Children may be in therapy for a variety of reasons related to trauma. Some children experience the death of a parent, survive a serious accident, or lose their home or possessions due to a natural disaster. Others may experience several traumatic events during their young lives or be subjected to chronically stressful situations such as abuse, neglect, or multiple foster care environments. While some children are not permanently affected by these experiences, others may suffer serious symptoms that interfere with normal emotional, cognitive, or social development.

Terr (1990) notes that “trauma does not ordinarily get better by itself. It burrows down further and further under the child’s defenses and coping strategies” (p. 293). Children who are traumatized often feel helpless, confused, and ashamed and are afraid to trust others or their environment. Therapists who encounter these children must form a productive relationship with them to enable them not only to revisit painful experiences, but also to overcome intrusive memories, make meaning, and find hope. In order to reach these children effectively, therapists must use both developmentally appropriate methods
and interventions that address traumatic memories and provide emotional relief.

In recent years, recognition has been growing that trauma is an autonomic, physiological, and neurological response to overwhelming events or experiences that creates a secondary psychological response (Rothchild, 2000). This recognition has reframed how therapists intervene with individuals who have symptoms of stress, and it acknowledges that these symptoms are the body’s adaptive reactions to distressing events. There is an increasing consensus that intervention must not only utilize evidence-based practices in psychotherapy with children, but must also employ techniques that focus on the sensory impact of trauma.

This chapter provides an overview of trauma from a neurobiological view and a foundation for understanding why sensory interventions such as arts therapies and expressive methods are effective and often necessary in work with traumatized children. For therapists who are not familiar with these modalities, a brief description of creative arts therapies and expressive therapies is offered along with general information on the nature of traumatic events and their impact on children.

DEFINING TRAUMA

For the purpose of this book, “trauma” is defined as an experience that creates a lasting, substantial psychological impact on a child. Traumatizing events may be single occurrences such as an accident or witnessing an injury to another or several experiences that become traumatic in their totality. Extensive exposure to neglect or abuse, experience of terrorism or war, or survival of a disaster and subsequent loss of home, possessions, and/or family members are examples of repeated or chronic trauma experiences. Terr’s (1981, 1990) seminal work with child survivors of the Chowchilla kidnapping incident offers some of the first reports on the complexity of traumatic experiences and post-trauma symptoms. As a result of the Chowchilla study and subsequent investigations, Terr identified many of the characteristics commonly seen in traumatized children, including behaviors in art and play activity and influences on cognitive and emotional development. She also described two forms of traumatic events: acute or Type I trauma
(single event) and chronic or Type II trauma (multiple or cumulative events). In either type of traumatic event, children may encounter physical and/or emotional disruption and suffer bodily trauma and/or psychological effects.

Therapists who work with traumatized individuals now understand that a number of factors actually mediate how single or multiple traumas affect children and how these factors may predispose young clients to more serious problems. Posttraumatic stress disorder (PTSD) is well known to most mental health professionals; the current definition is found in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR; American Psychiatric Association, 2000). Characteristics similar to PTSD in children were described as early as the 1930s, reflecting the currently accepted symptom cluster in assessment of PTSD (Silva, 2004). It was not until 1987 in DSM-III-R (American Psychiatric Association, 1987) that specific features of children’s PTSD emerged that account for developmental differences between young clients and adults. In brief, some symptoms of PTSD in children are:

- **Hyperarousal** includes intense psychological distress and/or physiological reactivity when exposed to something that resembles an aspect of the traumatic event, difficulty concentrating, sleep problems such as difficulty falling or staying asleep, hypervigilance, and irritability or outbursts of anger.
- **Reexperiencing** includes suddenly acting or feeling as though a traumatic event is recurring in the present, intrusive thoughts about the event, and nightmares that include sensory or declarative aspects of the event.
- **Avoidance** includes attempts to avoid thoughts or feelings associated with the traumatic event, inability to recall aspects of the event, attempts to avoid activities or situations that evoke memory of a trauma, detachment from family and friends, difficulty sleeping due to nightmares associated with the event, decreased interest in previously pleasurable activities, and a foreshortened sense of the future.

