generalized anxiety disorders, affective disorders, and schizophrenia, as well as to the normal comparison group. The group with PTSD was found to have hypnotizability scores that were higher than both the psychopathological and normal controls.

Recent empirical studies have supported a strong relationship among trauma, dissociation, and personality disturbances. Herman and colleagues (1989) found a high prevalence of traumatic histories in patients with borderline personality disorder. A profound relationship has been reported for childhood trauma and multiple personality disorder (MPD). Kluft (1993) proposes that the dissociative processes that underlie multiple personality development continue to serve a defense function for individuals who have neither the external nor internal resources to cope with traumatic experiences. Coons and Milstein (1986) reported that 85% of a series of 20 MPD patients had documented allegations of childhood abuse. Similar observations have been made by Frischholz (1985) and Putnam and colleagues (1986), who reported rates of severe childhood abuse as high as 90% in patients with MPD. The nature of the childhood trauma in many of these cases is notable for its severity, multiple elements of physical and sexual abuse, threats to life, bizarre elements, and profound rupture of the sense of safety and trust when the perpetrator is a primary caretaker or other close relationship.

*Peritraumatic Dissociation.* The studies reviewed clearly demonstrate the relationship between traumatic life experience and general dissociative response. One fundamental aspect of the dissociative response to trauma concerns immediate dissociation at the time the traumatic event is unfolding. Trauma victims not uncommonly will report alterations in the experience of time, place, and person, which confers a sense of unreality of the event as it is occurring. Dissociation during trauma may take the form of altered time sense, with time being experienced as slowing down or rapidly accelerated; profound feelings of unreality that the event is occurring, or that the individual is the victim of the event; experiences of depersonalization; out-of-body experiences; bewilderment, confusion, and disorientation; altered pain perception; altered body image or feelings of disconnection from one's body; tunnel vision; and other experiences reflecting immediate dissociative responses to trauma. We have designated these acute dissociative responses to trauma as peritraumatic dissociation.

Although actual clinical reports of peritraumatic dissociation date back nearly a century, systematic investigation has occurred more recently. Wilkinson (1983) investigated the psychological reponses of survivors of the Hyatt Regency Hotel skywalk collapse in which 114 people died and 200 were injured. Survivors commonly reported depersonalization and derealization experiences at the time of the structural collapse. Holen (1993), in a long-term prospective study of survivors of a North Sea oil rig disaster, found that the level of reported dissociation during the trauma was a predictor of subsequent PTSD. Koopman and colleagues (1994) investigated predictors of posttraumatic stress symptoms among survivors of the 1991 Oakland Hills firestorm. In a study of 187 participants, dissociative symptoms at the time the firestorm was occurring more strongly predicted subsequent posttraumatic symptoms than did anxiety and the subjective experience of loss of personal autonomy.

*Peritraumatic Dissociative Experiences Questionnaire.* Based on the important clinical and early research observations on peritraumatic dissociation as a risk

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factor for chronic PTSD, we embarked on a series of studies to develop a reliable and valid measure of peritraumatic dissociation. We designated this measure the Peritraumatic Dissociative Experiences Questionnaire (Marmar et al., 1996). In a first study with the PDEQ, the relationship of peritraumatic dissociation and posttraumatic stress was investigated in male Vietnam theater veterans (Marmar et al., 1994). In a first replication of this finding, the relationship of peritraumatic dissociation with symptomatic distress was determined in emergency services personnel exposed to traumatic critical incidents (Weiss et al., 1995; Marmar et al., 1996). In a second replication, the relationship of peritraumatic dissociation and posttraumatic stress was investigated in female Vietnam theater veterans (Tichenor et al., 1994).

Across the four studies, the PDEQ has been demonstrated to be internally consistent, strongly associated with measures of traumatic stress response, strongly associated with a measure of general dissociative tendencies, strongly associated with level of stress exposure, and unassociated with measures of general psychopathology. These studies support the reliability and convergent, discriminant, and predictive validity of the PDEQ. Strengthening these findings are two independent studies utilizing the PDEQ by investigators in other PTSD research programs. Bremner and colleagues (1992), utilizing selective items from the PDEQ as part of a measure of peritraumatic dissociation, reported a strong relationship of peritraumatic dissociation with posttraumatic stress response in an independent sample of Vietnam War veterans. In the first prospective study with the PDEQ, Shalev and colleagues (1996) examined the relationship of PDEQ ratings gathered in the first week following trauma exposure to posttraumatic stress symptomatology at 5 months. In this study of acute-physical-trauma victims admitted to an Israeli teaching hospital emergency room, PDEQ ratings at 1 week predicted stress symptomatology at 5 months, over and above exposure levels, social supports, and Impact of Event scores in the first week. This study is noteworthy in that it is the first finding with the PDEQ in which ratings were gathered prospectively.

