The Long-Term Consequences of Early Childhood Trauma: A Case Study and Discussion

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There is a great need to better understand the impact of traumatic events very early in life on the course of children’s future development. This report focuses on the intriguing case of a girl who witnessed the murder of her mother by her father at the age of 19 months and seemed to have no recollection of this incident until the age of 11, when she began to exhibit severe symptoms of posttraumatic stress disorder (PTSD) in response to a traumatic reminder. The case presentation serves as the basis for a discussion regarding pertinent issues involved in early childhood trauma. This case and accompanying discussion were originally presented at the 19th Annual Meeting of the International Society for Traumatic Stress Studies and were transcribed and revised for use in this article. Specific topics include early childhood memory and trauma, learning and the appraisal of danger, and PTSD and traumatic grief in early childhood. Clinical and public health implications are also discussed. This case illustrates the dramatic impact that “preverbal” traumatic memories can have on children’s later functioning and speaks to the importance of assisting very young children in the immediate aftermath of traumatic events.

CASE SUMMARY

Identifying Information

Rachel was 11 years old when she was referred to the outpatient trauma clinic in a large, city hospital. She appeared to be experiencing clinically significant symptoms of posttraumatic stress disorder (PTSD) in response to a rock breaking through her bedroom window in the middle of the night. The rock seemed to have triggered flashbacks of an original trauma that had taken place approximately 10 years prior and of which Rachel allegedly had no recollection.

1. Informed consent was obtained from patients involved in this treatment. Names and identifying information have also been changed to protect confidentiality.
Description of Original Trauma

At the age of 19 months, Rachel was witness to the murder of her mother by her father. From reports provided by another witness to the murder, we now know that Rachel's estranged father broke through a window of the apartment Rachel and her mother lived in, shattering the glass. Rachel's mother fled, with Rachel in her arms, to a neighbor's apartment; however, Rachel's father followed them, broke through the door of the neighbor's apartment, and proceeded to shoot and kill Rachel's mother. Rachel was in her mother's arms at the time of the shooting, and she was dropped to the floor when her mother fell to the ground. The neighbor, who had attempted to protect Rachel and her mother, was severely injured during the shooting but survived. This was another incident that Rachel witnessed. Rachel's father was found dead two weeks later. He had fled the scene of the crime and killed himself immediately after killing his wife.

When the police reached the scene of the crime, they found Rachel hiding behind a chair in the living room, covered in her mother's blood. Fortunately, she was physically unhurt and was immediately placed in a therapeutic foster home. Rachel was adopted two months later by her maternal grandmother and continues to live with her today.

Symptomatology Following Event

When Rachel was placed in her grandmother's custody, she exhibited a number of physiological and psychological difficulties that appeared to be a direct result of the trauma. She was withdrawn, sad, and had frequent crying episodes. She showed regression in several areas of functioning, including eating, toileting, and language. She had difficulty sleeping and demonstrated severe separation anxiety symptoms, particularly at night. She would also tremble and shake violently when she was afraid.

Although most of her symptoms appeared to dissipate gradually over time, Rachel would regress periodically in response to certain traumatic reminders. For example, for the first year after her mother's death, Rachel became extremely dysregulated not only at the sight of blood, but even more generally at the sight of her grandmother's red coat. When Rachel was approximately 4 years old, her family took her to see a July 4th fireworks display. Just as the fireworks began, Rachel screamed, "Stop shooting my Mommy!" and began crying uncontrollably. Despite her grandmother's continued belief that Rachel had forgotten about the original trauma, further evidence of Rachel's intact trauma was later reported by her kindergarten teacher, who was concerned about a drawing that Rachel had made. The assignment had been to draw a picture of the people in her family, and Rachel had drawn a picture of two women, one of whom she labeled "Mom" and the other "Grandma," plus a nameless man with a face that was blackened completely with crayon. When asked who the man was, Rachel refused to answer.

According to Rachel's grandmother, Rachel had completely forgotten about the murder incident. However, it is important to note that no discussion of Rachel's mother and father had ever taken place in her grandmother's home. When Rachel was approximately 9 years old, she asked her grandmother how her mother had died. Her grandmother, fearing Rachel's reaction to hearing the truth, admitted lying and said, "She fell off a roof." A few months later, Rachel asked her grandmother, "What really happened to my mother?" and her grandmother was unable to answer her. Rachel reportedly never inquired about her father. This veil of silence continued until Rachel entered individual therapy.

Previous Treatment

Rachel was brought to a psychological counseling center for the first time when she moved in with her grandmother at the age of two. She spent approximately two months in therapy, with most of the focus on play therapy. At the same time, Rachel's grandmother began attending a support group for bereaved parents, but reportedly felt that she was "not
ready” to begin talking about her loss in front of others and terminated the group prematurely. Of note, Rachel’s grandmother indicated that she was not involved in Rachel’s previous treatment.

