CME

# Developmental Trauma Disorder

## Toward a rational diagnosis for children with complex trauma histories.

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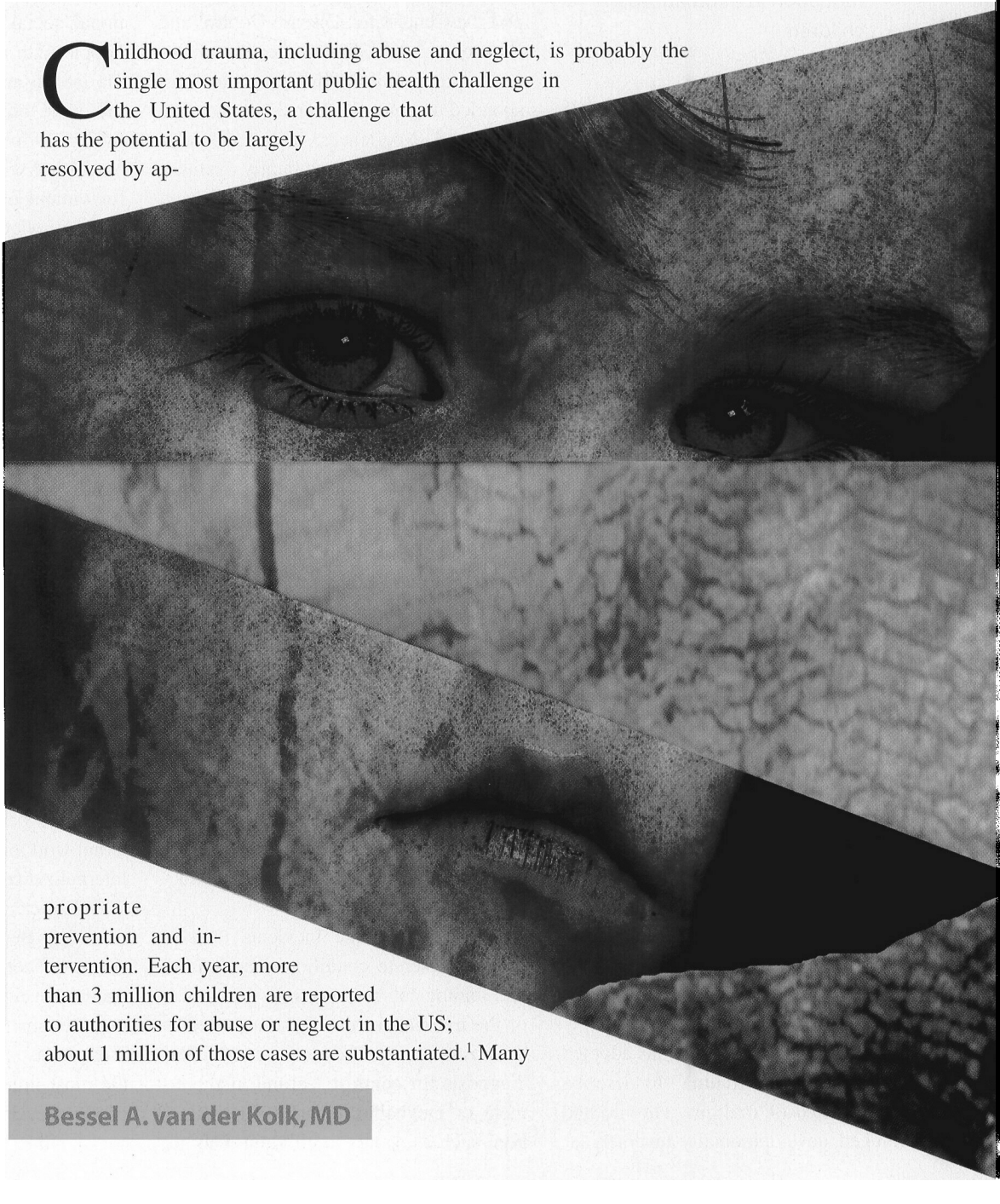

Childhood trauma, including abuse and neglect, is probably the single most important public health challenge in the United States, a challenge that has the potential to be largely resolved by appropriate prevention and intervention. Each year, more than 3 million children are reported to authorities for abuse or neglect in the US; about 1 million of those cases are substantiated.[1] Many

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**EDUCATIONAL OBJECTIVES**

1. Identify emotional triggers and patterns of re-enactment in traumatized children.
2. Discuss the spectrum of developmental derailments secondary to complex trauma exposure.
3. Describe patterns of accommodation in traumatized children.

thousands more undergo traumatic medical and surgical procedures and are victims of accidents and of community violence (see Spinazzola et al., page 433). However, most trauma begins at home; the vast majority of people (about 80%) responsible for child maltreatment are children's own parents.