These symptoms may occur in children with PTSD, but discussion continues about differences in responses in children and adults. Also, a number of factors affect how children respond to traumatic
events and if children go on to exhibit emotional disorders, including PTSD. Biological aspects, temperament, resiliency, developmental stage, attachment to parents or caregivers, abilities and adaptive coping skills, and available social support are related to individual susceptibility to PTSD (Silva, 2004), acute stress reactions, and mood or behavioral disorders. Children directly exposed to a traumatic event, such as a violent crime, death, or disaster, who do not have adequate social support in the form of family, caregivers, or community or who experience multiple crises are more susceptible to trauma and may require additional, long-term treatment. These children have a higher risk of PTSD and stress-related disorders, although the prevalence rates vary depending on the research study (Silva, 2004). In brief, a number of characteristics and experiences contribute to how trauma affects children and whether or not children suffer long-lasting and disruptive symptoms.

Fortunately, only a portion of children exposed to stressful events go on to develop PTSD or serious disorders, but it is widely accepted that vulnerability and resiliency factors (see Chapter 14) impact the development of symptoms that require ongoing treatment. Most children need a minimum of intervention and usually return to normal personal and social functioning in a short time. In these cases, interventions that incorporate critical incident debriefing, prevention strategies, and brief therapies may lessen the initial distress, identify social supports, and enhance adaptive coping skills.

THE PHYSIOLOGY OF TRAUMA

It is now widely agreed that trauma reactions are both psychological and physiological experiences. In order to help children who have been traumatized, it is first important to have a working knowledge of the physiology of trauma, know how the brain is organized, and understand how the body and mind react to traumatic events. This section does not intend to provide in-depth explanations of human physiology and how trauma affects the brain; this material is widely available and is covered in numerous contemporary texts. Instead, it provides a basic overview and summarizes major concepts that pertain to trauma intervention as an introduction to creative interventions with traumatized children.
The Triune Brain

The human brain is often described as consisting of three parts: the brain stem, the limbic system, and the cortex. The brain stem is the first area to mature and is, from an evolutionary standpoint, the oldest area of the brain. It is responsible for regulating basic functions such as reflexes, the cardiovascular system, and arousal. The cerebellum is connected to the brain stem and coordinates motor, emotional, and cognitive functioning. The brain stem and cerebellum are often referred to as the “reptilian brain” because they are like the brain of reptiles (Damasio, 1999).

The limbic system includes a group of structures that form a ring around the brain stem—the hypothalamus, amygdala, and hippocampus. The limbic system is often referred to as the “emotional brain” because it is the source of urges, needs, and feelings. Its primary functions involve self-preservation, the fight or flight response, and implicit memory—learned associations that link sensations to context. The limbic system, in a sense, evaluates experiences for emotional significance and reacts to these experiences in ways that are learned by the individual over time.

The cortex and neocortex are referred to as the “thinking brain” because they are the parts of the brain where reasoning, communication, and planning occur. They contain the capacity for language and consciousness and the ability not only to think thoughts, but also to think about thoughts, behavior, and emotions. Despite the higher functioning of this region of the brain, the lower parts of the brain also have a significant impact on actions and responses.

Trauma reactions are believed to occur when responses of the limbic system used to mobilize oneself in the face of personal threat are not utilized in a productive way. Essentially, children who experience an event such as physical abuse, disaster, terrorism, or any other distressing experience may go into what can be considered a “survival mode.” In other words, if the energy normally used for fighting or fleeing is not expended, the emotional activation is held in the nervous system and not dissipated or released (Rothchild, 2000). In the case of traumatic stress, even though the nervous system is still highly activated, children may experience a disruption or impairment in normal functioning and develop habitual responses such as explosive emotions, noncompliant behavior, psychological numbness, cognitive
problems, or other reactions depending on personality factors and the type and extent of distress.