**Presenting Problem**

Rachel’s grandmother brought Rachel to her pediatrician after becoming concerned about her extreme reaction to a rock breaking through her bedroom window. Rachel had been asleep when the rock was thrown through her window, by some neighborhood teenagers in the middle of the night, shattering the glass. Fortunately, Rachel’s bed was not near the window and she was not physically harmed. However, she began to exhibit significant difficulties immediately after this incident. She began crying uncontrollably while at the same time screaming, “Someone’s gonna get me.” Consistent with symptoms immediately following her mother’s murder, she was refusing to eat, had difficulty sleeping due to night terrors, and was sad and irritable. She also exhibited extreme trembling and severe separation anxiety.

**Current Assessment**

Rachel presented to the therapist (J.K.) as an attractive, polite, somewhat withdrawn eleven-year-old girl. She was able to separate from her grandmother without difficulty. Although she was responsive to questions, her responses were brief, and she made no spontaneous comments. Rachel had great difficulty expressing her feelings. She also showed extreme avoidance to topics related to either one of her parents. Aside from her extreme traumatic reaction to the rock incident, she did not seem to have any recollection whatever of the original trauma.

Specific data regarding Rachel’s symptoms were gathered through separate clinical interviews with Rachel and her grandmother as well as a battery of parent- and child-report measures. During the interview, Rachel indicated that since the rock incident, she had been unable to sleep in her own bed because she was afraid “someone’s gonna get me.” She was unable to elaborate on who this person might be or why she felt this way. She also indicated that she was feeling “shaky” all the time, particularly at night. Her grandmother stated that Rachel had been “trembling violently” throughout the night and would wake up periodically calling for her grandmother, even when her grandmother was sleeping right next to her. Rachel had also lost her appetite and was not able to eat full meals. According to Rachel’s grandmother, Rachel was unable to tolerate being alone in any room of the house, even for a minute. Consequently, Rachel insisted on sleeping in the same bed as her grandmother and would not leave her side when they were in the house.

Rachel had difficulty responding to specific questions pertaining to potential PTSD symptoms, stating, “I don’t know” to most questions. This may have been due to her general avoidance and/or lack of emotional vocabulary. However, she was administered the Trauma Symptom Checklist for Children (TSCC) as well as the UCLA PTSD Index for DSM-IV, and these measures indicated that Rachel was experiencing significant symptoms of PTSD. The TSCC (Briere, 1996) is a 54-item self-report instrument that evaluates posttraumatic symptomatology, including PTSD symptoms and dissociation, in children and adolescents, aged 8 to 16. Each symptom item is rated according to its frequency of occurrence using a four-point scale ranging from 0 (never) to 3 (almost all of the time). Several relevant items were given high ratings (2 or 3) by Rachel, including “scary ideas or pictures just pop into my head,” “feeling afraid,” “being afraid of the dark,” and “forgetting things, can’t remember things.” The UCLA PTSD Index (Pynoos, Rodriguez, Steinberg, Stuber, & Frederick, 1998) screens for exposure to traumatic events and DSM-IV PTSD symptoms in school-age children and adolescents. Response options range from 0 (none of the time) to 4 (most of the time). On this measure, Rachel scored high on the following items: “I have trouble going to sleep or I wake up often during the night,” “I have trouble remembering important parts of what
happened," "when something reminds me of what happened, I get very upset, afraid, or sad," "I have upsetting thoughts, pictures, or sounds of what happened come into my mind when I do not want them to," and "I feel jumpy or startle easily, like when I hear a loud noise or when something surprises me."

Rachel's grandmother was given a variety of parent-report measures, including the Child Dissociative Checklist (Putnam, Helmers, Horowitz, & Trickett, 1993), which is a 20-item observer-report checklist that assesses frequency of symptoms on a 3-point scale (0 = not true, 1 = somewhat true, 2 = very true). Rachel's grandmother indicated that the following items were "very true" of Rachel: "Child does not remember or denies traumatic or painful experiences that are known to have occurred," "child goes into a daze or trance-like state at times or often appears spaced-out," and "child is unusually forgetful or confused about things that he/she should know."

Rachel's reexperiencing, avoidance, and hyperarousal symptoms had persisted for over a month and were causing clinically significant impairment. Consequently, Rachel appeared to meet DSM-IV criteria for PTSD (American Psychiatric Association, 2000).