Inquiry into developmental milestones and family medical history is routine in medical and psychiatric examinations. In contrast, social taboos prevent obtaining information about childhood trauma, abuse, neglect, and other exposures to violence. Research has shown that traumatic childhood experiences not only are extremely common but also have a profound impact on many different areas of functioning. For example, children exposed to alcoholic parents or domestic violence rarely have secure childhoods; their symptomatology tends to be pervasive and multifaceted and is likely to include depression, various medical illnesses, and a variety of impulsive and self-destructive behaviors. Approaching each of these problems piecemeal, rather than as expressions of a vast system of internal disorganization, runs the risk of losing sight of the forest in favor of one tree.

## COMPLEX TRAUMA

The traumatic stress field has adopted the term "complex trauma" to describe the experience of multiple, chronic and prolonged, developmentally adverse traumatic events, most often of an interpersonal nature (eg, sexual or physical abuse, war, community violence) and early-life onset. These exposures often occur within the child's caregiving system and include physical, emotional, and educational neglect and child maltreatment beginning in early childhood (Cook et al., page 390, and Spinazzola et al., page 433).

In the Adverse Childhood Experiences (ACE) study by Kaiser Permanente and the Centers for Disease Control and Prevention,[2] 17,337 adult health maintenance organization (HMO) members responded to a questionnaire about adverse childhood experiences, including childhood abuse, neglect, and family dysfunction. Eleven percent reported having been emotionally abused as a child, 30.1% reported physical abuse, and 19.9% sexual abuse. In addition, 23.5% reported being exposed to family alcohol abuse, 18.8% were exposed to mental illness, 12.5% witnessed their mothers being battered, and 4.9% reported family drug abuse.

The ACE study showed that adverse childhood experiences are vastly more common than recognized or acknowledged and that they have a powerful relationship to adult health a half-century later. The study confirmed earlier investigations that found a highly significant relationship between adverse childhood experiences and depression, suicide attempts, alcoholism, drug abuse, sexual promiscuity, domestic violence, cigarette smoking, obesity, physical inactivity, and sexually transmitted diseases. In addition, the more adverse childhood experiences reported, the more likely a person was to develop heart disease, cancer, stroke, diabetes, skeletal fractures, and liver disease.

Isolated traumatic incidents tend to produce discrete conditioned behavioral and biological responses to reminders of the trauma, such as those captured in the posttraumatic stress disorder (PTSD) diagnosis. In contrast, chronic maltreatment or inevitable repeated traumatization, such as occurs in children who are exposed to repeated medical or surgical procedures, have a pervasive effects on the development of mind and brain.

Chronic trauma interferes with neurobiological development (Ford, see page 410) and the capacity to integrate sensory, emotional and cognitive information into a cohesive whole. Developmental trauma sets the stage for unfocused responses to subsequent stress,[3] leading to dramatic increases in the use of medical, correctional, social and mental health services.[4] People with childhood histories of trauma, abuse and neglect make up almost the entire criminal justice population in the US.[5] Physical abuse and neglect are associated with very high rates of arrest for violent offenses. In one prospective study of victims of abuse and neglect, almost half were arrested for nontraffic-related offenses by age 32.[6] Seventy-five percent of perpetrators of child sexual abuse report to have themselves been sexually abused during childhood.[7]

These data suggest that most interpersonal trauma on children is perpetuated by victims who grow up to become perpetrators or repeat victims of violence. This tendency to repeat represents an integral aspect of the cycle of violence in our society.

## TRAUMA, CAREGIVERS, AND AFFECT TOLERANCE

Children learn to regulate their behavior by anticipating their caregivers' responses to them.[8] This interaction allows them to construct what Bowlby called "internal working models."[9] A child's internal working models are defined by the internalization of the affective and cognitive characteristics of their primary relationships. Because early experiences occur in the context of a developing brain, neural development and social interaction are inextricably intertwined. As Don Tucker has said: "For the human brain, the most important information for successful development is conveyed by the social rather than the physical environ-

ment. The baby brain must begin participating effectively in the process of social information transmission that offers entry into the culture."[10]

Early patterns of attachment affect the quality of information processing throughout life.[11] Secure infants learn to trust both what they feel and how they understand the world. This allows them to rely on both their emotions and their thoughts to react to any given situation. Their experience of feeling understood provides them with the confidence that they are capable of making good things happen and that, if they do not know how to deal with difficult situations, they can find people who can help them find a solution.

Secure children learn a complex vocabulary to describe their emotions, such as love, hate, pleasure, disgust, and anger. This allows them to communicate how they feel and to formulate efficient response strategies. They spend more time describing physiological states such as hunger and thirst, as well as emotional states, than do maltreated children.[12]