*Mechanisms for Peritraumatic Dissociation.* The strong replicated findings relating peritraumatic dissociation to subsequent PTSD raise theoretically important questions concerning the mechanisms that underlie peritraumatic dissociation. Speculation concerning psychological factors underlying trauma-related dissociation date back to the early contributions of Breuer and Freud (1895/1955). In their formulation, traumatic events are actively split off from conscious experience but return in the disguised form of symptoms. The dissociated complexes have an underground psychological life, causing hysterics to "suffer mainly from reminiscences." Janet (1889) proposed that trauma-related dissociation occurred in individuals with a fundamental constitutional defect in psychological functioning, which he designated *la misere psychologique*. Janet proposed that normal individuals have sufficient psychological energy to bind together their mental experiences, including memories, cognitions, sensations, feelings, and volition, into an integrated synthetic whole under the control of a single personal self with access to conscious experience (Nemiah, in press). From Janet's perspective, peritraumatic dissociation results in the coexistence within a single individual of two or more discrete, dissociative streams of consciousness, each existing independently from the others, each with rich mental contents, including feelings, memories, and bodily sensations, and each with access to conscious experience at different times.

Contemporary psychological studies of peritraumatic dissociation have focused on individual differences in the threshold for dissociation. It is also possible that the threshold for peritraumatic dissociation or generalized dissociative vulnerability is a heritable trait, aggravated by early trauma exposure and correlated with hypnotizability, as suggested by Spiegel and colleagues (1988).

A second line of investigation concerning the underlying mechanisms for peritraumatic dissociation focuses on the neurobiology and neuropharmacology of anxiety. A yohimbine challenge study by Southwick and colleagues (1993) suggests that, in individuals with PTSD, flashbacks occur in the context of high-threat arousal states. It is also significant that panic-disordered patients frequently report dissociative reactions at the height of their anxiety attacks. The effects of yohimbine in triggering flashbacks in PTSD patients and panic attacks in patients with panic disorder is mediated by a central catecholamine mechanism, as yohimbine serves as an alpha-adrenergic receptor antagonist, resulting in increased firing of locus ceruleus neurons. These observations suggest that the relationship between peritraumatic dissociation and PTSD may, for some individuals, be mediated by high levels of anxiety during the trauma.

Marmar et al. (1996) reported on individual differences in the level of peritraumatic dissociation during critical-incident exposure in emergency services personnel. They found the following factors to be associated with greater levels of peritraumatic dissociation: younger age; higher levels of exposure during critical incident; greater subjective perceived threat at the time of critical incident; poorer general psychological adjustment; poorer identity formation; lower levels of ambition and prudence, as defined by the Hogan Personality Inventory; greater external locus of control; and greater use of escape/avoidance and emotional self-control coping. Taken together these findings suggest that emergency services personnel with less work experience, more vulnerable personality structures, higher subjective levels of perceived threat and anxiety at the time of incidence occurrence, greater reliance on the external world for an internal sense of safety and security, and greater use of maladaptive coping strategies are more vulnerable to peritraumatic dissociation.

*Treatment for Trauma Related Dissociation*. To date, no controlled clinical trials have been reported of psychosocial or pharmacological intervention specifically targeting trauma-related dissociation. Kluft (1993), in an overview of clinical reports on treatment approaches for trauma-related dissociation, recommends individual, supportive-expressive psychodynamic psychotherapy, augmented as needed with hypnosis or drug-facilitated interviews. In 1993, van der Hart and Spiegel advocated the use of hypnosis as a way of

creating a safe, calm mental state in which the patient has control over traumatic memories, as an approach to the treatment of trauma-induced dissociative states presenting as hysterical psychosis.

Contemporary psychodynamic approaches to the treatment of trauma-related dissociation emphasize the establishment of the therapeutic alliance, reconstruction of traumatic memories, working through of problematic weak and strong self-concepts activated by the trauma, and transference interpretation aimed at helping the patient process perceived threats in the relationship with the therapist without resorting to dissociation (Horowitz, 1986; Marmar, 1991). As the previously dissociative elements are brought in to a more coherent self, the further use of traditional psychodynamic psychotherapy can help the patient solidify gains, mourn losses, and resolve conflicts through interpretation.

From a neuropharmacological point of view, Pitman (personal communication, 1994) has advocated the use of medications to lower threat arousal levels at the time of traumatic occurrence. Alpha-2 adrenergic agonists, beta-blockers, or other nonsedating, antiarousal agents, could be provided to emergency services personnel to aid in the modulation of arousal responses to life-threatening or gruesome exposure. Advances in critical-incident stress-debriefing procedures may lead to psychological interventions that lower immediate threat appraisal and consequently reduce the likelihood of sustained peritraumatic dissociation.

### REFERENCES

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BREUER, J., & FREUD, S. (1955). **Studies on hysteria.** In J. Strachey (Ed. and Trans.), *The standard edition of the complete psychological works of Sigmund Freud* (Vol. 2). London: Hogarth Press. (Original work published 1895).