Current Treatment

The full course of treatment began approximately 1 month after the "rock incident" took place and lasted approximately 1.5 years. Treatment components were derived from Trauma-Focused Cognitive-Behavioral Therapy for childhood traumatic grief (Cohen, Mannarino, & Knudsen, 2004) as well as Trauma Systems Therapy (Saxe, Ellis, Fogler, Hansen, & Sorkin, 2005; Saxe, Ellis, & Kaplow, 2006). Both of these treatments involve the acquisition of emotional and cognitive coping skills as well as trauma-processing techniques. The acquisition of coping skills is a necessary prerequisite for trauma processing, as these skills help to combat much of the child's physiological symptomatology in response to traumatic reminders and, over time, allow for less hesi-

tancy with regard to approaching the trauma. Trauma-processing techniques, such as the writing of a trauma narrative, enable the child to process thoughts and feelings associated with the trauma and begin to ascribe meaning to the traumatic event.

Trauma Systems Therapy (Saxe et al., 2005; Saxe et al., 2006) integrates the use of psychopharmacology with a package of several psychotherapeutic techniques. A trial of clonidine was initiated to augment emotion regulation skills by reducing Rachel's symptoms of hypervigilance and severe anxiety. Mirtazapine was added in order to reduce Rachel's sleep disturbances. Rachel was followed with monthly psychiatric visits.

Psychotherapy was broken into four phases of treatment: emotion regulation skills, cognitive coping skills, trauma-processing, and grief-processing. Rachel and her grandmother were seen on a weekly basis. The session was generally split such that Rachel met with the therapist for the first 35 minutes, and Rachel's grandmother met with the therapist for the last 25 minutes. As Rachel's trauma symptoms began to subside, the last 25 minutes became joint sessions whereby treatment was conducted with Rachel and her grandmother together.

The first phase of treatment focused on the acquisition of emotion regulation skills. Rachel was extremely hesitant to discuss the event that had brought her into therapy. In fact, when she was initially asked questions about the rock breaking through the window and how she felt at the time, she began to tremble and was unable to make eye contact with the therapist. Although she was unable to identify specific emotions associated with the event or thoughts about the event, she was able to state that her body felt "shaky" and that her heart was racing. In order to reduce these visceral responses, Rachel was taught various relaxation techniques, such as deep breathing and visualization. These techniques were practiced in the therapist's office and at Rachel's home. The therapist created a "relaxation tape" for Rachel that involved components of deep muscle relaxation as well as pleasant visualizations that Rachel chose and
identified as being relaxing (e.g., picking flowers in a field, butterflies, etc.). Rachel was also taught to use these techniques when she began to experience physiological symptoms (e.g., shaking, trembling, heart palpitations, etc.).

As Rachel’s physical symptoms became more manageable, she was taught to recognize internal cues that she associated with feeling “in control” or “out of control” as well as activities that could help her return to a regulated state. Through the use of different “feelings games,” Rachel gained more of an emotional vocabulary. At this point, Rachel was able to talk about feeling “scared and nervous” when the rock came through her window. Rachel completed an “Emotion Regulation Guide” (Saxe et al., 2006) that required her to identify traumatic reminders and ways in which she could intervene when these stressors made her feel dysregulated. For example, Rachel identified “being alone” as a stressor. She then generated self-regulation techniques that she could use to prevent her aversive reactions to this stressor, such as “go swimming,” “dance,” and “use my relaxation tape.”

The second phase of treatment focused on the acquisition of cognitive coping skills. Although Rachel began to use her relaxation skills regularly at night in order to help her fall asleep, she was still waking up periodically throughout the night in a panic state. Because she was still sleeping in the same bed as her grandmother, this was obviously disruptive and concerning to both of them. Through the use of a “Cognitive Coping Log” (Saxe et al., 2006), Rachel was asked to reflect on the specific situations that made her feel “upset” or “out of control,” what she was thinking and feeling at the time of the event, and what she could have thought about to make her feel differently during the event. Rachel indicated that sometimes she would “wake up in the middle of the night because I’m scared.” Her thoughts at the time included, “I’m scared someone is gonna get [i.e., hurt] me,” and this would make her feel “nervous” and lead to her “calling out to Grandma in the middle of the night.” Rachel was encouraged to find other, more pleasant thoughts that she might be able to call upon when she awoke in the middle of the night. She indicated that “thinking about picking flowers” made her feel happy and might result in her being able to go back to sleep. These cognitive coping exercises were discussed in session and were also practiced at home with the help of Rachel’s grandmother.

As Rachel’s sleeping improved, and her reexperiencing symptoms decreased, she began the third phase of treatment, which involved trauma-processing exercises, with a particular focus on the trauma narrative. Normally, within this treatment component, the child is asked to write about the traumatic event that took place, including thoughts and feelings before, during, and after the event. However, because Rachel was still “unaware” of the original trauma, she was asked to write a story about a topic of her choice. Interestingly, she chose to write a story about a little girl named Julie who lived with her mother and father until they both died when she was four years old. When asked how they died, Rachel stated, “Julie doesn’t know. She doesn’t think about it.” She then wrote, “But she will finally feel relief once she learns the truth about her parents.”

