A Trauma and Recovery Model for Victims and Their Families after a Catastrophic School Shooting: Focusing on Behavioral, Cognitive, and Psychological Effects and Needs

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School shootings, and particularly catastrophic school shootings, are no longer a rarity in this country. This article presents a trauma and recovery model for victims of a catastrophic school shooting, based on the author's experiences with victims of a suburban school shooting. It is meant to provide a better understanding of the impact and responses often observed in victims—students, staff, teachers, and administrators—and their families after a catastrophic school shooting. The model identifies behavioral, cognitive, and psychological responses, as well as the psychological needs of the victims and their families. [Brief Treatment and Crisis Intervention 3:397–411 (2003)]

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Tragic school shootings from 1997 to 1999 shocked the nation. On October 1, 1997, 16-year-old Luke Woodham, after killing his mother, opened fire at his Pearl, Mississippi, high school, killing 3 and wounding 7; on December 1, 1997, in West Paducah, Kentucky, 14-year-old Michael Carneal killed 3 students at a high school prayer meeting; on March 24, 1998, in Jonesboro, Arkansas, 13-year-old Mitchell Johnson and 11-year-old Andrew Golden opened fire, killing 4 schoolmates and 1 teacher; on April 24, 1998, in Edinboro, Pennsylvania, 14-year-old Andrew Wurst killed 1 teacher at a school dance; on May 21, 1998, in Springfield, Oregon, 15-year old Kip Kinkel, after killing both of his parents, walked into the school cafeteria and shot 24 classmates, killing 2; on April 20, 1999, Eric Harris and Dylan Klebolt assaulted their Littleton, Colorado, school, killing 13 (12 students and 1 teacher) before they took their own lives; on May 20, 1999, in Conyers, Georgia, 15-year old Thomas Solomon Jr. wounded 6 classmates. These catastrophic school incidents differ from milder forms of aggression in schools—in general, intentional verbal or physical acting out, such as bullying, vandalism, theft, groping, single-victim injury, and so forth—in that...
they generally involve multiple fatalities. A “catastrophic event” has been defined by Roberts (2000) as “acute localized violent occurrences producing widespread trauma in those experiencing or exposed to the event. These incidents commonly directly victimize groups of people and frequently include multiple fatal assaults” (p. 515).

Catastrophic school violence generally involves others being injured, often under the threat of death, as well as exposure to the loss of loved ones and grotesque sights. Detailed and extensive media coverage has brought awareness to parents, teachers, school officials, politicians, and the public about the reality that catastrophic school shootings have permeated many inner-city as well as suburban communities of various socioeconomic and ethnic groups. In fact, media coverage has not only brought greater awareness, but it has also raised questions about the short- and long-term effects of such catastrophic traumatic events on victims and their families.

A catastrophic school shooting is a time of crisis, best described as “a period of psychological disequilibria, experienced as a result of a hazardous event or situation that contributes a significant problem that cannot be remedied by using familiar coping strategies” (Roberts, 2000, p. 7). The catastrophic school-shooting experience and its sequelae inevitably have powerful effects on the victims and their families, disrupting their behavioral, cognitive, and psychological well-being. The impact is minimized or exaggerated according to the intensity and duration of the threat and the degree of imminent danger to self or others with no defense or escape. During the Columbine High School shooting, students in the library hid under tables when the two shooters played “peek-a-boo” with them, killing some and sparing the lives of others. This event caused the survivors’ sense of imminent danger, having no place to go for protection except under the tables, which provided little, if any, security. Based on other research studies (e.g. Bryant, Mayou, Wiggs, Ehlers, & Stores, 2001; DeVries et al., 1999; Gill, 2002; Yule, 1999), as many as 14 to 35% of these students have developed posttraumatic stress disorder (PTSD), which means that a significant minority of these victims have developed PTSD most likely within the first few weeks after the shooting, with late onset in only a few cases (Meichenbaum, 1994). Resiliency can serve as a buffer for many of the other victims (Larson & Lee, 1996; Lightsey, 1994). Certain stress buffers were identified by Cohen and Wills (1985) as variables that “related to well-being only (primarily) for persons under stress” (p. 310). In addition to Cohen and Wills, stress buffers were researched extensively by Hettler and Cohen (1998); Larson and Lee (1996); and Lightsey (1994). It is important to remember that stress buffers can serve as protective mechanisms but also that “the experience of a traumatic event is necessary but not sufficient to cause PTSD” (Yule, 2001, p. 196). Existing research (Bryant et al., 2001; DeVries et al., 1999; Gill, 2002; Yule, 1999) has hypothesized that between 65 and 86% of students, teachers, and administrators who are victims of catastrophic school shootings will most likely experience posttraumatic stress (PTS) and not PTSD. Careful assessment for PTS and PTSD should be conducted of the victims and their families (including risk and protective factors and level of past and present functioning [Eaton & Roberts, 2002]), all in an attempt to restore and promote their cognitive emotional and interpersonal function (Murphy, Pynoos, & James, 1997).