## SELECTED ABSTRACTS

BREMNER, J.D., & BRETT, E.A. (1997). **Trauma-related dissociative states and long-term psychopathology in posttraumatic stress disorder.** *Journal of Traumatic Stress, 10,* 37-49. Dissociative responses to trauma have been hypothesized to be associated with long-term increases in psychopathology. The purpose of this study was to examine dissociative responses to premilitary, combat-related and postmilitary traumatic events and long-term psychopathology in Vietnam combat veterans with (n = 34) and without (n = 28) PTSD. PTSD patients reported higher levels of dissociative states at the time of combat-related traumatic events than non-PTSD patients. Higher levels of dissociative states persisted in PTSD patients in the form of higher levels of dissociative states in response to postmilitary traumatic events. In addition, dissociative responses to combat trauma were associated with higher long-term general dissociative symptomatology as measured by scores on the Dissociative Experience Scale, as well as increases in the number of flashbacks since the time of the war. These findings are consistent with previous formulations that dissociation in the face of trauma is a marker of long-term psychopathology.

BREMNER, J.D. & MARMAR, C. (Eds.) (in press). *Trauma, memory, and dissociation.* Washington, DC: American Psychiatric Press. [Abstract not available at press deadline]

BREMNER, J.D., SOUTHWICK, S.M., BRETT, E., FONTANA, A., ROSENHECK, R.A., & CHARNEY, D.S. (1992). **Dissociation and posttraumatic stress disorder in Vietnam combat veterans.** *American Journal of Psychiatry, 149,* 328-332. OBJECTIVE: This study compared current dissociative symptoms and dissociation at the time of specific traumatic events in Vietnam combat veterans with PTSD and Vietnam combat veterans without PTSD. METHOD: Vietnam combat veterans who sought treatment for PTSD (N = 53) were compared to Vietnam combat veterans without PTSD (N = 32) who sought treatment for medical problems. Dissociative symptoms were evaluated with the Dissociative Experiences Scale. Dissociation at the time of a combat-related traumatic event was evaluated retrospectively with the modified Dissociative Experiences Questionnaire. The Combat Exposure Scale was used to measure level of combat exposure. RESULTS: There was a significantly higher level of dissociative symptoms, as measured by the Dissociative Experiences Scale, in patients with PTSD (mean = 27.0, SD = 18.0) than in patients without PTSD (mean = 13.7, SD = 16.0). This difference persisted when the difference in level of combat exposure was controlled with analysis of covariance. PTSD patients also reported more dissociative symptoms at the time of combat trauma, as measured retrospectively by the Dissociative Experiences Questionnaire (mean = 11.5, SD = 1.6) than non-PTSD patients (mean = 1.8, SD = 2.1). CONCLUSIONS: Dissociative symptoms are an important element of the long-term psychopathological response to trauma.

CARLSON, E. B., & ROSSER-HOGAN, R. (1991). **Trauma experiences, posttraumatic stress, dissociation, and depression in Cambodian refugees.** *American Journal of Psychiatry, 148,* 1548-1551. OBJECTIVE: The authors' goal was to determine the levels of trauma and psychiatric symptoms in a randomly selected group of Cambodian refugees and to determine the relationship between the amount of trauma experienced and subsequent psychiatric symptoms. METHOD: Data on traumatic experiences and symptoms of posttraumatic stress, dissociation, depression, and anxiety were collected on 50 randomly selected Cambodian refugees who had resettled in the United States. RESULTS: Subjects experienced multiple and severe traumas and showed high levels of all symptoms measured. 43 (86 percent) of the subjects met DSM-III-R criteria for PTSD, 48 (96 percent) had high dissociation scores, and 40 (80 percent) could be classified as suffering from clinical depression. Correlations between trauma scores and symptom scores and among symptom scores were moderate to large. CONCLUSIONS: These results indicate that a high proportion of Cambodian refugees who are not psychiatric patients suffer from severe psychiatric symptoms and that there is a relationship between the amount of trauma they experienced and the severity of these symptoms.

CHU, J.A. & DILL, D.L. (1990). **Dissociative symptoms in relation to childhood physical and sexual abuse.** *American Journal of Psychiatry, 147,* 887-892. Studies have reported high rates of childhood abuse in people with psychiatric illness. This study examined whether dissociative symptoms are specific to patients with histo-

ries of abuse. 98 female psychiatric inpatients completed self-report instruments that focused on childhood history of trauma, dissociative symptoms, and psychiatric symptoms in general. 63 percent of the subjects reported physical and/or sexual abuse. 83 percent had dissociative symptom scores above the median score of normal adults, and 24 percent had scores at or above the median score of patients with PTSD. Subjects with a history of childhood abuse reported higher levels of dissociative symptoms than those who did not.

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. Abstracted in *PTSD Research Quarterly, 3(3),* 1992.

HOLEN, A. (1993). **The North Sea oil rig disaster.** In J. P. Wilson & B. Raphael (Eds.), *International handbook of traumatic stress syndromes* (pp. 471-478). New York: Plenum Press. Survivors of the Alexander L. Kielland, an oil rig that capsized in the North Sea with great loss of life, were followed over an eight-year period. A wide range of long-term consequences was studied. At the time of the disaster dissociation was found to be significantly associated with the general short-term outcome. This was less so in the long term, where it was found to be associated with the avoidance score on the Impact of Event Scale.

