

Trauma's Impact on Learning and Behavior: A Case for Interventions in Schools

Reprinted from Trauma and Loss: Research and Interventions V2 N2 2002

Revised May 2007

By: William Steele, MSW, PsyD

Research documenting the effects of trauma on learning and behavior has become increasingly available and consistent in its descriptions of the cognitive and behavioral alterations following exposure to trauma. From early infancy through adulthood, trauma can alter the way we view ourselves, the world around us, and alter how we process information and the way we behave and respond to our environment. Without intervention these cognitive processes and behavioral responses can lead to learning deficiencies, performance problems, and problematic behavior. School systems need to be encouraged to provide trauma-specific intervention to its traumatized students to help minimize the learning, and behavioral difficulties that can result when the needs of trauma victims go unrecognized or ignored. To appreciate the preventative need for structured trauma-specific intervention following critical incidents, one must understand the functions of the brain in the midst of trauma.

Arousal and Cognitive Functions

Following exposure to a potentially trauma-inducing incident, survivors may become frozen in an activated state of arousal. Arousal refers to a heightened state of alert or a persistent fear for one's safety. Short-term and prolonged arousal can affect cognitive and behavioral functions. In the arousal state, changes in the brain are triggered by a variety of stress related functions (van

der Kolk, 1996). Bremmer et al. (1996) found that victims of physical /sexual abuse traumatization had lower memory volume in the left-brain (Hippocampal) area than did the non-abused. This left-brain function refers to understanding or processing information. One of these functional alterations takes place in the neocortex. Perry & Szalavitr (2006), Bremmer (2001), and others have found that while in the arousal state it becomes difficult to process information because of the altered functioning of the neocortex. Anyone who has had to see a physician for potentially life-threatening condition may remember very little of what the physician says. Only after getting home, (a place of safety) comes the realization of how many questions needed to be asked, which were forgotten at the time. Health advocates today, understand how difficult it is for a patient to process information while in a anxious (arousal) state and recommend that patients take another family member or friend with them to the doctors office as well as write down all the questions needing to be asked.

If a child/student who has been traumatized remains in an aroused state of fear and finds it difficult to process verbal information it then becomes difficult to follow directions, to recall what was heard, to make sense out of what is being said. Focusing, attending, retaining and recalling verbal information becomes very difficult. These are primary learning functions that can be altered during or immediately following traumatic exposure and for some continue unrecognized for long periods.

Cognitive deficits such as poor problem solving, (unable to think things out or make sense of what is happening), low self-esteem (how one thinks of oneself – victim-thinking) and hopelessness (loss of future orientation) have

all been clearly linked to negative (traumatic) life events (Stein & Kendell, 2004; LeDoux, 2002; Schore, 2001; Teicher, 2000; Yang & Clum, 2000). The fact is, trauma has been shown to significantly compromise cognitive development (Levine, 2007; Perry & Szalavitr, 2006; Trickett, McBride, and Chang, 1995). Yang and Clum (2000) using a series of structured equation analysis showed that “early negative life events” have a strong impact on cognitive deficits, which are now related to have a strong impact on suicidal behavior as well (p. 183). Furthermore, stress induces the release of glucocorticoids, such as cortisol, that can damage the left Hippocampal area of the brain, increasing memory deficit (Perry & Szalavitr, 2006; Bremner, 2001).

Cognitive alterations following trauma can take place at any age including early infancy. The right brain is involved “in the vital functions that support survival and enable the organism to cope actively and passively with stress (Schore, 2001, p. 41).” “The right hemisphere controls perception analysis of visual patterns.... and emotions (Alessi & Ballard, 2001, p. 398). Buck (1994) supports the belief that the right brain is where the dominant reactions to stress occur. Main (1996) observes that the ability to regulate ones response to stress can be negatively altered even during early infancy when a child is exposed to such negative environmental influences as violence. Schore (2001) concurs and Hopkins and Butterworth (1990) support these and similar findings that appropriate responses to external changes (stress/crisis) can be altered by activation of the arousal state – the heightened state of fear induced by traumatic exposure.

Following the September 11, 2001 attack on America, millions in this country experienced the absence of a sense of safety and, as a result, thought processes were immediately altered. Unlike the tragedy and massacre at Columbine High School, parents across the country rushed to school to be with their children, or to take them home. Their thoughts and behavior reflected fear, terror, a sense of powerlessness, confusion; the inability to think clearly, to process all the information. For a brief moment, Americans experienced to some degree immediate arousal. No matter what was said (cognitive) people no longer felt safe. Cognitive processes were significantly altered.

At some point, trauma victims must begin or have help to think differently about what they experienced, how they view themselves and the world. For many trauma victims, increased arousal keeps them frozen, thinking as a “victim”– powerless, hopeless, under constant threat. The reduction of arousal is essential to the restoration of these functions. Such intervention can be applied in school settings the days and weeks following trauma-inducing critical incidents, which impact school students and staff.

Interventions must help trauma victims become trauma survivors by helping them to change their thought processes. However, cognitive intervention can only be successful when first the sensory experience to trauma is altered. Following September 11th, for example, Americans were repeatedly reassured (cognitively) they were safe, but this could not be accepted until they first felt safe – a sensory experience. Parents who saw uniformed police officers in the parking lot when they arrived at their child’s school, felt safer than those who saw no visible sign of safety. What was seen communicated

a greater sense of safety than what was being heard. Understanding trauma as a sensory experience is also critical to understanding the levels of intervention necessary to restore cognitive functioning as well as behavioral appropriateness.