This sentence proved to be a key element in helping Rachel’s grandmother overcome her own fears about openly discussing the traumatic event with Rachel.

Throughout the first three phases of treatment, Rachel and her grandmother were given joint homework assignments that were designed to facilitate open communication regarding their loss. For example, they looked at pictures of Rachel’s mother together and read condolence cards that Rachel’s grandmother had saved. After about five months of treat-

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2. It is noteworthy that the name of the character in the story was also the first name of Rachel’s therapist. A critical component of therapy was helping Rachel to understand that the therapist was willing to talk about any aspect of Rachel’s past at a pace that felt comfortable to Rachel. It may be that Rachel not only identified with the character in her story (i.e., the therapist), but also saw her as someone who could handle hearing the truth.
ment, Rachel’s grandmother finally felt ready to tell Rachel about her parents. The disclosure session seemed to be the true turning point in therapy for both Rachel and her grandmother. During the session, Rachel’s grandmother explained exactly what had happened to Rachel’s mother and father. Although Rachel was sobbing throughout the session, she had great difficulty verbalizing her emotions at that time. After the session, Rachel’s grandmother appeared to be visibly relieved, stating, “I feel as though a thousand pounds have been lifted from my shoulders.”

Following the disclosure, the third phase of treatment (trauma-processing) was continued in order to help Rachel make sense of what she had experienced, both in relation to the meaning of her original trauma and her experiences with traumatic reminders. At this point, Rachel was able to create a new trauma narrative that focused on her own experience (as opposed to that of a fictional character). Chapter 3 of her narrative was entitled, “Something Bad Happened to Me.” In this chapter, Rachel wrote about what had happened to both of her parents. When asked what she might have been feeling at the time of the murder, she responded, “scared, nervous, and shocked,” and when asked what she had been feeling in her body at the time of the murder, she responded, “my legs [were] shaking.” Chapter 9 of her narrative was entitled, “What I Learned from the Bad Thing,” and Rachel noted, “I learned to cherish what I have.”

During the fourth and final phase of treatment, sessions began to focus on the grief symptoms Rachel had repressed as a result of her avoidance of topics related to her mother. As an important component of this phase of treatment, Rachel created a card for her mother, which read, “Dear Mom, I miss you very much, but I know you are watching over me. I love you. Love, Rachel.” As Rachel became more comfortable talking about her mother, joint sessions involved discussions surrounding Rachel’s mother (e.g., similarities between Rachel and her mother, positive characteristics, etc.). These discussions not only helped Rachel to further process her grief, but also allowed for more open communication between Rachel and her grandmother regarding the loss and the traumatic components of the event.

Clinical and Interpersonal Challenges

One of the most difficult aspects of treating children who have no explicit memory for a traumatic event is non-invasively assisting them with their reconstruction of their history while at the same time helping to modify distortions that may not be helpful to the child. It is also important for the therapist to resist correcting non-essential information that the therapist knows is not necessarily true in order to facilitate the trauma narrative process. In Rachel’s case, she had to rely on her grandmother to provide her with the memories she was missing. However, in order to integrate these memories into her own life narrative, it was important for Rachel to put them into a context that made sense to her. For example, in her own trauma narrative, Rachel stated, “my mother was rocking me to sleep” just prior to her father’s forced entry. Rachel’s grandmother never provided her with this information, and while it is possible that Rachel actually remembered her mother rocking her to sleep, it is also possible that Rachel added this to the story in an effort to make it fit with her internal representation of her mother as a safe, secure, and nurturing caregiver.

Various interpersonal cues throughout the treatment process provided important information regarding Rachel’s unconscious processes and her most emotion-laden memories. Some of the more obvious cues included Rachel’s inability to maintain eye contact and her attempts to change the subject when her mother was mentioned. A less obvious cue emerged when the idea of the joint session with her grandmother was initially presented to her. When the therapist explained that the end of the session would involve Rachel and her grandmother discussing a pleasant topic related to her mother, Rachel began to fall asleep. And, in fact, Rachel did appear to be asleep during the first two joint sessions. One could argue that Rachel simply felt emotion-
ally and physically drained by the end of both sessions. However, it is just as likely that her behavior was indicative of her overall avoidance and a defensive “shutting down” of her emotions. As with most of her trauma-related avoidance behavior, this response seemed to dissipate after she was repeatedly exposed to the feared experience (i.e., listening to her grandmother’s comments about her mother and participating in the joint sessions).