KOOPMAN, C., CLASSEN, C. C., & SPIEGEL, D. (1994). **Predictors of posttraumatic stress symptoms among survivors of the Oakland/Berkeley, Calif., firestorm.** *American Journal of Psychiatry 151,* 888-894. OBJECTIVE: The purpose of this study was to examine factors predicting the development of posttraumatic stress symptoms after a traumatic event, the 1991 Oakland/Berkeley firestorm. The major predictive factors of interest were dissociative, anxiety, and loss of personal autonomy symptoms reported in the immediate aftermath of the fire; contact with the fire; and life stressors before and after the fire. METHOD: Subjects were recruited from several sources so that they would vary in their extent of contact with the fire. Of 187 participants who completed self-report measures about their experiences in the aftermath of the firestorm, 154 completed a follow-up assessment. Of these 154 subjects, 97 percent completed the follow-up questionnaires 7-9 months after the fire. The questionnaires included measures of posttraumatic stress and life events since the fire. RESULTS: Dissociative and loss of personal autonomy symptoms experienced in the fire's immediate aftermath, as well as stressful life experiences occurring later, significantly predicted posttraumatic stress symptoms measured 7-9 months after the firestorm by a civilian version of the Mississippi Scale for Combat-Related PTSD and the Impact of Event Scale. Dissociative symptoms more strongly predicted posttraumatic symptoms than did anxiety and loss of personal autonomy symptoms. Intrusive thinking differs from other kinds of posttraumatic symptoms in being related directly to the trauma and previous stressful life events. CONCLUSIONS: These findings suggest that dissociative symptoms experienced in the immediate aftermath of a traumatic experience and subsequent stressful experiences are indicative of risk for the later development of posttraumatic stress symptoms. Such measures may be useful as screening procedures for identifying those most likely to need clinical care to help them work through their reactions to the traumatic event and to subsequent stressful experiences.

MARMAR, C. R. (1991). **Brief dynamic psychotherapy of posttraumatic stress disorder.** *Psychiatric Annals, 21,* 404-414. The success of short-term psychotherapeutic interventions depends on the ability of the patient and therapist to enter quickly into a collaborative working process. Brief dynamic psychotherapy has its greatest applicability for individuals who present with PTSD several months to several years following traumatic stress events. Acute catastrophic stress reactions occur within hours or a few days of traumatic stress exposure. The impact of a traumatic event on the person's self-concept serves as an organizer for the unfolding of the treatment process. The brief treatment approach is best suited for relatively well-functioning individuals who suffer a single traumatic event in adult life.

MARMAR, C.R., WEISS, D.S., METZLER, T.J., & DELUCCHI, K. (1996). **Characteristics of emergency services personnel related to peritraumatic dissociation during critical incident exposure.** *American Journal of Psychiatry, 153 (Festschrift Supplement),* 94-102. Abstracted in *PTSD Research Quarterly, 8(2),* 1997.

MARMAR, C.R., WEISS, D.S., SCHLENGER, W.E., FAIRBANK, J.A., JORDAN, B.K., KULKA, R.A. & HOUGH, R.L. (1994). **Peritraumatic dissociation and posttraumatic stress in male Vietnam theater veterans.** *American Journal of Psychiatry 151,* 902-907. OBJECTIVE: The aim of this study was to determine the reliability and validity of a proposed measure of peritraumatic dissociation and, as part of that effort, to determine the relationship between dissociative experiences during disturbing combat trauma and the subsequent development of PTSD. METHOD: A total of 251 male Vietnam theater veterans from the Clinical Examination Component of the National Vietnam Veterans Readjustment Study were examined to determine the relationship of war zone stress exposure, retrospective reports of dissociation during the most disturbing combat trauma events, and general dissociative tendencies with PTSD case determination. RESULTS: The total score on the Peritraumatic Dissociation Experiences Questionnaire-Rater Version was strongly associated with level of posttraumatic stress symptoms, level of stress exposure, and general dissociative tendencies and weakly associated with general psychopathology scales from the MMPI-2. Logistic regression analyses supported the incremental value of dissociation during trauma, over and above the contributions of level of war zone stress exposure and general dissociative tendencies, in accounting for PTSD case determination. CONCLUSIONS: These results provide support for the reliability and validity of the Peritraumatic Dissociation Experiences Questionnaire-Rater Version and for a trauma-dissociation linkage hypothesis: the greater the dissociation during traumatic stress exposure, the greater the likelihood of meeting criteria for current PTSD.

PUTNAM, F.W. (1989). **Pierre Janet and modern views of dissociation.** *Journal of Traumatic Stress, 2,* 413-429. Pierre Janet's numerous important contributions to the understanding of dissociative disorders grew out of his background in philosophy, psychology, and medicine. A religious and even mystical man, he tempered his lifetime studies of psychopathology with precise observation and rigorous documentation. Janet was the first to articulate the clinical principles of the dissociative disorders and to systematically explore and treat the traumatic memories underlying dissociated behavior. He pioneered the use of abreaction and age-regression hypnotherapy techniques for exploring hidden trauma. Our clinical understanding of the dissociative disorders and their treatment stems in large measure from Pierre Janet's careful and thoughtful investigations a century ago.