Sensory Functions – Behavioral Responses

We have learned that while in the arousal state or, not feeling safe at the sensory level, cognitive functioning and processing is altered. Short-term memory suffers (Staknum, Gebarskie, Berent, and Schfeingart, 1992); verbal memory also decreases (Bremmer, 1995). Behavior is in response to what is sensed. Aggression, agitation, exaggerated withdrawal, loss of small motor activities; like being unable to unlock a door, make a phone call, unable to talk (stuttering), unable to sleep, are not uncommon behaviors in response to trauma (Le Doux, Romanski, and Xagoraris, 1991). Children can be easily startled and become behaviorally reactive to perceived threats. A study on children's recall following a horrific earthquake found that 90% remembered the earthquake, but their memory was very selective and related to events that had personal meaning for them (Azarian, Lipsett, Miller, and Skriptchenko-Gregorean, 1999). If that meaning involves a sensory (felt) threat, real or perceived, behavior changes accordingly. Even though the danger may be over the "sense" that it is not can lead children, for example, into being fearful of leaving home. Behavioral changes in addition to the alterations of cognitive processes discussed earlier are often misread for resistance, stubbornness, over reactivity, impulsiveness, confrontation or a having a learning disability or Attention Deficit Hyperactive Disorder (ADHD) (Levine, 2007; Weinstein, 2000).

As a sensory experience trauma is encoded in the implicit memory (right-brain area). Implicit memory also referred to as “procedural memory” refers to how an event is remembered by the body and central nervous system (van der Kolk, et. al 1996; Squire, 1994; Rothchild, 2000). The trauma experience is stored implicitly via images, sensations, affective and behavioral states. Although in the early days following the attack on America, Americans were repeatedly reassured of their safety by the President, The Wall Street Journal (date unknown) reported that for several weeks the consumption of mashed potatoes had significantly increased. In other words, it was comfort food (a sensory experience) that brought some relief. In the midst of trauma, and for some, following their traumatic experience cognitive reassurances, attempts to appeal to our “explicit” or “declarative” memory simply is not enough. At the sensory level what we see, what we “sense” becomes far more important to survival than verbal information. Telling parents their children were safe at school was not enough on September 11, 2001; parents needed to be with their children and to “see for themselves” that they were safe.

Behavior

This “sensory state” of trauma is defined by a sense of terror, powerlessness, and the absence of a sense of safety. In this sensory state, behavior is altered in response to the danger we sense. Well-trained and knowledgeable educators on September 11th left television sets on all-day in elementary classrooms across the country. In their panic and terrifying alarm, they lost sight of the undue exposure they inadvertently provided their students. Weeks later, when some sense of safety was returned, the very same educators reported they now realized that, in their own panic, they left the

children unprotected and over exposed; they weren't thinking clearly at the time. They were functioning at a sensory level, not a cognitive level.

van der Kolk, (1994); Levine, (1997); Saigh, (1999) have supported that trauma is experienced as a sensory experience and only later ordered as a cognitive experience. Another way to state this is that students who do not feel safe, find it difficult to learn; they even find it difficult to remember (Perry & Szalavitr, 2006; Matthews & Saywitz, 1992) and, while in an aroused state, begin to behave in ways that are problematic. Not until a "sense of safety" is returned are cognitive processes restored, behaviors returned to pre-trauma level. The questions this presents, therefore, are what type of intervention can best restore this sense of safety (decrease arousal); how soon can we intervene and can these interventions be provided in the school setting?

Trauma Intervention

As detailed earlier, trauma can trigger (arouse) the activation of the autonomic nervous system to ready itself to resist or solve the real or perceived threat presented by exposure to a critical incident (van der Kolk, et. al 1996). If the response (arousal) is not discharged or deactivated, the sustained arousal state can lead to sustained cognitive and behavioral dysfunction (Levine, 2007; Grill, 2001). Trauma being a sensory experience (Lang, 1979; Steele, & Raider, 2001; Rothchild, 2000), arousal is experienced as an absence of the "sense of safety" and as a "sense of powerlessness." Aggressiveness, over reactive responses and exaggerated withdrawal (Le Doux, Romanski, & Xagoraris, 1991) are survival behaviors – attempts to feel safe, in control. As long as a child is not feeling safe and

in control, this aroused state makes it difficult to process verbal information, attend, focus, retain and recall (Perry & Szalavitr, 2006, Bremmer, 2001; Starknum, Gergarski, Berent, & Schteingart, 1992; Saigh, 1999).

Intervention designed to deactivate the arousal state and return the child to a sense of safety and a sense of power or control, helps to restore previous cognitive and behavioral patterns (Thompson, Charlton, Kerry et al. 1995).

The most immediate, short-term and long-term intervention, therefore, must be designed to restore that sense of safety and power.

Four Levels of Intervention

It is important to understand that not all students/staff exposed to a critical incident will need all four levels of intervention. Not all students/staff will experience a critical incident with the same level of vulnerability. Some victims will feel safer and more in control than others. Some will perform better at a cognitive level than others. To pull all students, or all staff for example into debriefing (second level of intervention) may needlessly overexpose some of the participants and worsen their original reactions (McFarlane, 1994).

We must, therefore, be careful to apply the least intense and least intrusive interventions first (Rando, 1993). The National Institute for Trauma and Loss in Children (TLC) approaches trauma intervention at four different levels. Level one – crisis intervention, level two – debriefing, level three – social responsiveness, and level four – structured sensory intervention.

These interventions are detailed in TLC's Trauma Response Protocol Manual, Debriefing Handbook for Schools and Agencies, Structured Sensory Interventions for Children, Adolescents and Parents (SITCAP), and

Schools Response to Terrorism: A Handbook of Protocols. This format only allows us to identify the key elements of these four levels of intervention which help to deactivate the state of arousal or restore a sense of safety and power (control) as quickly as possible.