Treatment with Rachel’s Grandmother

During the first two phases of Rachel’s treatment, Rachel’s grandmother was taught the same emotional and cognitive coping skills as Rachel. She was also involved in assisting Rachel with the acquisition of these skills, particularly when Rachel’s symptoms escalated in the middle of the night. As therapy progressed, and it was evident that Rachel’s grandmother was able to utilize the skills imparted to her, trauma processing began through the use of gradual exposure techniques. Therapy sessions were focused particularly on aspects of the murder that she had been unable to discuss previously. For example, specific aspects of the loss that were especially traumatic to Rachel’s grandmother included the phone call she had received telling her that her daughter had been killed and the viewing of her daughter’s body prior to the funeral. During this time, Rachel’s grandmother openly discussed her strong spiritual/religious beliefs and attributed her ability to overcome much of her anger regarding her daughter’s death to these beliefs.

As Rachel’s grandmother continued to process her own thoughts and feelings related to her loss, she became much more open to the idea of discussing the murder with Rachel. Her willingness to approach this topic with Rachel in session followed almost immediately after she was able to talk about the most traumatic aspects of her own loss. After the disclosure session, Rachel’s grief processing facilitated her grandmother’s acknowledgment of her own sadness surrounding the loss. Joint sessions appeared to be extremely effective in terms of helping both of them process their grief, communicate about this difficult topic, and learn how to best help each other during their sad moments.

Current Status

Although Rachel continued to have some difficulty expressing emotions associated with the loss of her mother as well as the traumatic event, she demonstrated significant decreases in PTSD symptoms by the end of the treatment and no longer met criteria for the disorder. Per her grandmother’s report, Rachel was able to sleep in her own bed by herself and no longer awoke in the middle of the night. She was also able to be alone in different rooms of the house without any anxiety symptoms, she was much less hypervigilant, and the trembling and shaking that had been reminiscent of the original traumatic reaction had slowed. She was able to approach the topic of her mother with no associated trauma symptoms. On the re-administration of the Trauma Symptom Checklist for Children, Rachel no longer endorsed items associated with re-experiencing or avoidance. She had also discontinued both psychotropic medications by the fourth phase of treatment.

Ironically, it was Rachel’s symptomatology that helped to heal the lives of other members of her family, particularly her grandmother, who had chosen for years to suppress the feelings and memories associated with her loss. As witness to her mother’s death, Rachel was now, in a sense, witness to her mother’s rebirth in the hearts and minds of her family members. Her story is one that brings us closer to the truth about the impact of early childhood trauma and the necessity of addressing symptoms in the immediate aftermath of the event.

EARLY CHILDHOOD MEMORY AND TRAUMA

This case has important implications regarding the nature of early childhood memory and the ways in which memories impact chil-
dren who experience trauma in their earliest years. Memory systems have generally been categorized in a dichotomous fashion: a declarative or explicit memory system versus an implicit emotional memory system (Rovee-Collier, 1997). The declarative or explicit memory system is built to remember things, details of events, the contextual facts of experience. For obvious reasons, this memory system is highly linked to language systems and is largely mediated by the hippocampus and higher brain systems (LeDoux, 1998). In contrast, the implicit emotional memory system appears to be organized so as to give us the emotional valence of events without the details of context. This is largely mediated by the amygdala, and it is tightly connected to body response systems to help individuals survive in the face of threat. This system is very rapid, unconscious, and of obvious evolutionary value (LeDoux, 1998). Usually, these two memory systems are highly coordinated. When undergoing extreme stress or trauma, however, these systems become uncoupled, such that the sensory and affective elements become dissociated from any coherent semantic memory system (Van der Kolk & Fissler, 1993). The conscious result of this uncoupling is to feel a certain way without knowing why. Because these memories continue to exist, even in an unintegrated form, they continue to influence emotion and behavior (Frayley & Shaver, 1999).

Brewin, Dalgleish, and Joseph (1996) distinguish between verbally accessible memories versus situationally accessible memories. Whereas verbally accessible memories are representations of an individual's conscious experience of a trauma and can be deliberately retrieved from autobiographical memory, situationally accessible memories cannot be accessed deliberately, but resurface automatically when the individual is confronted with a situation/context that has physical features or meaning similar to those of the trauma. This distinction is exemplified when Rachel is sobbing in response to hearing about her mother's murder but is unable to speak about what she is feeling.