SHALEV, A.Y., PERI, T., CANETTI, L. & SCHREIBER, S. **Predictors of PTSD in injured trauma survivors: A prospective study.**

(1996). *American Journal of Psychiatry 153,* 219-225. OBJECTIVE: The aim of this study was to prospectively examine the relationship between immediate and short-term responses to a trauma and the subsequent development of PTSD. METHOD: All patients consecutively admitted to a general hospital were screened for the presence of physical injury due to a traumatic event. 51 eligible subjects were assessed 1 week and 6 months after the trauma. The initial assessment included measures of event severity, peritraumatic dissociation, and symptoms of intrusion, avoidance, depression, and anxiety. The follow-up assessments added the PTSD module of the Structured Clinical Interview for DSM-III-R - Non-Patient Version and the civilian trauma version of the Mississippi Scale for Combat-Related PTSD. RESULTS: 13 subjects (25.5 percent) met PTSD diagnostic criteria at follow-up. Subjects who developed PTSD had higher levels of peritraumatic dissociation and more severe depression, anxiety, and intrusive symptoms at the 1-week assessment. Peritraumatic dissociation predicted a diagnosis of PTSD after 6 months over and above the contribution of other variables and explained 29.4 percent of the variance of PTSD symptom intensity. Initial scores on the Impact of Event Scale predicted PTSD status with 92.3 percent sensitivity and 34.2 percent specificity. Symptoms of avoidance that were initially very mild intensified in the subjects who developed PTSD. CONCLUSION: Peritraumatic dissociation is strongly associated with the later development of PTSD. Early dissociation and PTSD symptoms can help the clinician identify subjects at higher risk for developing PTSD.

SPIEGEL, D., HUNT, T., & DONDERSHINE, H.E. (1988). **Dissociation and hypnotizability in posttraumatic stress disorder.** *American Journal of Psychiatry, 145,* 301-305. The authors compared the hypnotizability of 65 Vietnam veteran patients with PTSD to that of a normal control group and four patient samples using the Hypnotic Induction Profile. The patients with PTSD had significantly higher hypnotizability scores than patients with diagnoses of schizophrenia (N = 23); major depression, bipolar disorder - depressed, and dysthymic disorder (N = 56); and generalized anxiety disorder (N = 18) and the control sample (N = 83). This finding supports the hypothesis that dissociative phenomena are mobilized as defenses both during and after traumatic experiences. The literature suggests that spontaneous dissociation, imagery, and hypnotizability are important components of PTSD symptoms.

TICHENOR, V., MARMAR, C.R., WEISS, D.S., METZLER, T.J., & RONFELDT, H.M. (1996). **The relationship of peritraumatic dissociation and posttraumatic stress: findings in female Vietnam theater veterans.** *Journal of Consulting and Clinical Psychology, 64,* 1054-1059. This study examined the relationship of dissociation at the time of trauma, as assessed by the Peritraumatic Dissociation Experiences Questionnaire, Rater Version (PDEQ-RV), and posttraumatic stress symptoms in a group of 77 female Vietnam theater veterans. PDEQ-RV ratings were found to be associated strongly with posttraumatic stress symptomatology, as measured by the Impact of Event Scale, and also positively associated with level of stress exposure and general dissociative tendencies, measured by the Dissociative Experiences Scale. The PDEQ-RV was unassociated with general psychiatric symptomatology, as assessed by the clinical scales of the Minnesota Multiphasic Personality Inventory-2. The PDEQ-RV was predictive of posttraumatic stress symptoms beyond the contributions of level of stress exposure and general dissociative tendencies. The findings provide further support for the reliability and validity of the PDEQ-RV as a measure of peritraumatic dissociation.

VAN DER HART, O. & SPIEGEL, D. (1993). **Hypnotic assessment and treatment of trauma-induced psychoses: The early psychotherapy of H. Breukink and modern views.** *International Journal of Clinical and Experimental Hypnosis, 41,* 191-209. The role of hypnotizability assessment in the differential diagnosis of psychotic patients is still unresolved. In this article, the pioneering work of Dutch psychiatrist H. Breukink (1860-1928) during the 1920s is used as early evidence that hypnotic capacity is clinically helpful in differentiating highly hypnotizable psychotic patients with dissociative symptomatology from schizophrenics. Furthermore, there is a long tradition of employing hypnotic capacity in the treatment of these dissociative psychoses. The ways in which Breukink used hypnosis for diagnostic, prognostic, and treatment purposes are summarized and discussed in light of both old and current views. He felt that hysterical psychosis was trauma-induced, certainly curable, and that psychotherapy using hypnosis was the treatment of choice. Hypnosis was used for symptom-oriented therapy, as a comfortable and supportive mental state, and for the uncovering and integrating of traumatic memories. For the latter purpose, Breukink emphasized a calm mental state, both in hypnosis and in the waking state, therapy discouraging emotional expression, which he considered dangerous in psychotic patients. In the discussion, special attention is paid to the role and dangers of the expression of trauma-related emotions.