Consider 8-year-old Mark, a child who is currently in treatment at a local psychiatric facility. He has a long history of severe physical abuse, sexual abuse, and neglect and has lived in multiple foster homes. Mark has very little ability to control his impulses; in the classroom and play therapy room, he often initiates arguments with other children, steals, sets fires, and is prone to tearful outbursts when under even minimal stress. He finds it difficult to focus his attention on any one game or toy for more than a minute and reacts to fear-inducing situations with psychological numbing and withdrawal, frozen and unable to move. Mark is also developmentally delayed, behaving like a much younger child and drawing human figures at the level of a 4-year-old child (Figure 1.1).

In reviewing Mark’s behavior, how the brain reacts to repetitive traumatic experiences may explain many of his current responses to others and his environment. As an individual who is profoundly or chronically distressed, Mark reacts with little self-control because he is unable to regulate his emotional responses. His behavior may be a survival response involving fighting (arguing) and sometimes freezing (psychological numbing and withdrawal), depending on the perceived

FIGURE 1.1. Human figures by Mark, age 8 years.
threats in his environment that cause fear, terror, or feelings of helplessness. He may have learning disabilities due to years of distress that have affected his cognitive and social functioning. In contrast to Mark, healthy, capable, and resilient children can use problem-solving skills, available social support, and other resources to overcome stressful events; those who have traumatic stress reactions cannot and go on to develop symptoms of PTSD or other emotional disorders.

The Mind–Body Connection

It is well accepted that the body often mirrors emotions. Different parts of the brain may become active when we look at sad faces or happy faces, imagine a happy or sad event or relationship, or hear a particular song or sound. These emotions are connected to a variety of hormonal fluctuations as well as cardiovascular and neurological effects (Sternberg, 2001). In fact, the physiology of emotions is so complex that the brain knows more than the conscious mind can reveal—that is, one can display an emotion without being conscious of what induced it (Damasio, 1999).

In the case of traumatic events, sensory experiences related to crisis, such as images, touch, sound, and smell, may become learned associations that resurface when one encounters a different, yet similar set of stimuli. For example, when Mark feels insecure around other children, he automatically reacts with uncontrollable rage, recapitulating his early relationships with an abusive sister; if he feels threatened by an adult, he becomes hypervigilant and immobilized as his body prepares for physical violence or punishment. There is general agreement that traumatic events similar to the ones Mark has experienced take a toll on the body as well as the mind. After a significant trauma, the “body remembers” (Levine, 1997; Rothchild, 2000), and, as van der Kolk (1994) notes in the title of his book, “the body keeps the score” of emotional experiences.

Memory Storage

The way in which memory is stored is also important to understanding the brain and traumatic events. In brief, there are two types of memory: explicit and implicit. Explicit or declarative memory is conscious memory and is composed of facts, concepts, and ideas; one has access to language to describe what one is thinking and feeling, and explicit
memory allows processing of information, reasoning, and meaning, helping individuals define and make sense of experiences.

Implicit memory is sensory and emotional and is related to the body’s learned memories. Riding a bicycle is a good example of implicit memory, while narrating the chronological details of the event (getting on the bike, pedaling to the park) is an example of explicit memory. In implicit memory, there is no language. In other words, the senses are the memory—what we see, what we hear, sensations of smell, touch, and taste become the implicit containers of that experience.

Currently, there is speculation that PTSD may result when implicit memory of trauma is excluded from explicit storage (Rothchild, 2000); that is, an individual may not have access to the context in which the emotions or sensations arose. Additionally, language (a function of explicit memory) is not generally accessible to trauma survivors after a distressing event. In particular, Broca’s area, a section of the brain that controls language, is affected, making it difficult to relate the trauma narrative. Positron emission tomography (PET) scans have demonstrated that trauma actually creates changes in Broca’s area that lead to difficulties in identifying and verbalizing experiences, a process normally accessible via explicit memory (van Dalen, 2001). Bessel van der Kolk observes, “it is a problem with verbalization... the Broca’s area shuts down” (Korn, 2001, p. 4) when an individual is asked to speak about a traumatic event. Because trauma is stored as somatic sensations and images, it may not be readily available for communication through language. Perhaps this inability to verbalize trauma relates to the human survival response; when an experience is extremely painful to recall, the brain protects the individual by literally making it impossible to talk about it.