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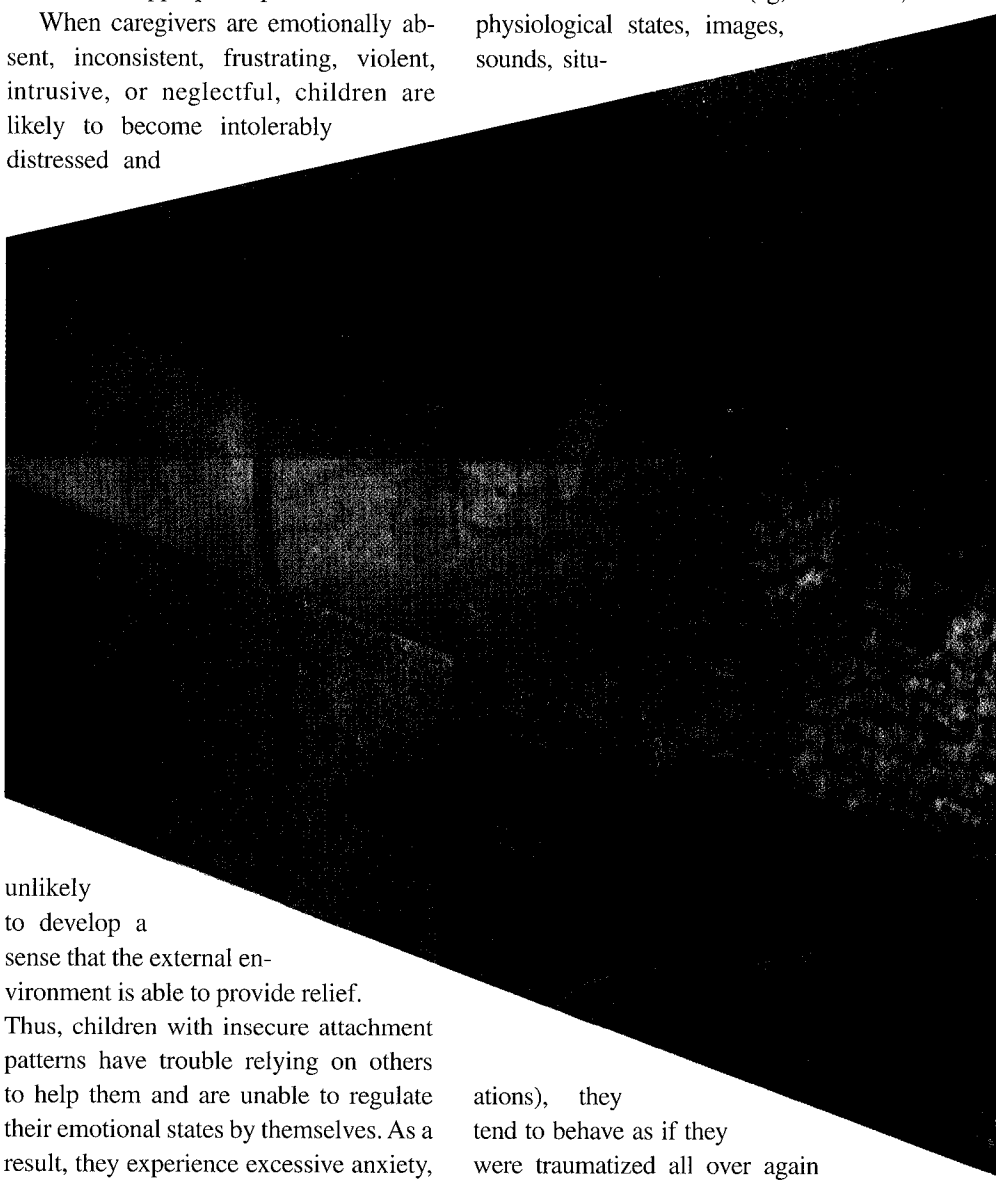
Under most conditions, parents are able to help their distressed children restore a sense of safety and control. The security of the attachment bond mitigates against trauma-induced terror. When trauma occurs in the presence of a supportive, if helpless, caregiver, the child's response is likely to mimic that of the parent — the more disorganized the parent, the more disorganized the child.[13]

However, if the distress is overwhelming, or when the caregivers themselves are the source of the distress, children are unable to modulate their arousal. This causes a breakdown in their capacity to process, integrate, and categorize what is happening. At the core of traumatic stress is a breakdown in the capacity to regulate internal states. If the distress does not ease, the relevant sensations, affects, and cognitions cannot be associated — they are dissociated into sensory fragments[14] — and, as a result, these children cannot comprehend what is happening or devise and execute appropriate plans of action.

When caregivers are emotionally absent, inconsistent, frustrating, violent, intrusive, or neglectful, children are likely to become intolerably distressed and unlikely to develop a sense that the external environment is able to provide relief. Thus, children with insecure attachment patterns have trouble relying on others to help them and are unable to regulate their emotional states by themselves. As a result, they experience excessive anxiety, anger, and longings to be taken care of. These feelings may become so extreme as to precipitate dissociative states or self-defeating aggression. "Spaced out" and hyperaroused children learn to ignore either what they feel (their emotions), or what they perceive (their cognitions).