VAN DER KOLK, B.A., BROWN, P., & VAN DER HART, O. (1989). **Pierre Janet on post-traumatic stress.** *Journal of Traumatic Stress, 2,* 365-378. More than one hundred years ago, in 1889, Pierre Janet published *L'Automatisme Psychologique*, his first work to deal with how the mind processes traumatic experiences. Janet claimed that vehement emotions interfere with proper appraisal and appropriate action. Failure to confront the experience fully leads to dissociation of the traumatic memories and their return as fragmentary reliving experiences: feeling states, somatic sensations, visual images, and behavioral reenactments. A century later, Janet still provides an unsurpassed framework for integrating current knowledge about the psychodynamic, cognitive, and biological effects of human traumatization.

WEISS, D.S., MARMAR, C.R., METZLER, T.J., & RONFELDT, H.M. (1995). **Predicting symptomatic distress in emergency services personnel.** *Journal of Consulting and Clinical Psychology, 63,* 361-368. This study identified predictors of symptomatic distress in emergency services (EMS) personnel exposed to traumatic critical incidents. A replication was performed in 2 groups: 154 EMS workers involved in the 1989 Interstate 880 freeway collapse during the San Francisco Bay area earthquake, and 213 counterparts from the Bay area and from San Diego. Evaluated predictors included exposure, social support, and psychological traits. Replicated analyses showed that levels of symptomatic distress were positively related to the degree of exposure to the critical incident. Level of adjustment was also related to symptomatic distress. After exposure, adjustment, social support, years of experience on the job, and locus of control were controlled, 2 dissociative variables remained strongly predictive of symptomatic response. The study strengthens the literature linking dissociative tendencies and experiences to distress from exposure to traumatic stressors.

# ADDITIONAL CITATIONS
## Annotated by the Editors

COONS, P.M., & MILSTEIN, V. (1986). **Psychosexual disturbances in multiple personality: Characteristics, etiology, and treatment.** *Journal of Clinical Psychiatry, 47,* 106-110.

Studied male and female psychiatric inpatients who had multiple personality disorder and found that 75% had been sexually abused and 55% had been physically abused in childhood. Compared with inpatients who did not have a dissociative disorder, the multiple personality patients were more likely to have psychosexual disturbances. The authors propose that multiple personality is an adaptive response to trauma in that an alternate personality can permit some degree of sexual functioning.

DANÇU, C.V., RIGGS, D.S., HEARST-IKEDA, D.E., SHOYER, B. G., & FOA, E.B. (1996). **Dissociative experiences and posttraumatic stress disorder among female victims of criminal assault and rape.** *Journal of Traumatic Stress, 9,* 253-267.

Prospectively examined the relationship between dissociative symptoms and PTSD in 158 female assault victims and 46 comparison women. A higher level of dissociative symptoms at 2 weeks was correlated with increased severity of PTSD at 3 months among nonsexual assault victims, but not among sexual assault victims. Dissociation was linked to a history of child sexual abuse.

FRISCHHOLZ, E.J. (1985). **The relationship among dissociation, hypnosis, and child abuse in the development of multiple personality disorder.** In R.P. Kluft (Ed.), *Childhood antecedents of multiple personality* (pp. 99-126). Washington, DC: American Psychiatric Press.

The concept of dissociation was originally developed to explain the symptoms of multiple personality disorder. MPD patients are more hypnotizable than other clinical groups, supporting the notion that hypnosis can be appropriately characterized as a form of dissociation. Child abuse and severity of childhood punishment have been shown to be related to adult hypnotic responsivity.

HOROWITZ, M.J. (1986). *Stress response syndromes* (2nd ed.). Northvale, NJ: Jason Aronson.

Investigates the characteristics of PTSD and other stress response syndromes. Describes principles of brief psychodynamic psychotherapy for stress-induced symptoms and signs, and explores behavioral therapies. Uses case histories to show how personality factors and preexisting conflicts form a patient's reaction to a traumatic event.

KLUFT, R.P. (1993). **Multiple personality disorder.** In D. Spiegel, (Ed.), *Dissociative disorders: A clinical review* (pp. 17-44). Lutherville, MD: Sidran Press.

Provides an overview of multiple personality disorder from historical and cross-cultural perspectives. Next, the author comprehensively describes phenomenology, etiology, differential diagnosis, comorbidity, and treatment. Includes the author's four-factor model of etiology, which emphasizes both personal and environmental influences on the development of MPD.

NEMIAH, J.C. (in press). **Early concepts of trauma, dissociation, and the unconscious: Their history and current implications.** In J.D. Bremner and C. Marmar (Ed.), *Trauma, memory, and dissociation.* Washington, DC: American Psychiatric Press.

Compares Breuer and Freud's approach to treating dissociated traumatic memories with Janet's approach. The author points out that whereas Janet targeted the cognitive aspects of traumatic memories, Breuer and Freud additionally targeted the distressing emotional aspects of such memories, in the process they termed "abreaction." The author also discusses this historical work in light of contemporary perspectives on dissociation.