**CREATIVE INTERVENTIONS AND TRAUMATIZED CHILDREN**

In addition to having a working knowledge of the physiology of trauma reactions in children, it is also important to understand the variety of therapeutic approaches that use creativity, imagination, and self-expression as their core. Creative interventions have been formalized through the disciplines of art therapy, music therapy, dance/movement...
therapy, drama therapy or psychodrama, poetry therapy, and play therapy, including sandtray therapy. Each discipline has been applied in psychotherapy and counseling with individuals of all ages, particularly children, for more than 50 years. Art, music, dance, drama, and poetry therapies are referred to as “creative arts therapies” because of their roots in the arts and theories of creativity (National Coalition of Creative Arts Therapies Associations, 2007). These therapies and others that utilize self-expression in treatment are also called “expressive therapies” (Malchiodi, 2005). Expressive therapies are defined as the use of art, music, drama, dance/movement, poetry/creative writing, bibliotherapy, play, and sandplay within the context of psychotherapy, counseling, rehabilitation, or medicine. Additionally, expressive therapies are sometimes referred to as “integrative” when purposively used in combination in treatment.

These individual approaches are defined as follows:

- **Art therapy** is defined as the use of art media, images, and the creative process and respects client responses to the created products as reflections of development, abilities, personality, interests, concerns, and conflicts. It is a therapeutic means of reconciling emotional conflicts, fostering self-awareness, developing social skills, managing behavior, solving problems, reducing anxiety, aiding reality orientation, and increasing self-esteem (American Art Therapy Association, 2007).

- **Music therapy** is the prescribed use of music to effect positive changes in the psychological, physical, cognitive, or social functioning of individuals with health or educational problems (American Music Therapy Association, 2007).

- **Drama therapy** is the systematic and intentional use of drama/theater processes, products, and associations to achieve the therapeutic goals of symptom relief, emotional and physical integration, and personal growth. It is an active approach that helps the client tell his or her story to solve a problem, achieve catharsis, extend the depth and breadth of his or her inner experience, understand the meaning of images, and strengthen his or her ability to observe personal roles while increasing flexibility between roles (National Association for Drama Therapy, 2007).

- **Dance/movement therapy** is based on the assumption that body and mind are interrelated and is defined as the psychotherapeutic use
of movement as a process that furthers the emotional, cognitive, and physical integration of the individual. Dance/movement therapy effects changes in feelings, cognition, physical functioning, and behavior (American Dance Therapy Association, 2007).

- Poetry therapy and bibliotherapy are terms used synonymously to describe the intentional use of poetry and other forms of literature for healing and personal growth.

- Play therapy is the systematic use of a theoretical model to establish an interpersonal process wherein trained play therapists use the therapeutic powers of play to help clients prevent or resolve psychosocial difficulties and achieve optimal growth and development (Landreth, 1991; Webb, 2007).

- Sandplay therapy is a creative form of psychotherapy that uses a sandbox and a large collection of miniatures to enable a client to explore the deeper layers of his or her psyche in a totally new format; by constructing a series of “sand pictures,” a client is helped to illustrate and integrate his or her psychological condition.

- Integrative approaches involve two or more expressive therapies to foster awareness, encourage emotional growth, and enhance relationships with others. This approach distinguishes itself through combining modalities within a therapy session. Integrative approaches are based on a variety of orientations, including arts as therapy, arts psychotherapy, and the use of arts for traditional healing (Barba, Fuchs, & Knill, 1995; Estrella, 2005).

It is important to clarify that while some practitioners define art, dance/movement, music, or drama therapies as play therapies (Lambert et al., 2007), creative arts therapies and expressive therapies are not merely subsets of play therapy and have a long history in mental health with distinct approaches. While the arts may sometimes be a form of play, encouraging children to express themselves through a painting, music, or dance involves an understanding of the media beyond the scope of play. In brief, the arts therapies are different from play therapy because they integrate knowledge of art with principles of psychotherapy and counseling.