Level One - Crisis Intervention

The value of crisis intervention was established as early as 1944 by Eric Lindemann (1944), who detailed the grief reactions of those involved in the Coconut Grove fire in Boston. Hundreds of books and research projects have since detailed its benefits for children and families (Caplan, 1964; Rapoport, 1970; Johnson, 1993; Webb, 1994). Schools became familiar with the importance and need for crisis intervention in the early 80's when suicide among children became an epidemic. Most schools today have, in place, a set of protocols to initiate when a critical incident takes place. Some, of course, are more comprehensive, more practical, and more user-friendly than others. TLC's Trauma Response Protocol Manual (Steele, et. al 2000) was developed with the help of some 1,500 school professionals across the country who had first-hand experiences with critical incidents. It is written in a format that details specific tasks needed following those situations.

What is most important concerning the types of crisis intervention initiated is that it directs itself to restoring a sense of safety and control, for all students and staff. Crisis intervention is the first level of intervention. It is initiated immediately following a critical incident and continues for two-to-three days. It consists of organized responses (protocols), dissemination of

information, in part through classroom presentations and, attending to the emotional needs of those involved.

How important is it to have an organized protocol? We have learned that in the midst of trauma normal cognitive functions can be overwhelmed and disappear because of the sensory nature of trauma. Hundreds of examples exist which show that otherwise calm, organized staff lose their ability to think clearly in the midst of trauma. In a sense, protocols exist so people don't have to think in the midst of chaos, yet still act appropriately.

Protocols, in other words, are the result of an orderly "thinking things through" before they happen, so that appropriate actions are immediate. "A time of crisis is not conducive to improvisation. Prior preparation and orientation of staff members regarding management of a crisis will greatly assist those expected to assume leadership roles and, initiate actions appropriate to the time of need" (Webb, 1986, 476).

This following scenario illustrates the need to have protocol that are designed to keep everyone safe, regardless of their ability at the time to think clearly. Imagine a school building under attack. Panic sets in: some freeze, some flee, and some stand ready to fight. Those who freeze or run in terror will find it very difficult to take verbal directions. They need to first see someone they recognize and then either be physically led or guided to a predesignated area of safety. This tells us that we must have personnel in that school who are clearly identifiable (staff identification badges) and who position themselves as visible reference points for those in panic to run to and then be directed to a predesignated safe area. There will also be a need to physically assist those who freeze and are unable to move into that safe

area. Those certified by TLC understand that the use of personnel in this fashion address sensory reactions in the midst of trauma versus basic cognitive functions which may not be accessible to many at the time of the trauma. Many elementary teachers across the country left television sets turned on the day of the 9/11 terrorist attacks. We cited the example earlier that adults had a need to know what was going on in order to try and manage their anxiety. However, they unduly over-exposed the children. Weeks later, when feeling safe, most were able to cognitively understand that they had not afforded their children protection from over-exposure. They also now understood, that in the midst of trauma, we do not always, cannot always, rely on cognitive processes to assist us. These same teachers will act differently the next time because of what they have learned.

Organized protocols, therefore, help support the deficiencies in cognitive functioning that can occur in the midst of trauma.

Authority – Information

Imagine being in a surgical waiting room. The doctor tells you he/she will be out at 3:00PM to let you know how your loved one is doing. It is now 3:05PM. You begin to think the worst has happened. What you need more than anything else is a person in authority (the doctor in this case) presenting information to calm and reassure you. In school settings it is critical that students, staff, and parents hear from someone in authority – the principal/superintendent. It is important that factual information be presented and reassurance given that the school is prepared, and its staff trained to manage these situations. Classroom presentations in the first two days accomplishes this element of crisis information.

Keep in mind that not everyone can process all the information presented during those initial days. However, for many, information is what lowers their arousal (anxiety, fear) and restores their sense of safety. The important issue related to classroom presentations is that all students are given the same presentation and information. If each group hears something different it only creates confusion as students begin to talk to one another about what they were told. For this reason TLC has a classroom presentation model that it encourages all presenters follow. This maintains the orderly response so critical in the first few days. This process also allows students and staff the opportunity to develop a uniform, cognitive understanding of what has happened as well as be prepared for what will be happening the remainder of that day and the days that follow.

Emotional Needs

For many, no additional intervention will be needed. However, some will need additional crisis intervention to attend to their emotional reactions. Listening, attending, acknowledging, summarizing, reflecting, normalizing, nurturing, correcting false information, planning for the remainder of the day, the evening, empathetic responses are the primary crisis responses at this time. This type of special attention, for those having a difficult time emotionally, often is all that is needed.

Level Two – Debriefing

In research evaluating the outcome differences between those exposed to debriefing and those not involved in debriefing, those groups who participated in debriefing reported having shorter duration of reactions and less intense reactions. Debriefing can accelerate symptom reduction

(Hokanson & Wirth, 2000; Everly & Mitchell, 2000; Eid., Johnson, & Weisaeth, 2001). Dr. Jeffrey Mitchell, a former fireman, is credited with establishing the Critical Incident Stress Debriefing Model and process designed to assist rescue workers and survivors of catastrophic situations. Other models have been developed: Armstrong, et. al (1991), Raphael (1986), Hobfoll (1994), but Mitchell's model receives the most attention.

The purpose of debriefing is to give participants the opportunity to tell their story by using very focused questions that identify the cognitive, affective and behavioral experiences of the participants. The formal debriefing model is, however, very cognitive and its processes do not address the unique needs of schools and students. The National Institute for Trauma and Loss in Children, with the help of some 1,500 professionals across the country developed several models to meet the needs of the various ages of students; the needs of the most exposed and least exposed, the needs of staff and of administrative response. Trauma Debriefing for Schools and Agencies (Steele, 1999) is now used in schools across the country. Defusing for younger children, debriefing for adolescents and adults, operational debriefing for all staff and debriefing crisis teams are the major models used by TLC. Debriefing is only for the most exposed and takes place in most situations about the third or fourth day following the incident. In New York following 9/11 over 8,000 students were evacuated from the target area and relocated to other schools and sites (Lehmuller & Switzer, 2002). Because of all that was actually happening, debriefing was not a possibility for several days. In situations where major everyday functions or resources cease like electricity, or water supply, inaccessible roads, etc. the initiation of debriefing may not occur until these services and resources are returned.