PUTNAM, F.W., GUROFF, J.J., SILBERMAN, E.K., BARBAN, L., & POST, R.M. (1986). **The clinical phenomenology of multiple personality disorder: Review of 100 recent cases.** *Journal of Clinical Psychiatry, 47,* 285-293. Cited in *PTSD Research Quarterly, 3(3),* 1992.

SOUTHWICK, S.M., KRYSTAL, J.H., MORGAN, C.A., JOHNSON, D.R., NAGY, L.M., NICOLAOU, ANDREAS, L., HENINGER, G.R., & CHARNEY, D.S. (1993). **Abnormal noradrenergic function in posttraumatic stress disorder.** *Archives of General Psychiatry, 50,* 266-274.

Administered yohimbine and placebo in a cross over design to 18 male controls and 20 male military veterans with PTSD. Forty percent of the PTSD group, but no controls, had flashbacks during yohimbine administration. Results emphasize the role of the noradrenergic system in PTSD.

VAN DER KOLK, B.A. & VAN DER HART, O. (1989). **Pierre Janet and the breakdown of adaptation in psychological trauma.** *American Journal of Psychiatry, 146,* 1530-1540. Abstracted in *PTSD Research Quarterly, 1(1),* 1990.

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### WHAT'S NEW AT
### `http://www.dartmouth.edu/dms/ptsd/`

We have recently acquired software that will enable us to improve both the management of our World Wide Web site and the quality of the material we display there.

As our Web site grows in complexity, it is increasingly difficult to ensure that links among pages are updated to reflect the deletion of old content and the addition of new material. One of our new software packages will do this for us.

Another will enable us to convert many of our print publications into Portable Document Format (PDF). Anyone with the appropriate reader software—which is available free of charge, in versions for practically all computers—can then view or print a PDF file. Whether viewed on screen or printed onto paper (with a PostScript printer), a PDF file will look exactly like the printed document. Page layout, text fonts, illustrations—all will replicate the original. (Color fidelity will depend upon the monitor and printer used, but this will seldom be a significant issue in National Center publications.) We intend to begin by placing PDF versions of all back issues of the *PTSD Research Quarterly* on our Web site. Then we shall begin to post PDF files for most other National Center documents.

# NORTHEAST PROGRAM EVALUATION CENTER: THE EVALUATION DIVISION OF THE NATIONAL CENTER FOR PTSD

Robert Rosenheck, MD and Alan Fontana, PhD

The delivery of health care services in this country is undergoing unprecedented change. Changes in health care delivery appear to be inspired by a need to reduce health care costs. From another perspective, however, the changes also reflect an effort to use empirical data on the effectiveness and cost of health services to provide a rational basis for deciding which services and how much of each service are needed to meet the needs of each patient.

The VA is the largest provider of services for PTSD in the United States, treating approximately 87,000 veterans with PTSD annually, at an estimated annual cost of $250 million. Although VA services are funded by an annual Congressional appropriation, VA is, nevertheless, experiencing many of the same pressures that are affecting health care delivery elsewhere. Major changes in large organizations like VA present both opportunities and hazards for relatively small, vulnerable populations like veterans with PTSD.

The Northeast Program Evaluation Center, the Evaluation Division of the National Center for PTSD, has been charged with monitoring the structure, process, and outcome of PTSD treatment through this period of change. Over the past year NEPEC has provided the Congress, VA leaders, and field programs with extensive information on access, population coverage, service delivery, clinical outcomes, consumer satisfaction, and costs of PTSD services. These data have provided the basis for significant changes in the delivery of VA PTSD inpatient services, and have been used to establish benchmarks for delivery of PTSD services that will be used to evaluate system performance in the future. Directed by Robert Rosenheck MD, Clinical Professor of Psychiatry at Yale Medical School, NEPEC is located on the West Haven Campus of the VA Connecticut Health Care System. It was established in 1987 for the purpose of evaluating new VA programs for veterans with PTSD, homeless veterans, and severely mentally ill veterans. Alan Fontana PhD, Research Scientist at Yale, joined NEPEC in 1988 as Director of PTSD Evaluations.

During the first 7 years of NEPEC's existence, staff were responsible for guiding and evaluating the implementation of over 70 PTSD outpatient clinics and over 25 new inpatient and residential treatment units. In addition, more than 40 research and evaluation studies were published, addressing the causes and consequences of PTSD, and the effectiveness and cost of VA treatment. The first national outcome studies of inpatient and outpatient PTSD treatment demonstrated previously unexamined variability in cost and effectiveness of various types of VA PTSD programs, and these studies have played an important role in the reconfiguration of VA inpatient PTSD treatment services during the past year. A series of studies of the etiology of PTSD demonstrated the importance of the premilitary and homecoming experiences in the genesis of PTSD, as well as the strong relationship between PTSD and sexual harassment and abuse among women who served in the Vietnam Theater. Related studies elucidated the relationship of PTSD to homelessness, suicide, and anti-social behavior, and evaluated the role of race as a factor in treatment.