When children are unable to achieve a sense of control and stability, they become helpless. If they are unable to grasp what is going on and unable do anything about it to change it, they go immediately from (fearful) stimulus to (fight/flight/freeze) response without being able to learn from the experience. Subsequently, when exposed to reminders of a trauma (eg, sensations, physiological states, images, sounds, situations), they tend to behave as if they were traumatized all over again — as a catastrophe.[15] Many problems of traumatized children can be understood as efforts to minimize objective threat and to regulate their emotional distress.[16] Unless caregivers understand the nature of such



SIDEBAR

## Developmental Trauma Disorder

**A. Exposure**

- Multiple or chronic exposure to one or more forms of developmentally adverse interpersonal trauma (eg, abandonment, betrayal, physical assaults, sexual assaults, threats to bodily integrity, coercive practices, emotional abuse, witnessing violence and death).
- Subjective experience (eg, rage, betrayal, fear, resignation, defeat, shame).

**B. Triggered pattern of repeated dysregulation in response to trauma cues**

Dysregulation (high or low) in presence of cues. Changes persist and do not return to baseline; not reduced in intensity by conscious awareness.

- Affective.
- Somatic (eg, physiological, motoric, medical).
- Behavioral (eg, re-enactment, cutting).
- Cognitive (eg, thinking that it is happening again, confusion, dissociation, depersonalization).
- Relational (eg, clinging, oppositional, distrustful, compliant).
- Self-attribution (eg, self-hate, blame).

**C. Persistently Altered Attributions and Expectancies**

- Negative self-attribution.
- Distrust of protective caretaker.
- Loss of expectancy of protection by others.
- Loss of trust in social agencies to protect.
- Lack of recourse to social justice/retribution.
- Inevitability of future victimization.

**D. Functional Impairment**

- Educational.
- Familial.
- Peer.
- Legal.
- Vocational.

re-enactments, they are likely to label the child as "oppositional," "rebellious," "unmotivated," or "antisocial."

## THE DYNAMICS OF CHILDHOOD TRAUMA

Young children, still embedded in the here-and-now and lacking the capacity to see themselves in the perspective of the larger context, have no choice but to see themselves as the center of the universe. In their eyes, everything that happens is related directly to their own sensations. Development consists of learning to master and "own" one's experiences and to learn to experience the present as part of one's personal experience over time.[17] Piaget[18] called this "decentration": moving from being one's reflexes, movements, and sensations to having them.

Predictability and continuity are critical for a child to develop a good sense of causality and learn to categorize experience. A child needs to develop categories to be able to place any particular experience in a larger context. Only then will he or she be able to evaluate what is happening and entertain a range of options with which they can affect the outcome of events. Imagining being able to play an active role leads to problem-focused coping.[15]

If children are exposed to unmanageable stress and if the caregiver does not take over the function of modulating the child's arousal, as occurs when children are exposed to family dysfunction or violence, the child will be unable to organize and categorize experiences in a coherent fashion. Unlike adults, children do not have the option to report, move away or otherwise protect themselves; they depend on their caregivers for their very survival.

When trauma emanates from within the family, children experience a crisis of loyalty and organize their behavior to survive within their families. Being prevented from articulating what they observe and experience, traumatized children will organize their behavior around keeping the secret, deal with their helplessness with compliance or defiance, and acclimate in any way they can to entrapment in abusive or neglectful situations.[19]

When professionals are unaware of children's need to adjust to traumatizing environments and expect that children should behave in accordance with adult standards of self-determination and autonomous, rational choices, these maladaptive behaviors tend to inspire revulsion and rejection. Ignorance of this fact is likely to lead to labeling and stigmatizing children for behaviors that are meant to ensure survival.

Being left to their own devices leaves chronically traumatized children with deficits in emotional self-regulation. This results in problems with self-definition as reflected by a lack of a continuous sense of self, poorly modulated affect and impulse control, including aggression against self and others, and uncertainty about the reliability and predictability of others, expressed as distrust, suspiciousness, and problems with intimacy, resulting in social isolation.[20] Chronically traumatized children tend to suffer from distinct alterations in states of consciousness, including amnesia, hypermnesia, dissociation, depersonalization and derealization, flashbacks and nightmares of specific events, school

problems, difficulties in attention regulation, disorientation in time and space, and sensorimotor developmental disorders. The children often are literally are "out of touch" with their feelings, and often have no language to describe internal states.[21]

When a child lacks a sense of predictability, he or she may experience difficulty developing object constancy and inner representations of their own inner world or their surroundings. As a result, they lack a good sense of cause and effect and of their own contributions to what happens to them. Without internal maps to guide them, they act instead of plan and show their wishes in their behaviors, rather than discussing what they want.[15] Unable to appreciate clearly who they or others are, they have problems enlisting other people as allies on their behalf. Other people are sources of terror or pleasure but are rarely fellow human beings with their own sets of needs and desires.