So what then is remembered from the earliest years? Research by Rovee-Collier (1997) has led to some important insights on the memory capacities of infants as young as 2 months. In many respects, the memory systems of infants show many of the same properties as adult memory. For example, infants show both delayed recognition and cue/context reactivation indicative of the explicit and implicit memory systems identified in adults. Both infant and adult explicit memory is susceptible to interference, but implicit memory is relatively insensitive to these disruptions. What is especially noteworthy is that context/cue reactivation effects do not depend on number of prior exposures to a stimulus in both young children and adults. A recent study demonstrated that a six-month-old infant can outperform any adult on a memory/perceptual task (Pascalis, de Haan, & Nelson, 2002). This study showed that up to about 9 months of age, infants can actually identify individual monkey faces with the same degree of accuracy that we can for human faces. This provides further evidence that infants perceive and are able to remember very explicit details in ways that are later lost to us. We call this phenomenon "perceptual narrowing."

So what does all this mean for Rachel? She experienced a terrible event that was encoded implicitly, largely by her amygdala, which will never be retrieved declaratively. However, it is relevant that at various points in her history there was a resurfacing of symptoms as a result of being exposed to stimuli that were reminiscent of the original trauma (e.g., the fireworks, the sight of the red coat, etc.). Although her symptoms may have always been present, they were not fully manifest or persistent until she was faced with an episode that, in many ways, was uncannily like the triggering episode. The rock going through a window evoked a terror response because of the way this was originally encoded, but it occurred for Rachel out of context. She did not understand in any way the contextual details of why she was feeling what she was feeling. At age 11, Rachel exhibited almost exactly the same kinds of symptoms that were reported by history, particularly her behavioral regression, which was much more
apparent in a child of 11 than it was when she was a toddler. In summary, it is clear that at an early age, children experience and recall traumatic events in a much more direct and fully aware fashion than has been previously appreciated.

LEARNING AND THE APPRAISAL OF DANGER

Although this is a salient case, unfortunately, it is not an uncommon one. In 2000, intimate partner homicides accounted for 33.5 percent of the murders of women (Bureau of Justice Statistics Crime Data Brief, 2003). In addition, studies suggest that between 3.3 and 10 million children witness some form of domestic violence annually, including murder (Carlson, 1984). While much of the focus thus far has been on memory, we must not forget the important role of learning. In other words, it is critical to understand this young child's experience at 19 months, what she learned from it, and how that is carried forward into the future.

Beginning in infancy, the emergence of discrete affective states (e.g., pleasure, fear, etc.) combined with the infant's growing capacity to encode environmental events enables the establishment of emotionally meaningful, situation-specific, internal representations or working models (Gaensbauer, 2002). These representations and associated memories are what allow the infant (and later, the child) to recognize and respond emotionally to future events that have similar stimulus configurations (Gaensbauer, 1982). Internal working models play a key role in the process of appraisal, particularly in relation to the degree of safety or danger in the world around us, which can lead to adaptive or maladaptive responses (Knox, 2003).

We can assess what memories Rachel has recorded to some extent by her traumatic reminders, each of which serves as a reminder of the appraisal of danger. Anecdotally, we know from studies of young children that blood is one of the most common ways in which children are able to judge the seriousness of the event. This includes not only having the blood on them, as was the case with Rachel, but more generally, the color red. In Rachel's case, we can assume that she probably would have heard cries of distress. Cries of distress are another prominent way in which children learn to infer a threat of danger. In other words, the reference point for danger is the actual expression of distress in the mother. In a traumatic situation, the child appraises danger from moment to moment, even at 19 months. In Rachel's case, the actions involved in this appraisal were dramatic: hearing noise of glass window shattered, running out of the house, running to a neighbor, held tightly by mother, seeing father forcefully enter the room, hearing the gun fire, watching mother and another person get shot, falling to the floor. As evidenced by some of Rachel's traumatic reminders, it is clear that many of these recordings later influenced her expectations about danger (e.g., glass shattering = intruder, possible death).

PTSD IN EARLY CHILDHOOD

This case speaks to the need to develop better clinical profiles of what traumatized children look like. Scheeringa and his colleagues have been examining the manifestations of PTSD in infants and toddlers (Scheeringa, Zeanah, Myers, & Putnam, 2003). This research is helping us to better understand the manifestations of trauma in this particular age group and has highlighted the fact that the DSM criteria for PTSD do not capture many of the trauma-related symptoms experienced in younger children.

Rachel's case also reinforces the need to address trauma in its immediate aftermath in an effort to prevent future PTSD. The scant longitudinal data we have available on children traumatized at early ages suggests that PTSD symptoms do not necessarily resolve spontaneously—as many people would like to believe (Scheeringa, Zeanah, Myers, & Putnam, 2003). Rather than assuming that these children are so young that there will be no lasting effect, we should assume that their early age increases their risk for long-term post-traumatic...
effects. Rachel received very little intervention, perhaps because the adults in her life believed that she had "forgotten" the trauma. However, this is not an uncommon occurrence. Many, if not most, children in our child protection system receive little to no services in terms of trauma treatment. As a result, the traumatic stress symptoms remain untreated. As we see in Rachel's case, symptoms can still be manifested ten years after the trauma has taken place. Rachel's PTSD symptoms were close to the surface and could be easily reactivated by experiences reminiscent of the original trauma. It is likely that they also impacted on her developmental, social and academic abilities, impairing concentration and learning.