It is therefore important that mental health professionals understand the behavioral, cognitive, and psychological impact of catastrophic school violence and the needs that the victims and their families have afterward. From the actual trauma to the recovery, victims and their families transition through trauma reaction,
including the complexity of the traumatic experience and the interactions of traumatic experiences and the interactions of traumatic reminders, secondary stress, posttraumatic stress, and development” (Yule, 2001, p. 197), of which more research needs to be considered. However, the body of literature on PTSD is growing (Pfefferbaum, 1997; Yule, 1999; Yule et al., 2000; Yule, Perrin, & Smith, 1999) as are current prevention and intervention models, such as Roberts’s seven-stage crisis intervention model (Roberts, 1996; Roberts, 2000), the stress/crisis/trauma model (Waters, Lynn & Morgan, 2002), and PTSD treatment such as critical-incident stress debriefing (CISD; Dyregrov, 1991; Stallard & Law, 1993) and eye-movement desensitization and reprocessing (EMDR) with children and adolescents (Chemtob, Nakashima, Hamada, & Carlson, 1998; Tinker & Wilson, 1999). School- and classroom-based interventions include psychoeducational groups (Eth, 1992; Klingman, 1987); single-case groups (March, Amaya-Jackson, Murray, & Schulte, 1998); and prevention programs such as FAST Track program (Dodge, 1993), Positive Adolescent Choices Training (PACT; Yung & Hammond, 1998), and Viewpoint Training Program (Wahler, Fetch, & Silliman, 1997). Additionally, cognitive behavioral therapy (CBT; Meichenbaum, 1994) is utilized, including cognitive therapy (Beck, 1996) and rational-emotional-behavioral therapy (Ellis, 1996). Family therapy and rational-emotional therapy (RET) are believed to be helpful when working with victims and their families (Knox & Roberts, 2000). The literature reflects an apparently increasing awareness that victims of a traumatic event and their families benefit from brief treatment, particularly solution-focused therapy with the focus being on issues of the “here and now.” In addition to the growing body of literature on PTSD and crisis intervention, prevention models have been described as well; however, for catastrophic school shootings, no trauma and recovery model has been developed thus far addressing the behavioral, cognitive, and psychological impact of the event and the psychological needs of victims and their families. The model presented in this paper encompasses the behavioral, cognitive, and psychological impact as well as the psychological needs of the victims of school shootings and their families. It identifies the stages of trauma and recovery generally experienced by victims of school shootings and their families.

The Trauma and Recovery Model for Victims of a School Shooting

Catastrophic school shootings have long-term effects on victims and their families. The severity and duration of the effects as well as the recovery time are generally dependent on the individual’s

- internal resources—problem-solving skills, cognitive function, intelligence, and so forth;
- resilience—ability to use natural healing processes, such as talking with others, journaling, “play, dreams, and community rituals to celebrate life and to mourn loss” (Melzak, 1997, p. 17);
- past experiences—previous exposure to aggression and violence (actual and vicarious) and parental responses to familial aggression and violence (Epps, 1997, p. 49);
- spiritual beliefs (Hettler & Cohen, 1998; Woodcock, 2001);
- psychological well-being—depression, grief or loss issues, major mental illness (Pine & Cohen, 2002); and
- physical factors—fatigue, illness, previous use or abuse of alcohol and drugs.

After a catastrophic school shooting, factors that influence family, subsystem, and individ-
ual family members’ functioning include availability of personal, family, and community resources; culture or subculture; gender; economic considerations; and age and developmental level. Other influential factors include stress buffers and resiliency.

**Stress Buffers**

The buffer hypothesis posits that the occurrence of life change in the presence of buffering factors should produce less distress than the occurrence of life change in the absence of those factors (Thoits, 1982). The impact of the buffering effect in situations of stress, such as a catastrophic school shooting, “depends on the presence, absence, or level” of buffering factors that individuals have (Cleary & Kessler, 1982, p. 160). Social support is one such stress buffer. For example, individuals who have at least one person in their life that they can rely on and confide in are believed to be less vulnerable to traumatic stress. Cohen and Wills (1985) called this buffer “appraisal support,” that is, having others available to help appraise stressful situations; and they believed it to be more effective with the physiological and psychological effects of traumatic stress. Similar to “appraisal support,” “positive automatic thoughts” (PAT) may also serve as a stress buffer (Lightsey, 1994). In both examples, the individual’s protective mechanism serves as a buffer. Other factors that have demonstrated buffering effects include physical fitness (Roth & Holmes, 1985), sense of humor (Martin & Lefcourt, 1983), optimism (Scheier, Weintraub, & Carver, 1986), self-esteem (Witmer, Rich, Barcikowski, & Mague, 1983), self-complexity (Linville, 1987), efficiency (Ben-Sira & Potency, 1985), coping style (Felton, Revenson, & Hinrichsen, 1984; Holahan & Moos, 1985; Suls & Fletcher, 1985), type A characteristics (Holahan & Moos, 1985), and health practices (Wiebe & McCallum, 1986). It is important to remember that these stress-buffering factors are not contingent on the occurrence of a stressor. Additionally, these factors do not specifically evoke coping with stressors, but people who have some of these factors will most likely deal with stress more successfully than those who lack such factors.