As the VA has experienced changes in operating procedures during the past two years, NEPEC has been asked to provide performance data. In October 1996, the Eligibility Reform Law required that VA maintain its capacity to treat disabled veterans with mental illness, including those with PTSD. NEPEC provided benchmark data for the implementation of that law, concerning the number of veterans receiving specialized PTSD treatment and on the quality of PTSD treatment, using measures that are the standard in private sector assessment of the performance of managed care organizations. A recent report on clinical outcomes of over 3,000 veterans, from a national sample of over 60 intensive PTSD programs, presented the most comprehensive outcome data yet available from any VA mental health program.

Clinical trial methods are generally inapplicable in the evaluation of care provided in large health care systems. New methods are needed to address specific methodological problems of sample selection, data collection, outcome measurement, and risk adjustment. These challenges are being addressed at NEPEC, which will play a central role in national efforts to maintain accessible, high-quality services for veterans with PTSD in the future.

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## PILOTS UPDATE

We are well into the triennial revision of the PILOTS Thesaurus, the controlled vocabulary of terms that we use to standardize our indexing of the traumatic stress literature. We are adding many new descriptors, and deleting a few that have not proved useful to our indexers. In many cases, we are modifying the scope of an existing descriptor, or changing its relationship to other terms in the Thesaurus. These changes will enable us to keep up with new trends in the traumatic stress literature and to make the database more useful to users from a growing number of disciplines.

Some changes are forced upon us by front-page events. The Rwandan genocide had tumultuous effects on the politics of Zaire, leading to the overthrow of the Mobotu regime and the resumption of the country's earlier name. But we cannot simply follow the new Kinshasa government's example. The descriptor "Congolese" has already been reserved for publications about the other Congo, the one whose capital is Brazzaville; and recent civil warfare there suggests that Congo (Brazzaville) is as likely to call forth contributions to the PTSD literature as is Congo (Kinshasa). These parenthetical distinctions are employed by the U.S. State Department, whose example we would ordinarily follow. However, parentheses have a definite meaning in Boolean searching, and using them as part of a PILOTS descriptor would be incompatible with the software used by the Dartmouth College computers that host the PILOTS database. So we shall continue to employ "Congolese" with respect to traumatic stress in Congo (Brazzaville), and "Zairians" for Congo (Kinshasa). We shall expand the scope notes for these terms to explain precisely to whom each refers. And we shall not be too surprised if a future Kinshasa government changes the name of the country yet again.

Other changes reflect new developments in the assessment and treatment of PTSD. Distinctions among drugs that once seemed sharp might be elided by new pharmacological discoveries. Innovations in psychotherapy might give rise to a new literature. There may be considerable argument among practitioners about the efficacy of Thought Field Therapy, but from a bibliographer's viewpoint the existence of a literature about it makes it an entity as valid as any more-established treatment approach.

The most important changes in the PILOTS Thesaurus arise from a better understanding of the traumatic stress literature. When we began our indexing work, we based our descriptors for mental disorders on the terminology established by *DSM-III-R*. But only in the case of PTSD did we restrict our use of a descriptor to those papers describing symptoms that met the formal criteria for the *DSM* diagnosis. While this can be defended in the case of disorders infrequently mentioned in the literature of traumatic stress, it has not worked well in dealing with the voluminous literature on dissociative symptoms associated with traumatic events. So we intend to restrict "Dissociative Disorders" to those papers reporting symptoms supporting the formal diagnosis, and to employ a new descriptor ("Dissociative Symptoms") for papers dealing with less pervasive dissociative phenomena or with dissociation viewed as a symptom of PTSD.

In this case, as in several others, we shall have to examine all the papers that we had indexed under the established term to find those whose descriptors must be changed to conform to the new edition of the Thesaurus. Unlike many databases, which implement changes on a prospective basis only, the PILOTS database applies new or changed descriptors on a retrospective basis. This makes it easier for searchers to find what they need, but it imposes a substantial burden on the National Center's bibliographical staff, and a lesser one on database users. It is our task not only to improve the Thesaurus but also to ensure that it is applied consistently to the traumatic stress literature, both old and new. It is the user's task to ensure that he or she is using the latest version of the PILOTS Thesaurus and the *PILOTS Database User's Guide* whenever searching the database.

We published the first edition of the *User's Guide* in October 1971, and the second edition in November 1994. Both contained the complete PILOTS Thesaurus, as well as instructions for the database. It would seem appropriate to publish a third edition in November 1997, but we have reservations about this.

The rapidly-changing environment in which we operate has made each edition of the *PILOTS Database User's Guide* outdated almost from the date of publication. We have no reason to expect the pace of change to slacken. With this in mind, as well as the cost of publishing and distributing a printed manual, we are wondering if the third edition of the *User's Guide* should appear in electronic form, as a series of hypertext-linked pages on our Web site. This would allow revisions to be made on a timely basis, and would also make the *User's Guide* available whenever and wherever it was needed.

We solicit suggestions from PILOTS database users and from readers of the *PTSD Research Quarterly*, on both the future of the *PILOTS Database User's Guide* and the revision of the PILOTS Thesaurus. We have posted an outline of proposed changes on our Web site, at `<http://www.dartmouth/edu/dms/ptsd/Thesaurus_Revision.html>`, and we are eager to hear what those who use the traumatic stress literature have to say about them.

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