Exposure

Not everyone will need debriefing. Debriefing is generally reserved for the most exposed. There are four possible ways to be exposed, 1) as a surviving victim – victim of physical/sexual abuse, other assaults, community violence, critical injuries, catastrophic situations, etc., 2) as a witness to any potential trauma-inducing incident; violent or non-violent – murder, suicide, assault, car fatality, bus tragedy, house fire, drowning, etc., 3) being related to the victim – as a family member friend, or peer. (“Being related” can also include one’s perceived similarity to or personal identification with victims.) Milgram and associates (1988) found in their study of 268 seventh graders following a tragic school bus accident that “personal involvement” with the victims, rather than the incident itself, increased the level of prevalence. A study of 64 children (Schwarz & Kowalski, 1991) following a school shooting showed that irrespective of physical nearness to the event, emotional stress resulting from personal identification also led to Posttraumatic Stress Disorder (PTSD); 4) Verbal exposure – Saigh (1991) found that listening to the details of traumatic experiences, traumatic stress reactions can be induced. This is especially true for professionals responsible for intervention with traumatized children. Vicarious traumatization is always a potential development. Children who are exposed to repeated media coverage of details and survivors, understandably still may be vulnerable to trauma reactions.

Being “related to” and a “witness to” is far more frequent in today’s technological society. Approximately six months after the Oklahoma City bombing this author was speaking to a group of Head Start teachers. During

the presentation, one of the teachers told the story of how her children spontaneously devised a game where one half of them took all their sleeping (floor) mats and covered themselves. The other half, in pairs of two, one at a time would go over to the other children, lift up the mat, pick up the child under the mat and then escort that child over to the other side of the room by their indoor soccer nets. They did this until all of the children under the mats were rescued and taken to the “safety” nets. Afterward, they switched sides. Rescuers became victims trapped under the mats; victims were now rescuers.

By being witnesses to the tragedies of the bombing and seeing the rescue workers carry out children their own ages from the rubble of their day care center, these children identified with the victims and consequently needed to find a way to conquer the fear induced by being witnesses and recovery themselves to be “related to” the victims.

Debriefing is unlike any counseling process. Training is necessary to learn how to conduct debriefing. In school settings, debriefing should only be conducted by trained social workers, counselors with experience in working with the age level of those being debriefed and who also have a working knowledge of the developmental issues at the various age levels. Debriefing six-year-old children is far different than debriefing sixteen-year-old adolescents.

Level Three – Social Responsiveness and Empowerment

Level three is not a formal intervention for persistent reactions, but is actually happening concurrently with debriefing. It applies itself to the general population who needs to do something to feel better.

These intervention activities are sometimes spontaneous and can be initiated by staff or students. In most cases, they begin three or four days following the critical incident, but can begin earlier. They are sensory in nature, in that participants are actively involved in doing something in response to the trauma experienced. Following 9/11, for example, blood drives were initiated, monies were collected, letters written, pictures drawn that were then sent to victim's families and students in the attack area, vigils were held, community forums addressing cultural and religious issues triggered by the attack were convened, the meaning of such an attack were discussed in social science and history classes.

It is this kind of social response at a sensory level that helps to return a sense of control and power to those who were left feeling vulnerable following exposure. They can help to empower not just individual students or staff, but an entire community. They also provide the opportunity to teach children about the value of life, respect for diversity, generosity of spirit, care for others, and how to collaboratively work together to support one another in a time of crisis. They generate a social conscience as well as help teach children difficult lessons. They also help restore a sense of hope.

Numerous activities were encouraged and supported by the US Department of Education, Parent Teacher Associations, American Psychological Association, National Association of School Social Workers, Educators for Social Responsibility, American Academy of Child and Adolescent

Psychiatry, National Institute of Mental Health, National Institute for Trauma and Loss in Children, and many other state and local organizations. Schools Response to Terrorism: A Handbook of Protocols, published by TLC (Fall, 2002) provides a wide-range of social responsive and empowerment activities and resources.

Research related to the value of such activities is limited, yet administrators across the country saw how such activities had value in not only giving their students a voice, but in helping them collectively feel better. They become a way to help the “negativity” and “impotence” survivors can be left with immediately following exposure (Rowlands, 1998). They help children “gain control of the intense emotions and sense of helplessness that follow community disaster” (Austin, 1992). For immediate survivors, the outpouring of support helps to “validate” the value of the sacrifices made by their loved ones (van der Kolk, 1996).

This article does not permit a full discussion on memorial services within school settings, which is a level three intervention. The National Institute for Trauma and Loss in Children recommends that memorial services not be conducted in school settings, especially following a suicide because of the risk of contagion (Phillips & Carstensen, 1986; Gould & Schaffer, 1986). If one understands the nature of trauma, one understands that prolonged exposure via physical proximity to memories of the deceased can leave survivors “frozen” in their grief and trauma. This was the primary reason, that administrators decided to build an entirely new library for Columbine

High School (Semas, 2001). (Additional protocol following student deaths can be found in the Trauma Response Protocol Manual and activities for students following terrorism or when multiple deaths occur can be found in Schools Response to Terrorism: A Handbook of Protocols (Steele, Brohl & Brohl, 2002).