Differential Diagnosis

In schools all over the country, many children who exhibit high emotion and dysregulated behavior may receive a number of erroneous psychiatric diagnoses, particularly if the context in which the emotions or behaviors occur is not well understood. A child's sudden extreme emotion or dangerous and impulsive behavior may be considered Attention-Deficit Hyperactivity Disorder (ADHD) or a mood disorder if the stimuli that provoked the emotion or behavior are unspecified. The stimuli may appear to be innocuous to outside observers because they only have unique meaning for the child. For instance, most children would not be concerned if, while thumbing through a history book, they came across a picture of Davy Crockett leaning with his rifle against a log. However, for the child who recently witnessed his father aiming a gun at his mother, this picture can be a traumatic reminder. All of a sudden that child may be out of his seat and walking around the classroom in an agitated fashion. What the teacher sees is a child who cannot sit still and is not applying himself.

Children who have no explicit memory for a traumatic event are even more likely to be diagnosed with ADHD or a mood or behavioral disorder simply because they appear to be reacting out of context, and they have no way of explaining their own behavior. With-
through, creating a taboo against letting oneself and others integrate the trauma into conscious knowledge. When a child’s parent dies in violent circumstances, the surrogate caregivers often exert pressure on the child to “forget” what happened by not speaking about it, negating the child’s version of events, and responding with silence and evasion to the child’s questions. In their efforts to gain the adults’ approval and preserve their love, children are forced to create two parallel realities—the shared public reality where they align themselves with the adults’ expectations, and an untenable private reality where they “know what they are not supposed to know and feel what they are not supposed to feel” (Bowlby, 1979). This split reality leads to a pervasive emotional alienation not only from the caregivers but also from themselves. For Rachel, this occurred not around the time of the original event, but for the 10 years following the event.

Toddlers who witness one parent’s murder at the hands of the other are assaulted by several simultaneous sources of trauma: the overwhelming sensory stimulation associated with the murder, including screams, the sight and smell of blood, the frantic movements of both the victim and the perpetrator; the co-occurring awareness that the parents, far from fulfilling their developmental role as protectors, are actually inflicting terror and helplessness in the child; the realization that the child cannot turn to the parents for protection against the overwhelming fear; and the moment-to-moment subsequent awareness that neither parent is present for the daily caregiving routines that organize the child’s early sense of self (Ehrl & Pynoos, 1994; Lieberman, Compton, Van Horn, & Ghosh Ippen, 2003; Main & Hesse, 1990).

To cope with this multiple assault on psychological integrity, toddlers need to rely on a caregiver who will reassure them that they are now safe, preserve as much as possible the continuity and predictability of caregiving routines that provide a sense of safety, encourage them to tell what they saw and heard, and support the child’s accurate perceptions and correct distortions by providing an accurate and developmentally appropriate version of what happened (Lieberman, 2004). In the case presented here, the loving grandmother was able to fulfill the first two functions, but her own pain prevented her from fulfilling the other two. As a result, the child was left alone with a terrible knowledge that went underground in her consciousness because she could not grapple with it by herself.

It is an extraordinary testimony of the child’s and the grandmother’s psychological resources that they remained dimly aware that they had unfinished business to deal with and that, individually and together, they took advantage of a new challenge as an opportunity for growth. Through the years, Rachel kept showing in different ways that she wanted to know the truth of her mother’s death and that she knew aspects of what had happened. The grandmother’s ability to remember clearly Rachel’s reactions to the murder and her later efforts to make sense of it, her candor in describing her inability to answer Rachel’s questions, and her persistent guilt about her silence indicate that she was a loving and perceptive caregiver who knew what the child needed from her, although she felt incapable of providing it without some support for herself. It is telling that the turning point in treatment came when the grandmother and the child met together to talk about what happened in the supportive presence of the therapist.

**CLINICAL IMPLICATIONS**

Although Rachel did not have declarative memory for her trauma, declarative memory systems can be very useful in therapy. The establishment of a verbal narrative has been shown to be a critical part of the therapeutic process in that it not only helps children to make sense of their traumatic experience, but also helps them handle ongoing effects as they emerge across the lifespan (Gaensbauer, 2000). Verbally mediated memory systems (i.e., declarative, autobiographical) have evolved to help regulate the implicit emotional memory system. The process of helping Rachel to understand the context of her feelings...
and to create a meaningful narrative of her life powerfully evoked this higher order system. This system was used in therapy to help Rachel regulate her emotions and to live beyond the ghosts of her past. These ghosts would likely intrude over and over again, until she could begin to understand the context and build a narrative of her life.