In addition to the disciplines and approaches mentioned above, many therapists integrate activities that enhance relaxation as part of trauma intervention. Relaxation techniques often include creative components such as music (see Chapter 4), movement, or art making. Guided imagery or visualization, meditation, yoga, and other methods
of stress reduction are also used with children who have experienced traumatic events (Klein, 2001).

Art, music, and dance/movement therapies and other creative interventions such as play have sometimes been incorrectly labeled as “nonverbal” therapies. They are both verbal and nonverbal because verbal communication of thoughts and feelings is a central part of therapy in most situations. In fact, most therapists who use these methods integrate them within a psychotherapy approach, including but not limited to psychodynamic, humanistic, cognitive, developmental, systems, narrative, solution-focused, and others. For example, practitioners who describe their work with children in this book utilize specific frameworks to facilitate therapy with children based on current knowledge of best practices in trauma intervention. There are also creative interventions that specifically focus on verbal communication and self-expression as part of treatment, such as drama therapy, creative writing and poetry therapy, and bibliotherapy.

**UNIQUE CHARACTERISTICS OF CREATIVE INTERVENTIONS IN WORK WITH INDIVIDUALS WITH TRAUMA**

Johnson (1987) observes that creative arts therapies have a unique role in the treatment of trauma-related disorders, noting that individuals who experienced traumatic events have difficulty with verbal expression. He underscores that creative arts therapies are effective interventions with psychological trauma in children, individuals with mental illness or developmental delays, and older adults with neurodegenerative disorders or speech problems. Johnson’s observations were made almost a decade before the fields of neurobiology, psychiatry, and psychology confirmed that trauma has profound effects on the part of the brain that controls language or more fully identified the roles of explicit and implicit memory in trauma-related disorders.

For young trauma survivors with limited language or who may be unable to put ideas into speech, expression through art, music, movement, or play can be a way to convey these ideas without words and may be the primary form of communication in therapy. Creative interventions involving art, play, music, movement, or other modalities add a unique dimension to treatment because they have several spe-
cific characteristics not always found in strictly verbal therapies used in trauma intervention. These characteristics include, but are not limited to, (1) externalization, (2) sensory processing, (3) attachment, and (4) arousal reduction and affect regulation.

Externalization

In trauma intervention, externalization of trauma memories and experiences is considered central to the process of relief and recovery. All therapies, by their very nature and purpose, encourage individuals to engage in externalizing troubling thoughts, feelings, and experiences. Creative interventions encourage externalization through one or more modalities as a central part of therapy and trauma intervention. Gladding (1992) notes that using the arts in counseling may speed up the process of externalization and that expressive modalities allow people to experience themselves differently. Early studies by Terr (1990) identify specific ways that children externalize their trauma experiences through play in repetitive, abreaction, and corrective actions.

Externalization through visual means, play activity, movement, or other modalities may help shift traumatic experiences from the present to the past (Collie, Backos, Malchiodi, & Spiegel, 2006). In art therapy, for example, trauma memories can be externalized through the creative process of making or constructing an image or object. Self-expression through a painting, movement, or poem can relate past experiences, but this is only one benefit of how creative expression externalizes trauma. In fact, most therapists using creative arts or expressive therapies in trauma intervention capitalize on the ability of art, music, play, and other comparable methods of expression to contain traumatic experiences rather than encourage cathartic communication of raw emotions or mere repetition of troubling memories. Essentially, child clients are encouraged to use creative self-expression as a repository for feelings and perceptions that can be transformed during the course of treatment, resulting in emotional reparation, resolution of conflict, and a sense of well-being. When verbal communication is limited after traumatic experiences, it may be that some other form of externalization must be used in addition to verbal therapies such as cognitive-behavioral or other accepted approaches to trauma relief.
Sensory Processing

In most methods of trauma intervention, therapists encourage individuals to explore the trauma narrative—the story of what happened when the trauma occurred and feelings associated with the event—at some point during treatment. The goal is to help traumatized individuals process what is distressing; transform disturbing behaviors, thoughts, and feelings; and ultimately find relief. With children, however, expressing the trauma story with words is not always possible for developmental reasons, and, as previously mentioned, for severely traumatized clients, words may not be accessible when it comes to describing trauma memories.