The social aspect of this level of intervention may not help individuals with more intense or severe levels of trauma reactions. For some, it may even delay reactions. Think in terms of rescue workers, who work hard at doing what they are trained to do. When all of the activity ceases, the reality of what they have been exposed begins to take hold and reactions emerge. For some of these rescue workers, additional intervention will be needed.

Level Four – Structured Sensory Intervention

This final level of intervention responds to those victims who are experiencing PTSD weeks following exposure, even months or years later. It also responds to those who may not fulfill the criteria for PTSD but are, in fact, experiencing one or more trauma-specific reaction and/or delayed grief reactions (traumatic grief). This level of intervention can actually be used with students who have been exposed to a singular incident or chronic multiple traumatizations.

Structured Sensory Intervention for Traumatized Children, Adolescents, and Parents (SITCAP) (Steele & Raider, 2001) is the result of eleven years of development, field-testing in school and agency settings, and research by

The National Institute for Trauma and Loss in Children (TLC). SITCAP includes trauma-specific intervention programs for pre-school children three-to-six years - What Color Is Your Hurt?; children six-through-twelve years I Feel Better Now!; children six-through-twelve years and thirteen-through-eighteen years Trauma Intervention for Children and Adolescents, formerly known as – Trauma Response Kit; adults – Adults and Parents in Trauma: Learning to Survive and Trauma Debriefing for Schools and Agencies.

TLC has over 3,000 certified Trauma and Loss School Specialists, Consultants, and Consultant Supervisors using these intervention programs across the country in school and agency settings with children and families exposed to such incidents as murder, suicide, sexual/physical assault, domestic violence and other forms of violent acts; car fatalities, house fires, drownings, critical injuries, terminal illnesses, divorce, separation from parents and other non-violent critical incidents. These interventions are based upon well-researched cognitive-exposure based intervention strategies (Saigh & Bremmer, 1999; Malchiodi, 1998; Deblinger et. al, 1996; Roje, 1995; van der Kolk et. al, 1996; Pynoos, 1998).

The restoration of a sense of safety and power is a primary concern in each program. The activities are primarily sensory activities, as trauma is experienced at a sensory level, not a cognitive level. The structure of the intervention, however, directs those sensory experiences into a cognitive framework, which can then be reordered in a way that is manageable and empowering for children (Steele & Raider, 2001; Saigh, 1999). This intervention “is structured because with structure come a sense of control

and safety” (Steele & Raider, 2001, p. 63). Trauma-specific questions are used to help the victim give their experience a language, to tell their story. Sensory activities are used to help the victims make us a “witness” to what the experience was like. Once those tasks are completed, the child can now think differently about what happened.

Example

It was New Year’s Eve. A high school senior was ushering at a movie complex where several movies ran concurrently. He was slated to graduate in the spring and had been accepted into the police academy. Also a football player, he was physically quite strong and stood over six feet tall. Several kids in the movie he was assigned to were causing trouble. He attempted to get control but was unable to do so. He sought out the manager for help, but the manager had a full house and told him he would just have to handle it on his own. The situation did not change. In this complex, movies were scheduled so several let out at the same time. There was a “common” area that the theatres opened into, so everyone was moving into this area simultaneously. The youngster took his post across the common area outside the doors of the movie he was responsible to monitor. When the youths he had trouble with came out of the movie and into the common area they spotted him, rushed him, knocked him down and began beating on him. They broke his nose and several ribs. About a month later his parish priest, who was trying to help this youngster, called for assistance. The boy was skipping school and not attending the youth activities at church, which was not at all like him.

“What was the worst part for you?” was one of the trauma specific questions that helped to encourage this youngster’s telling of the story and focusing on specific details. When this case was presented in trainings and participants were asked to anticipate what the “worst part” must have been, their numerous responses rarely identified what the worst part was for this teenager. Responses ranged from the anger he felt at the manager for leaving him on his own, the embarrassment and shame that he couldn’t help himself and the pain he felt during the beating. The point is, what we often as observers consider to be the worst part is not necessarily experienced by the victim. Only by giving the victim the opportunity to make us a witness can we truly know his experience as he knows it.

The teen’s response was as follows:

“I can see it as if it is happening all over again. I’m on the ground and they’re kicking me. As they are kicking me I can see between their legs. (This kind of detail is unique to trauma in which events seem to happen almost in slow motion so that such details emerge.) As I’m looking between their legs, I see all these people standing around and no one is helping me.”

At that moment in time, he experienced complete abandonment, betrayed by the adults in his world. Without appropriate intervention this could have easily triggered very self-defeating, even destructive responses. He had already begun to isolate himself, was missing school and was putting his future in jeopardy. If he had gone much longer without help, it would not have been unusual for him to start carrying a weapon, join a gang, or even actively seek out the kids who beat him with the intent of getting revenge. Being unable to trust the adult world was the worst part of his experience

and one that often leads to destructive behavior and identification with the aggressor.

By asking this one trauma-specific question, the specialist was able to help this teen work through the abandonment and cognitive distortion he experienced; a focus that likely would have otherwise gone untreated.

Cognitive Reframing

Cognitive reframing is scripted to insure that the victim is provided a “survivors” way of making sense of the trauma experience. The goal is to help move the victim from “victim thinking” to “survivor thinking” which leads to empowerment, choice, active involvement in their own healing process and a renewed sense of safety and hope.

Activities also assist in supporting the reframing of the experience. The high school senior, in our earlier example, who was beaten on New Year’s Eve and had lost trust in the adult world, withdrew. By having him draw what his fears looked like and later giving them a name, he realized he was responding as a victim to his own fear that, if the police academy found out, they would never allow him to start his training. This was irrational, but not from a “victim’s” viewpoint. A sense of shame also emerged, as his view of self was not being able to take care of himself. When asked why standard operating procedure of police was to always work with a partner, he was able to refocus on the reality that alone, even in the midst of bystanders, protection and help was not always given. Working in pairs, he realized, dealt with the reality that even police could find themselves suddenly overwhelmed. At a cognitive level, he was then able to reframe that what

happened to him was not his fault and that as a police officer he would be doing for others what others could not do for him - help. In this sense, cognitive reframing allowed him to reorder his experience in a way that gave his future new meaning.