***A history of childhood physical and sexual assault is associated with a host of other psychiatric diagnoses in adolescence and adulthood.***

These children also have difficulty appreciating novelty. Without a map to compare and contrast, anything new is potentially threatening. What is familiar tends to be experienced as safer, even if it is a predictable source of terror.[15]

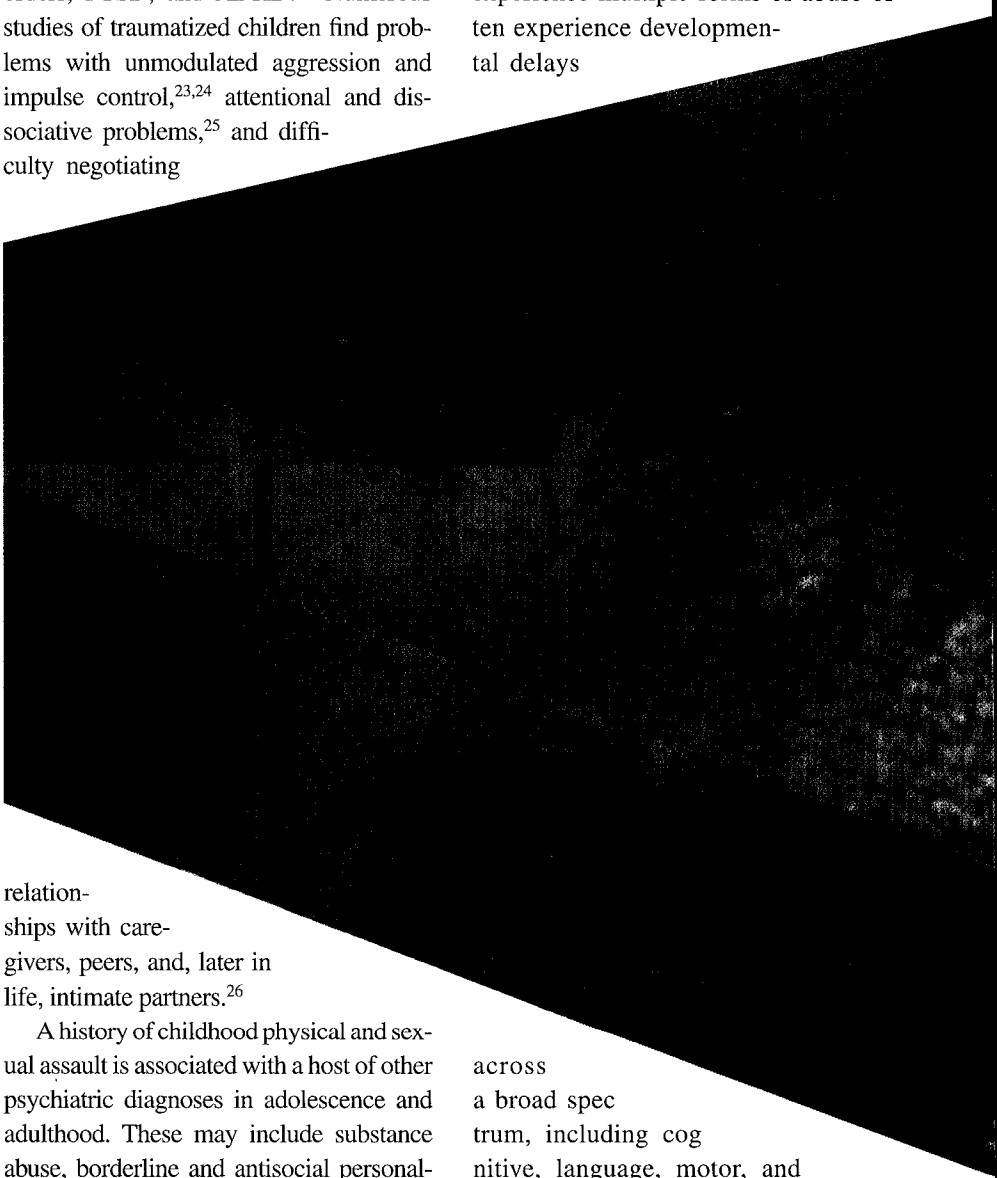
Traumatized children rarely discuss their fears and traumas spontaneously. They also have little insight into the relationship between what they do, what they feel, and what has happened to them. They tend to communicate the nature of their traumatic past by repeating it in the form of interpersonal enactments, both in their play and in their fantasy lives.

## CHILDHOOD TRAUMA AND PSYCHIATRIC ILLNESS

Posttraumatic stress disorder (PTSD) is not the most common psychiatric diagnosis in children with histories of chronic trauma (Cook et al., see page 390). For example, in one study of 364 abused children,[22] the most common diagnoses in order of frequency were separation anxiety disorder, oppositional defiant disorder, phobic disorders, PTSD, and ADHD.[22] Numerous studies of traumatized children find problems with unmodulated aggression and impulse control,[23,24] attentional and dissociative problems,[25] and difficulty negotiating relationships with caregivers, peers, and, later in life, intimate partners.[26]

A history of childhood physical and sexual assault is associated with a host of other psychiatric diagnoses in adolescence and adulthood. These may include substance abuse, borderline and antisocial personality, or eating, dissociative, affective, somatoform, cardiovascular, metabolic, immunologic, and sexual disorders.[27]

The results of the *Diagnostic and Statistical Manual of Mental Disorders*, fourth ediction (*DSM-IV*),[28] Field Trial suggested that trauma has its most pervasive impact during the first decade of life and becomes more circumscribed (ie, more like "pure" PTSD) with age.[29] The diagnosis of PTSD is not developmentally sensitive and does not adequately describe the effect of exposure to childhood trauma on the developing child. Because infants and children who experience multiple forms of abuse often experience developmental delays across a broad spectrum, including cognitive, language, motor, and socialization skills,[30] they tend to display very complex disturbances, with a variety of different, often fluctuating, presentations.