Expressive therapies and creative arts therapies are defined by psychology as “action therapies” (Weiner, 1999) because they are action-oriented methods through which individuals explore issues and communicate thoughts and feelings. Art and music making, dance and drama, creative writing, and all forms of play are participatory and sensory and require individuals to invest energy in them. For example, art making, even in its simplest sense, can involve arranging, touching, gluing, stapling, painting, forming, and many other tangible experiences. All creative methods focus on encouraging clients to become active participants in the therapeutic process.

Creative interventions serve as a catalyst for individuals to explore thoughts, feelings, memories, and perceptions through visual, tactile, olfactory, and auditory experiences. Some forms of creative activity actually can enhance trauma intervention with children. Drawing, for example, facilitates children’s verbal reports of emotionally laden events in several ways: reducing anxiety, helping the child feel comfortable with the therapist, increasing memory retrieval, organizing narratives, and prompting the child to tell more details than in a solely verbal interview (Gross & Haynes, 1998).

Because highly charged emotional experiences such as trauma are encoded by the limbic system as a form of sensory reality, expression and processing of sensory memories of the traumatic event are necessary to successful intervention and resolution (Rothchild, 2000). Action-oriented activities can tap the limbic system’s sensory memory of the event and help bridge implicit and explicit memories of it (Malchiodi, 2003; Malchiodi, Riley, & Hass-Cohen 2001). Steele (2007) observes that trauma intervention is a matter of finding a way
to access implicit memory to help children express their experiences. He cites an implicit process referred to as “iconic symbolization,” a means of giving traumatic experiences a visual identity (Michaesu & Baettig, 1996). The brain creates images to contain all the elements of traumatic experience—what happened, our emotional reactions to it, the horror and terror of the experience. When memory cannot be expressed linguistically, it remains at a symbolic level, which there are no words to describe. In brief, to retrieve that memory so that it can become conscious, it must be externalized in its symbolic form. In the same vein, in order to access traumatic experiences in children, sensory interventions must be used to allow them to “make us witnesses to their experiences, to present us with their iconic representations, and to give us the opportunity to see what they are now seeing as they look at themselves” following exposure to a traumatic event (Steele, 2007, p. 3).

Sensory expression makes progressive exposure of the trauma story and expression of traumatic material tolerable, helping overcome avoidance and allowing the therapeutic process to advance relatively quickly (Collie et al., 2006). Active participation and progressive exposure through creative methods may also help reduce the emotional numbing that occurs with PTSD. It allows children actively to imagine, experiment with or reframe an event, or rehearse a desired change through self-expression; that is, it involves a tangible object, play activity, movement, or other experience that can be physically altered. The role of imagination in expressive therapies is illustrated throughout this book, but in essence it assists children in moving beyond preconceived beliefs through experimentation with new ways of communication and experiences that involve “pretend.”

Attachment

Perry (2006) observes that “Experience can become biology” (p. 1). For children who have been severely traumatized, normal development during childhood can be profoundly altered by multiple traumatic events, causing attachment problems. Attachment theory (Bowlby, 1969) has been used as a theoretical base for psychotherapy for many years but has more recently become a major focus of neuroscience and renewed interest among therapists who work with trauma. Since Bowlby’s initial writings, researchers have demonstrated that interac-
tions between children and parents or caregivers determine the brain’s structure for children, promoting the development of the prefrontal cortex responsible for reasoning, problem solving, flexibility, and other important functions. Siegel (1999) explains attachment as “an inborn system in the brain that evolves in ways that influence and organize motivational, emotional, and memory processes with respect to significant caregiving figures” (p. 67). Schore (1994) offers a neurological model for the importance of infant attachment throughout life. He notes that soon after birth the caregiver and the infant develop interactions that are important to the process of affect regulation. Face-to-face contact and soothing touch are examples of ways the infant learns to respond to stimulation from people and experiences.