Cognitive approaches are largely used with exposure techniques. Frank (1988), Meichenbaum (1974), Saigh (1999), have all found the use of cognitive restructuring /reframing to be a valuable component for helping individuals move from “victim thinking” to “survivor thinking”. Cognitive reframing occurs everyday of a student’s life as a result of daily experiences with teachers and the education process. It is an essential component of trauma intervention and needs to be a part of the schools response.

Parent Involvement

A good deal of research has concluded that parents are also critical to their child’s ability to recover from trauma. Pynoos & Nader (1988) and Vogel & Verberg (1993) cited parents as the single most important support for school age children following a disaster. Byers (1996) reported that studies following World War II showed that the level of upset displayed by the adult in the child’s life, not the war itself, was the single most important factor in predicting the emotional well being and recovery of the child. We see the same relationship today.

An unstable parent creates an unstable child. A traumatized adult will find it difficult to help her traumatized child. Schwarz (1991) and many others have found that adults (parents), more frequently than children, experienced the

greatest distress when presented with a trauma. van der Kolk, et. al (1996) wrote “most children are amazingly resilient as long as they have caregivers that are emotionally available.” When a child has been traumatized, parents also experience extreme distress and often are unable to adequately respond to their traumatized children without appropriate intervention.

Learning about trauma helps parents, especially when their experience is brought back to life (triggered) by their child's traumatic experience. Education is an essential, necessary component to help the parent become aware of how her own unresolved fears may block her ability to allow her child to openly tell his story. The child needs a parent who is not terrified and emotionally overwhelmed. Parents with their own history often discover that their child's experience threatens to bring all the terror of their own experience back to life. Unknowingly, they reject their child's cry for help, or minimize the child's terror in hopes of calming the child.

Given the reality that parent involvement in intervention can be minimal, two sessions with parents can still support significant reduction of trauma reactions in their children. This is especially the case if those sessions are structured and focused on helping the parent become “a witness” to their child's experience as well.

Summary

Research (Steele & Raider, 2001) documented that TLC's intervention programs reduce severe levels of trauma reactions following violent as well

as non-violent incidents. It demonstrated that the most severe victims saw the greatest reductions in reactions; contrary to the myth that little can be done to help those exposed to multiple traumas. It demonstrated that trained school counselors, social workers and psychologists can assist traumatized children in the reduction of symptoms across all diagnostic subcategories of PTSD, and for most, continue that reduction months after the last intervention.

Structured sensory interventions developed by TLC are unique for several reasons. They have been field-tested and researched in school settings and can be applied to students exposed to either violent or non-violent trauma inducing situations. Because grief is part of any trauma reaction, they are beneficial for managing grief as well as trauma. They are short-term, no more than eight sessions with each session following in a sequential manner addressing the major themes of trauma: fear, terror, hurt, worry, anger, revenge, guilt, accountability absence of safety, powerlessness, and victim thinking versus survivor thinking. Not all children will need all eight sessions, yet the design is such that each session is self-contained and outcome driven. Resource materials are provided for parents as well as students to assist in the education of victims and their families as to the nature of trauma and the normalization of its reactions.

Today, crisis intervention is a standard response in schools settings following critical incidents. Unfortunately, responses are not always orderly, nor appropriately used because of the lack of awareness and understanding of the nature of trauma, the way it can impact victims, the different levels of needs of victims, and the training needed to appropriately initiate the

different levels of intervention from the least intrusive to the more intense strategies. Age appropriate resource materials (tools) are also needed to help facilitate successful intervention at the sensory level.

Understanding that trauma is not a cognitive experience, but a sensory one, dictates strategies that immediately restore, to victims, a sense of safety and renewed sense of empowerment/control in the face of fear and uncertainty generated by the incident. Reduction of the arousal level is critical to the restoration of pre-trauma cognitive processes, learning functions, behavior and performance. However, this must be approached systematically, as students or staff exposed to traumatic situations will have many varied reactions, some resolved with level one interventions, others needing up to level four intervention.

Children are most accessible in the school environment. We also learned as early as 1986 (Terr, 1990), following the Challenger space shuttle disaster, that children are vulnerable to trauma reactions even fourteen months later. Most educators understand that availability to the media today has left children overexposed to life events far too early in life and, as a result, children live in greater fear and anxiety than in past years. The school setting becomes an opportunity to help minimize that fear and restore a sense of safety. Valuable lessons can be learned if taught.

Students fully expect to hear from the adults in their environment following critical incidents. When educators fail to discuss the kind of critical incidents children are exposed to personally, via their school neighborhood or via the media coverage of major disasters, they are left to believe that “adults are

afraid to talk”; “nobody knows what to do”; and/or “I better not bring this up – there is something wrong about it” (Terr, 1992 p.87). Critical incidents/disasters present an opportunity to teach children to alter or expand their cognitive reactions, to stimulate their emotional growth, to be better prepared to negotiate the realities of today’s world.

Administrators generally appreciate the value of structured, orderly process when faced with difficult situations. It is far easier to exercise flexibility to unique elements of situations when structured boundaries exist. Crisis intervention in school settings need to also be structured and orderly, not only to minimize liability issues, but to maximize the opportunity to provide an immediate, efficient, outcome oriented resolution of that crisis. In essence, all members of school crisis teams need to be “on-the-same-page,” know exactly what their roles are, how and when they are to carry out these roles, and what is to be communicated to students, staff, families and communities. This is accomplished through a systematic initiation of protocols and levels of interventions of the kind discussed. The National Institute for Trauma and Loss in Children has been working with school districts across the country since 1990. Its protocols, intervention programs, strategies, and resource materials continue to be used and endorsed by schools and agencies across the country.