However, because there currently is

no other diagnostic entity that describes the pervasive effects of trauma on child development, these children are given a range of "comorbid" diagnoses, as if they occurred independently from the PTSD symptoms. None of these do justice to the spectrum of problems of traumatized children, and none provide guidelines on what is needed for effective prevention and intervention. By relegating the full spectrum of trauma-related problems 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.

## A NEW DIAGNOSIS: DEVELOPMENTAL TRAUMA DISORDER

The question of how best to organize the very complex emotional, behavioral, and neurobiological sequelae of childhood trauma has vexed clinicians for several decades. Because *DSM-IV* includes a diagnosis for adult onset trauma, PTSD, this label often is applied to traumatized children as well. However, the majority of traumatized children do not meet diagnostic criteria for PTSD[31] (Cook et al., see page 390), and PTSD cannot capture the multiplicity of exposures over critical developmental periods.

Moreover, the PTSD diagnosis does not capture the developmental effects of childhood trauma: the complex disruptions of affect regulation; the disturbed attachment patterns; the rapid behavioral regressions and shifts in emotional states; the loss of autonomous strivings; the aggressive behavior against self and others; the failure to achieve developmental competencies; the loss of bodily regulation in the areas of sleep, food, and self-care; the altered schemas of the world; the anticipatory behavior and traumatic expectations; the multiple somatic problems, from gastrointestinal distress to headaches; the apparent lack of awareness of danger and resulting self endangering behaviors; the self-hatred and self-blame; and the chronic feelings of ineffectiveness.

Interestingly, many forms of interpersonal trauma, in particular psychological maltreatment, neglect, separation from caregivers, traumatic loss, and inappropriate sexual behavior, do not necessarily meet *DSM-IV* "Criterion A" definition for a traumatic event. This criteria requires, in part, an experience involving "actual or threatened death or serious injury, or a threat to the physical integrity of self or others."[28] Children exposed to these common types of interpersonal adversity thus typically would not qualify for a PTSD diagnosis unless they also were exposed to experiences or events that qualify as "traumatic," even if they have symptoms that would otherwise warrant a PTSD diagnosis.

This finding has several implications for the diagnosis and treatment of traumatized children and adolescents. Non-Criterion A forms of childhood trauma exposure — such as psychological or emotional abuse and traumatic loss — have been demonstrated to be associated with PTSD symptoms and self-regulatory impairments in children[32] and into adulthood.[33] Thus, classification of traumatic events may need to be defined more broadly, and treatment may need to address directly the sequelae of these interpersonal adversities, given their prevalence and potentially severe negative effects on children's development and emotional health.

The Complex Trauma taskforce of the National Child Traumatic Stress Network has been concerned about the need for a more precise diagnosis for children with complex histories. In an attempt to more clearly delineate what these children suffer from and to serve as a guide for rational therapeutics this taskforce has started to conceptualize a new diagnosis, provisionally called developmental trauma disorder (Sidebar, see page 404). This proposed diagnosis is organized around the issue of triggered dysregulation in response to traumatic reminders, stimulus generalization, and the anticipatory organization of behavior to prevent the recurrence of the trauma effects.

This provisional diagnosis is based on the concept that multiple exposures to interpersonal trauma, such as abandonment, betrayal, physical or sexual assaults, or witnessing domestic violence, have consistent and predictable consequences that affect many areas of functioning. These experiences engender intense affects, such as rage, betrayal, fear, resignation, defeat, and shame, and efforts to ward off the recurrence of those emotions, including the avoidance of experiences that precipitate them or engaging in behaviors that convey a subjective sense of control in the face of potential threats. These children tend to reenact their traumas behaviorally, either as perpetrators (eg, aggressive or sexual acting out against other children) or in frozen avoidance reactions. Their physiological dysregulation may lead to multiple somatic problems, such as headaches and stomachaches, in response to fearful and helpless emotions.

Persistent sensitivity to reminders interferes with the development of emotional regulation and causes long-term emotional dysregulation and precipitous behavior changes. Children's over- and underreactivity is manifested on multiple levels: emotional, physical, behavioral, cognitive, and relational. They have fearful, enraged, or avoidant emotional reactions to minor stimuli that would have no significant effect on secure children. After having become aroused, these children have a great deal of difficulty restoring homeostasis and returning to baseline. Insight and understanding about the origins of their reactions seems to have little effect.