While early childhood trauma affects relationship patterns later in life, it may be corrected, at least in part, with appropriate intervention. Research in neuroscience is demonstrating that infancy is not the only chance a person has to develop healthy attachment; there seem to be ways to reshape and repair some early experiences. Recapitulating the normal, attachment-building sensory experiences of childhood through therapeutic intervention and through strengthening the parent–child relationship may help reestablish healthy attachments. Riley (2001) cites how art and play activities are being used in early childhood attachment programs and how simple creative exercises can be used to resolve relational problems and strengthen parent–child bonds. She explains that the nonverbal dimensions of these activities tap into early relational states before words are dominant, possibly allowing the brain to establish new, more productive patterns.

Siegel (1999) and Schore (1994) believe that interactions between infant and caregiver are mediated by the right brain because, during infancy, the right cortex develops more quickly than the left. Siegel also observes that, just as the left hemisphere requires exposure to language to grow, the right hemisphere requires emotional stimulation to develop properly. He goes on to say that the output of the right brain is expressed in nonverbal ways, such as drawing a picture, using a picture, or participating in play activities to describe feelings or events. Creative interventions may be an important means of working with attachment issues as well as other emotionally related disorders or experiences. A conceptual framework for how art and play therapies can be used with children with attachment disorder is more fully explained in Chapter 3, and the importance of psychoeducation for
Arousal Reduction and Affect Regulation

The reduction of arousal or hyperarousal in young clients is a central concept in trauma intervention. For this reason, most trauma intervention begins with regulation of emotions, stress reduction, and restoration of feelings of safety. Art therapy, for example, can be used to activate the body's relaxation response. In working with children from violent homes, I observed that art activity had a soothing, hypnotic influence and that traumatized children were naturally attracted to this quality when anxious or suffering from posttraumatic stress (Malchiodi, 1990).

Benson (1996), acclaimed for his work with the relaxation response, observes that it is possible for everyone to remember the calm and confidence associated with health and happiness. Even when physically ill, individuals can access what Benson calls “remembered wellness,” increasing the sense of well-being despite distress or illness. In trauma intervention, recalling memories of positive events that can reframe and eventually override negative ones is helpful in reducing posttraumatic stress, particularly if a sensory experience of remembered wellness is included. Simple activities such as drawing a picture of a pleasant time or hearing a soothing, familiar song, story, or rhyme appear to be effective because of the capacity of image making to recall sensory memories and details of positive moments (Malchiodi et al., 2001).

Tinnin (1994) proposes that art therapy facilitates healing in a similar way to the placebo effect because it uses mimicry, an instinctive, preverbal function of the brain that is basic to self-soothing. An example of mimicry might be a child stroking a blanket in a way that mimics a mother’s soothing to activate an internal process of self-relaxation. Creative expression may stimulate a similar experience and help the client self-soothe and repair, as noted above. Music, art, and dance and movement may be helpful in tapping the body’s relaxation response (Benson, 1996). Overall, expressive activities may stimulate the placebo effect through mimicking self-soothing experiences of childhood and inducing self-relaxation (Malchiodi, 2003; Tinnin, 1994). Of all creative interventions, music therapy has received the most comprehensive research on the reduction of autonomic responses such as blood pressure, heart rate, and respiration.
CONCLUSIONS

In brief, using creative interventions has enormous potential in trauma intervention, as demonstrated in this chapter and through the applications and cases described in this book. For children in general, creative activities in therapy offer many benefits: pleasure in making, doing, and inventing; play and imagination; and enhancement of self-worth through self-expression. For children who are traumatized, there are additional reasons to consider integrating creative arts therapies, play therapy, and other action-oriented approaches within intervention. For these young trauma survivors, creative expression offers a way to contain traumatic material within an object, image, story, music, or other art form; provides a sense of control over terrifying and intrusive memories; encourages active participation in therapy; reduces emotional numbness; and enhances reduction of hyperarousal and other distressing reactions. When verbal techniques fail to ameliorate trauma memory in children, art, play, music, or movement can provide the necessary means to reenact the feelings and sensations associated with traumatic experiences. In subsequent chapters, these and other advantages of creative activities as used in intervention with traumatized children are described, demonstrating in detail how these approaches facilitate emotional reparation, relief, and recovery.

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