Preschoolers’ memories are co-constructed; caregivers help their children encode and contextualize experiences by talking about them and exchanging thoughts and feelings. In co-constructing memories with their children, parents help children to develop narrative coherence. This competency that is usually acquired during the preschool years can be easily disrupted by violence and trauma. It is not surprising that Rachel did not have a coherent story of what happened to her mother because these skills were not imparted to her. However, she did show signs of recognizing triggers. The brain tries to discriminate between appraisal cues of danger (e.g., the gunshot, fireworks) and the original event, which can be a challenging task. The trauma narrative work allows the therapist to help with this discrimination process.

It is not surprising that what brought the trauma back into Rachel’s mind was the rock breaking through the window. This was the first sign of a forced entry during the original trauma, and it may be that, at the time of the event, Rachel experienced this as a threat to herself as well as her mother. In working with children who have been witness to a murder, we know that much of the child’s attention is on the direct threat to the parent. However, we also know that there is a suppressed sense of threat to themselves. For Rachel, the memory that was triggered in response to the rock breaking through her window may not have been the memory of her mother dying. In fact, it may have been an appraisal of danger: something is breaking through the window… I can get killed. Usually, during trauma narrative work, children will start with the threat to the parent and only later move to the threat of danger to themselves. Exploring the child’s suppressed sense of threat to himself/herself can be the key element in overcoming traumatic reactions.

In childhood traumatic grief, it is thought that intrusive trauma-related thoughts, memories, and images of the death trigger physiological reactions and extreme psychological distress that may have been characteristic of responses at the time of the traumatic death and now reoccur when any traumatic reminders are present (Cohen et al., 2002). These processes interfere with tasks that are necessary in order to fully grieve the loss of the parent. For example, an important aspect of “normal” bereavement is the ability to reminisce about the deceased parent and experience the pain of the lost relationship (Nader, 1997; Pynoos, 1992). When a child is experiencing traumatic grief, he or she is unable to tolerate reminders of the parent without the excessive use of avoidance and, consequently, is unable to mourn in a healthy way. Therefore, as we saw in the course of therapy, the trauma always takes priority over grief. As the trauma issues begin to be addressed, the facilitation of the grief process can begin.

In the case of a murder/suicide, the murder is always addressed first in therapy. The thought that a parent would abandon the child by taking his or her own life is often much harder to address. At some point in the future, Rachel will have to approach the meaning of her father’s suicide. Although there is more work ahead, it is clear that the therapy made an enormous difference to this child in terms of being able to deal with the most horrific realities of her life, initially in the context of the therapist’s office and later in the context of her family. Now she has the tools to start modifying the traumatic expectancies learned from that very early event.

CONCLUSIONS

Rachel’s story has critical implications for the field of early childhood trauma. Young children encode and remember traumatic events even when they cannot readily express them in words. The availability of verbal knowledge at the time of the trauma is not
necessary for the event to be remembered at a later date (Bauer & Wewerka, 1995), and it is possible for language to be superimposed on previously encoded preverbal memories (Nelson & Ross, 1980).

The current DSM PTSD criteria do not capture many of the symptoms of very young traumatized children and must be revised to improve diagnostic sensitivity in this age group. Traumatic experiences in early childhood have long-term effects on a child's sense of the world and his or her behavior. Events that are reminiscent of the original trauma can evoke acute traumatic reactions and post-traumatic symptoms. Caregivers often want to believe that the child was too young to remember the trauma and therefore may not draw a connection between the child's behavior and the traumatic reminder. As we saw in this case, trauma symptoms are likely to resurface until they are processed and transformed into coherent narratives.

Domestic violence can lead to negative consequences in various domains of functioning. Further support for this comes from a ground-breaking study which found a significant association between domestic violence and decreases in IQ (Koenen, Moffitt, Caspi, Taylor, & Purcell, 2003). The impact of exposure to domestic violence was about twice that of exposure to high levels of lead. Although there has been a major focus on lead abatement in this country, there are few services available to the millions of children exposed to domestic violence every year. Rachel's case is a reminder that the suffering of children who witness domestic violence does not end when the trauma is over. In fact, for some children, the end of the trauma may mark the beginning of a vicious cycle of trauma symptoms, functional impairment, and further traumatization. To end this cycle, intervention and prevention efforts focused on domestic violence and its victims must become a public health priority.

REFERENCES