References

Alessi, H.D. & Ballard, M.B. (2001). Memory development in children: Implications for children as witnesses in

situations of possible abuse. *Journal of Counseling and Development*, 79, 398-404.

Armstrong, K., O'Callahan, W., & Marmar, C. (1991). Debriefing red cross disaster personnel: The multiple

stressor debriefing model. *Journal of Traumatic Stress*, 4, 581-594.

Austin, L. (1992). *Responding to disaster: A guide for mental health professionals*. Washington, DC: American

Psychiatric Press.

Azarian, A., Lipsett, L., Miller, T. and Skriptchenko-Gregorean, V. (1999). Toddlers remember quake trauma. In

L. Williams & V. Baynard (Eds.), *Trauma and Memory* (pp. 299-310). Thousand Oaks, California: Sage.

Bremmer, J.D. (2001). Hypotheses and controversies related to the effects of stress on the hippocampus: An

argument for stress-induced damage to the hippocampus in patients with posttraumatic stress disorder.

Hippocampus, 11, 75-81.

Bremner, J.D., Krystal, J.H. Charnez, D.S., and Southwick, S. M. (1996). Neural mechanisms in dissociative

amnesia for childhood abuse: Relevance to the current controversy surrounding the false memory syndrome.

American Journal of Psychiatry. 153 (7), 71-80.

Buck, R. (1994). The neuropsychology of communication: Spontaneous and symbols aspects. *Journal of*

Pragmatics. 22, 265-278.

Caplan, G. (1964). *Principles of preventative psychiatry*. New York, NY: Basic Books.

Eid, J., Johnson, B., & Weisaeth, L. (2001). The effects of group psychological debriefing on acute stress reactions

following a traffic accident: A quasi-experimental approach. *International Journal of Emergency Mental*

Health, 3, 145-153.

Everly, Jr. G.S. & Mitchell, J.T. (2000). The debriefing “controversy” and crisis intervention. *International Journal of Emergency Mental Health*. 2, 211-225.

Ford article

Grill, D. (1999). *Deactivation*. (paper) Brentwood, CA: Treatment Center for Traumatic Life Experiences.

Gould, M. & Shaffer, D. (1986). The impact of suicide in television movies. *New England Journal of Medicine*.

315, 690-693.

Hobfoll, S.E., Briggs, S., & Wells, J. (1994). *Community stress and resources: Actions and reactions*. Poster

presented at NATO Conference on Stress, Coping and Disaster. Bonas, France.

Hokanson, M. & Wirth, B., (2000). The critical incident stress debriefing process for the Los Angeles county fire

department: Automatic and effective. *International Journal Of Emergency Mental Health*. 2, 249-257.

Hopkins, B., & Butterworth, G. (1990). Concepts of causality in explanations of development. In G. Butterworth

and Bryant (Eds.), *Causes of Development*. (p. 3-32). Hillsdale, New Jersey: Erlbaum.

Johnson, K. (1993). *School crisis management: A hands-on guide to training crisis response teams*. Alameda, CA: Hunter House, Inc.

Lang, P. J. (1979). A bio-informational theory of emotional imagery. *Psychophysiology*. 16, 495-512.

LeDoux, J. E. (2002). *Synoptic Self: How our brains become who we are*. New York, NY: Penguin.

Le Doux, I. E., Romanski, L., & Xagoraris. (1991). Indelibility of subcortical emotional memories. *Journal of Cognitive Neuroscience*. 1, 238-243.

Lehmuller, P., & Switzer, A. (2002). September 11: An elementary school at ground zero. *Principal*. 1, 52-54.

Levine, P. A. (2007). *Trauma though a child's eyes: Awakening the ordinary miracle of healing*. Berkeley, CA: North Atlantic Books.

Levine, P. A. (1997). *Waking the tiger*. Berkeley, CA: North Atlantic Books.

Lindemann, E. (1944). Symptomatology and management of acute grief. *American Journal of Psychiatry*, 101, 141-148.

Matthews, E., and Saywitz, K. (1992). Child victim witness manual. *California Center for Judicial Education and Research Journal*. 12, 5-81.

Main, M. (1996). Introduction of the special section of attachment and psychopathology and overview of the field of

attachment. *Journal of Consulting and Clinical Psychology*, 64, 237-243.

McFarlane, A.C. (1994). Helping victims of disasters. In Freedy, J.R. & Hobfoll, S.E. (Eds.) (1994). *Traumatic*

stress: From theory to practice. New York, NY: Plenum.

Milgram, N., Toubiana, Y., Raviv, A., & Goldstein, I. (1988). Situational exposure and personal loss in children's

acute and chronic stress reactions to a school bus disaster. *Journal of Traumatic Stress*, 1, 339-351.

New York Times Magazine Staff (2001). The way we live now document: The age of anxiety. *New York Times*

Magazine, Sunday June 10, 2001.

Ogawa, J.R., Sroufe, L.A., Weinfield, N.S., Carlson, E.A., and England, B. (1997). Development and the frag

mented self: Longitudinal study of dissociative symptomatology in a non-clinical sample. *Development and*

Psychopathology, 9, 855-879.

Perry, B. & Szalavitr, M. (2006). *The boy who was raised as a dog and other stories from a child psychiatrist's*

notebook: What traumatized children can teach us about loss, love and healing. New York, NY: Basic Books.