In addition to the conditioned physiological and emotional responses to reminders characteristic of PTSD, children with complex trauma develop a view of the world that incorporates their betrayal

and hurt. They anticipate and expect the trauma to recur and respond with hyperactivity, aggression, defeat, or freeze responses to minor stresses. Cognition in these children also is affected by reminders of the trauma. They tend to become confused, dissociated, and disoriented when faced with stressful stimuli. They easily misinterpret events in the direction of a return of trauma and helplessness, which causes them to be constantly on guard, frightened, and overreactive.

In addition, expectations of a return of the trauma permeate their relationships. This is expressed as negative self-attributions, loss of trust in caretakers, and loss of the belief that some somebody will look after them and make them feel safe. They tend to lose the expectation that they will be protected and act accordingly. As a result, they organize their relationships around the expectation or prevention of abandonment or victimization. This is expressed as excessive clinging, compliance, oppositional defiance, and distrustful behavior. They also may be preoccupied with retribution and revenge. All of these problems are expressed in dysfunction in multiple areas of functioning: educational, familial, peer-related, legal, and work-related.

*After a child is traumatized multiple times, the imprint of the trauma becomes lodged in many aspects of his or her makeup.*

## TREATMENT IMPLICATIONS

In the treatment of traumatized children and adolescents, there often is a painful dilemma of whether to keep them in the care of people or institutions who are sources of hurt and threat, or whether to play into abandonment and separation distress by taking the child away from familiar environments and people to whom they are intensely attached but who are likely to cause further substantial damage.[15] Treatment must focus on three primary areas: establishing safety and competence, dealing with traumatic re-enactments, and integration and master of the body and mind.

### Establishing Safety and Competence

Complexly traumatized children need to be helped to engage their attention in pursuits that do not remind them of trauma-related triggers and that give them a sense of pleasure and mastery. Safety, predictability, and "fun" are essential for the establishment of the capacity to observe what is going on, put it into a larger context, and initiate physiological and motoric self-regulation.

Before addressing anything else, these children need to be helped how to react differently from their habitual fight/flight/freeze reactions.[15] Only after children develop the capacity to focus on pleasurable activities without becoming disorganized do they have a chance to develop the capacity to play with other children, engage in simple group activities and deal with more complex issues.

### Dealing With Traumatic Re-enactments

After a child is traumatized multiple times, the imprint of the trauma becomes lodged in many aspects of his or her makeup. This is manifested in multiple ways: fearful reactions, aggressive and sexual acting out, avoidance, and uncontrolled emotional reactions. Unless this tendency to repeat the trauma is recognized, the response of the environment is likely to replay the original traumatizing, abusive, but familiar, relationships. Because these children are prone to experience anything novel, including rules and other protective

interventions, as punishments, they tend to regard teachers and therapists who try to establish safety as perpetrators.[15]

### Integration and Mastery

Mastery is, most of all, a physical experience: the feeling of being in charge, calm, and able to engage in focused efforts to accomplish goals. Children who have been traumatized experience the trauma-related hyperarousal and numbing on a deeply somatic level. Their hyperarousal is apparent in their inability to relax and in their high degree of irritability.

Children with "frozen" reactions need to be helped to re-awaken their curiosity and to explore their surroundings. They avoid engagement in activities because any task may unexpectedly turn into a traumatic trigger. Neutral, "fun" tasks and physical games can provide them with knowledge of what it feels like to be relaxed and to feel a sense of physical mastery.

## SUMMARY

At the center of therapeutic work with terrified children is helping them realize that they are repeating their early experiences and helping them find new ways of coping by developing new connections between their experiences, emotions and physical reactions. Unfortunately, all too often, medications take the place of helping children acquire the skills necessary to deal with and master their uncomfortable physical sensations. To "process" their traumatic experiences, these children first need to develop a safe space where they can "look at" their traumas without repeating them and making them real once again.[15]