Perry, B. (2000). Violence and childhood: How persisting fear can alter the developing child's brain. *The Child*

Trauma Academy. Retrieved February 21, 2002 from

<http://www.childtrauma@bcm.tn.edu>.

Phillips, D. & Carstensen, L. (1986). Clustering of teenage suicides after television news stories about suicide. *New*

England Journal of Medicine. 315: 685-689.

Rando, T. (1993). *Treatment of complicated mourning*. Champaign, IL: Research Press (p.596)

Raphael, B. (1986). *When disaster strikes: A handbook for the caring professions*. London, England: Hutchinson.

Rapoport, L. (1970). Crisis intervention as a mode of brief treatment. In Roberts, W. & Nee, R.H., (Eds.) *Theories Of Social Casework*, 267-311. Chicago, IL: University of Chicago Press.

Rothchild, B. (2001). *The body remembers: The psychophysiology of trauma and trauma treatment*. New York, NY: W.W. Norton.

Rothchild, B. (2003). *The body remembers casebook*. New York, NY: W.W. Norton.

Rowlands, M. (1998). Trauma memory and memorials. *British Journal of Psychotherapy*. 15, 1.

Saigh, P.A. & Bremner, J. (1999). *Posttraumatic Stress Disorder*. Boston, MA: Allyn & Bacon.

Saigh, P.A. (1991). The development of posttraumatic stress disorder pursuant to different modes of traumatization. *Behavior Research and Therapy*, 29, 213-216.

Schore, A. (2001a). The effects of early relational trauma on right-brain development, affect, regulation and infant mental health. *Infant Mental Health Journal*, 22, 201-269.

Schore, A. (2001b). The effects of a secure attachment relationship on right-brain development, affect regulation,

and infant mental health. *Infant Mental Health Journal*, 22, 41

Schwarz, E. & Kowalski, J. (1991). Posttraumatic stress disorder after a school shooting: Effects of symptom

threshold selection and diagnosis by DSM-III-R, or proposed DSM-IV. *American Journal of Psychiatry*. 48, 592-597.

Semas, J. (2001). Columbine revisited. *Curriculum Administrators*, 4, 34-38.

Squire, L. R. (1994). *Memory and Brain*. New York, NY: Oxford University Press.

Starknum, M.N., Gebarski, S.S., Berent, S., & Schteingart, D.E. (1992). Hippocampal formation volume, memory

of dysfunction, and cortisol levels in patients with cushing's syndrome. *Biology Psychiatry*, 32, 756-765.

Steele, W., Brohl, N., & Brohl, P. (2002). *Schools' response to terrorism: A handbook of protocols*. Grosse Pointe Woods, MI: TLC Institute.

Steele, W. & Raider, M. (2001). *Structured Sensory Interventions for Children, Adolescents and Parents (SITCAP)*.

New York,, NY: Edwin Mellen Press.

Steele, W., Ingle, D., Nelson, M., & Porter, P. (2000). *Trauma response protocol manual for schools*. Grosse Pointe Woods, MI.: TLC Institute.

Steele, W., (1999). *Trauma debriefing for schools and agencies*. Grosse Pointe Woods, Michigan: TLC Institute

Steele, W., (1991). *Working with families in crisis*. New York, NY: Guilford Press.

Stein, P. & Kendell, J. (2004). *Psychological trauma and the developing brain: Neurology based interventions for troubled children*. New York, NY: Hawthorne Maltreatment and Trauma Press.

Teicher, M (2000). Wounds that time won't heal: The neurobiology of child abuse. *Cerebrum: The Dana Forum on Brain Sciences*, 2, 50-68.

Terr, L. (1992). Large-group preventive treatment techniques for use after disaster. In L. Austin (Ed). *Responding to disaster: A guide for mental health professionals* (pp. 88-93). Washington, DC: American Psychiatric Press.

Terr, L. (1990). *Too scared to cry: Psychic trauma In childhood*. New York, NY: Harper & Row.

Thompson, J.A., Charlton, P.F.C., Kerry, R., Lee, D. & Turner, S.W. (1995). An open trial of exposure therapy

based on deconditioning for posttraumatic stress disorder. *British Journal of Clinical Psychology*, 31, 407-

416.

Travathen, C. (1993). The self born in subjectivity: The psychology of an infant communicating. In. U. Neissen

(Ed.), *The Perceived Self: Ecological and Interpersonal Sources of Self-Knowledge* (pp. 121-173). New York, NY: Cambridge University Press.

U.S.Department of Health & Human Services (2001). IN FOCUS: Understanding the effects of maltreatment on

early brain development. *National Clearinghouse on Child Abuse and Neglect*.

van der Kolk, B., McFarlane, A., & Weisaeth, L. (1996). *Traumatic stress disorder: The effects of overwhelming*

experience on mind, body, and society. New York, NY: Guilford Press.

van der Kolk (1994). The body keeps the score: Memory and the evolving psychobiology of PTSD. *Harvard Review*

of Psychiatry, 1, 253-265.

Vernberg, E., Silverman, W., Greca, A., and Prinstein, M. (1996). Prediction of posttraumatic stress symptoms in

children after hurricane Andrew. *Journal of Abnormal Psychology*. 105, 237-248.

Webb, N. (1994). School-based assessment and crisis intervention with kindergarten children following the New

York World Trade Center bombing. *Crisis Intervention*. 1, 47-59.

Weinstein, D. (2000). ADHD and posttraumatic stress disorder. *ADHD Report*, 8, 5

Webb, N. (1986). Before and after suicide: A preventative outreach program for colleges. *Suicide and Life-*

Threatening Behavior. 16, 469-480.

Yang, B., and Clum, G.A. (2000). Childhood stress leads to later suicidality via its effects on cognitive functioning.

Suicide and Life Threatening Behavior, 30, 83-189.