## REFERENCES


1. *Child Maltreatment 2001*. US Department of Health and Human Services, Administration on Children, Youth and Families. 2003. Available at: http://www.acf.dhhs.gov/programs/cb/publications/cm01/outcover.htm. Accessed April 13, 2005.
2. Felitti VJ, Anda RF, Nordenberg D, et al. Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults. The Adverse Childhood Experiences (ACE) Study. *Am J Prev Med*. 1998;14(4):245-258.
3. Cicchetti D, Toth SL. Developmental psychopathology and disorders of affect. In: Cicchetti D, Cohen DJ, eds. *Developmental Psychopathology, Vol. 2: Risk, Disorder, and Adaptation*. New York, NY: John Wiley & Sons; 1995:369-420.
4. Drossman DA, Leserman J, Nachman G, et al. Sexual and physical abuse in women with functional or organic gastrointestinal disorders. *Ann Intern Med*. 1990;113(11):828-833.
5. Teplin LA, Abram KM, McClelland GM, Dulcan MK, Mericle AA. Psychiatric disorders in youth in juvenile detention. *Arch Gen Psychiatry*. 2002; 59(12):1133-1143.
6. Widom CS, Maxfield MG. A prospective examination of risk for violence among abused and neglected children. *Ann N Y Acad Sci*. 1996 Sep 20;794:224-237.
7. Romano E, De Luca RV. Exploring the relationship between childhood sexual abuse and adult sexual perpetration. *J Fam Violence*. 1997;12(1):85-98.
8. Schore A. *Affect Regulation and the Origin of the Self: The Neurobiology of Emotional Development*. Hillsdale, NJ: Lawrence Erlbaum Associates; 1994.
9. Bowlby, J. *Attachment and Loss, Vol. 3*. New York, NY: Basic Books; 1980.
10. Tucker DM. Developing emotions and coritical networks. In: Gunnar MR, Nelson CA, eds. *Minnesota Symposium on Child Psychology, Vol 24*. Hillsdale, NJ: Lawrence Erlbaum Associates; 1992:75-128.
11. Crittenden PM. Treatment of anxious attachment in infancy and early childhood. *Dev Psychopathology*. 1992;4(4):575-602.
12. Cicchetti D, White J. Emotion and developmental psychopathology. In: Stein N, Leventhal B, Trebasso T, eds. *Psychological and Biological Approaches to Emotion*. Hillsdale, NJ: Lawrence Erlbaum Associates; 1990:359-382.
13. Browne A, Finkelhor D. Impact of child sexual abuse: a review of the research. *Psychol Bull*. 1986;99(1):66-77.
14. van der Kolk BA, Fisler R. Dissociation and the fragmentary nature of traumatic memories: overview and exploratory study. *J Trauma Stress*. 1995;8(4):505-525.
15. Streeck-Fischer A, van der Kolk B. Down will come baby, cradle and all: diagnostic and therapeutic implications of chronic trauma on child development. *Aust N Z J Psychiatry*. 2000;34(6):903-918.
16. Pynoos RS, Frederick CJ, Nader K, et al. Life threat and posttraumatic stress in school-age children. *Arch Gen Psychiatry*. 1987;44(12):1057-1063.
17. Kegan R. *The Evolving Self*. Cambridge, MA: Harvard University Press; 1982.
18. Piaget J. *The Construction of Reality in the Child*. New York, NY: Basic Books; 1954.
19. Summit RC. The child sexual abuse accommodation syndrome. *Child Abuse Negl*. 1983;7(2):177-193.
20. Cole PM, Putnam FW. Effect of incest on self and social functioning: a developmental psychopathology perspective. *J Consult Clin Psychol*. 1992;60(2):174-184.
21. Cicchetti D, White J. Emotion and developmental psychopathology. In: In: Stein N, Leventhal B, Trebasso T, eds. *Psychological and Biological Approaches to Emotion*. Hillsdale, NJ: Lawrence Erlbaum Associates; 1990:359-382.
22. Ackerman PT, Newton JE, McPherson WB, Jones JG, Dykman RA. Prevalence of post traumatic stress disorder and other psychiatric diagnoses in three groups of abused children (sexual, physical, and both). *Child Abuse Negl*. 1998;22(8):759-774.
23. Lewis DO, Shanok SS. Perinatal difficulties, head and face trauma, and child abuse in the medical histories of seriously delinquent children. *Am J Psychiatry*. 1979;136(4A): 419-423.
24. Steiner H, Garcia IG, Matthews Z. Posttraumatic stress disorder in incarcerated juvenile delinquents. *J Am Acad Child Adolesc Psychiatry*. 1997;36(3):357-365.
25. Teicher MH, Andersen SL, Polcari A, et al. The neurobiological consequences of early stress and childhood maltreatment. *Neurosci Biobehav Rev*. 2003;27(1-2):33-44.
26. Schneider-Rosen K, Cicchetti D. The relationship between affect and cognition in maltreated infants: quality of attachment and the development of visual self-recognition. *Child Dev*. 1984;55(2):648-658.
27. van der Kolk BA. The neurobiology of childhood trauma and abuse. *Child Adolesc Psychiatr Clin N Am*. 2003;12(2):293-317, ix.
28. American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders*. 4th ed. Washington, DC: American Psychiatric Publishing; 1994.
29. van der Kolk BA, Roth S, Pelcovitz D, Mandel FS, Spinazzola J. Disorders of extreme stress: the empirical foundation of a complex adaptation to trauma. *J Trauma Stress*. In press.
30. Culp RE, Heide J, Richardson MT. Maltreated children's developmental scores: treatment versus nontreatment. *Child Abuse Negl*. 1987;11(1):29-34.
31. Kiser LJ, Heston J, Millsap PA, Pruitt DC. Physical and sexual abuse in childhood: relationship with post-traumatic stress disorder. *Am Acad Child Adolesc Psychiatry*. 1991;30(5):776-783.
32. Basile KC, Arias I, Desai S, Thompson MP. The differential association of intimate partner physical, sexual, psychological, and stalking violence and posttraumatic stress symptoms in a nationally representative sample of women. *J Trauma Stress*. 2004;17(5):413-421
33. Higgins DJ, McCabe MP. Relationships between different types of maltreatment during childhood and adjustment in adulthood. *Child Maltreat*. 2000;5(3):261-272.