**Resiliency**

Resilience can best be described as an individual’s ability to cope, bounce back, and keep on growing, emotionally and psychologically in challenging and traumatic situations (Walsh, 1998). According to McFarlane, secure attachment bond serves as the primary defense for trauma-induced psychopathology for children and adults (McFarlane, 1988; van der Kolk & Fisler, 1994). Effective coping in times of catastrophic school shootings includes the ability to take care of oneself by having the insight and ability to reach out and access social support when one’s own resources are no longer adequate. When securely attached people mature, they are able to self-regulate their aroused emotions as well as receive comfort from others. In addition to secure attachment, resiliency also serves as a defense for long-term behavioral and emotional problems. Resilient individuals are reported to use a traumatic experience as an opportunity to reorganize their life and move toward health (Card, 1983; Sledge, Boydstun, & Rahe, 1980; Ursano, 1981). For a resilient person, a catastrophic school shooting serves as a psychic organizer (Holloway & Ursano, 1984).

Figure 1 is an outline of the school shooting trauma and recovery model. The four stages identified are (1) traumatic disaster event; (2) family displacement and separation; (3A) loss of a loved one and (4A) recovery; or, in cases of victim survival, (3B) reunification and (4B)
recovery. Although individual patterns of responses may vary in duration, needs, and symptomology, some general patterns do exist with regard to behavioral, cognitive, and psychological responses and needs that emerge over time, all of which are described in the proposed trauma and recovery model for school shootings.

In describing the trauma and recovery model for catastrophic school shootings, the terms **primary victims** and **secondary victims** are used. Primary victims are students and members of the school staff and administration—teachers, school psychologists and counselors (and other school mental health providers), school nurses, principals and assistant principals, and so forth. Primary victims are those who

- are directly injured;
- observed or witnessed threats and harm of others;
- heard the threats and harm of others; or
- were in hiding and within physical proximity of being at risk, afraid for their own and others’ safety.

Secondary victims are individuals engaged empathically with the victims. They hear about the event, with graphic descriptions of human cruelty; they are helpless witnesses and are unable to protect the victims (Pearlman & Saakvitne, 1995). This role often results in secondary victims’ beliefs about the world and human nature being challenged and changed. For the purpose of this article, secondary victims include those associated with the student victims—parents, siblings, and extended family—and those associated with the victims of the school staff—spouses/partners, children, and extended family.

Stage 1: Traumatic Disaster Event

**Description of the Situation**

This stage can best be described as the time when the school shooting occurs. It can last from a few minutes to hours.

**A. Primary Victim**

**Behavioral responses.** During this stage, primary victims respond one of three ways: fight, flight, or freeze. Some believe that males generally respond to life-threatening situations with fight or flight, whereas females and children respond primarily with freezing (Perry, Polland, Blakley, Baker, & Vigilante, 1995).
Cognitive responses. Many report a sense of split awareness, in which the sense of time appears altered, when pain is not experienced intensely and terror is not fully experienced cognitively. Some have an inability to understand what is happening and an inability to decide what to do.

Psychological responses. These include but are not limited to shock, disbelief, horror, “freezing,” sense of suspension of reality.

Psychological needs. Withdrawal from the experience/catastrophic event; finding a safe location; reaching a person who can provide protection. Some need to help others and ensure others’ safety over their own.

B. Secondary Victims

Behavioral responses. During this stage, secondary victims experience panic, and in an attempt at reunification, they rush to the school to be as close as possible to the victim. The behavior might be self-centered, with the individual thinking only about his or her own child or family member who is a victim.

Cognitive responses. Awareness of obstacles and other people, choosing if they want to follow or ignore them—for example, when police tell them to stay behind the barricades, they run past the barricades toward the school. Their thinking should not be described as irrational but rather as nonrational, since they are not looking for alternatives or considering possible consequences.

Psychological responses. These include but are not limited to panic, sense of helplessness, fear, worry.

Psychological needs. Adults want to be at the school, the place where their loved one is at risk. They want to be as physically close as possible. Many have a desire or need to do something. Individuals who are unable to go to the school have the need to watch, hear, or in some way be continuously updated about the situation to find out what is happening to their loved ones. They report that it gives them more of a “sense of control in an out of control situation.” The victim’s children need to have caregivers provide comfort and responsiveness to their physical and emotional needs.

Important: This stage cannot be maintained for a long period; it is often followed by exhaustion (Young, 1991; 1995).

Stage 2: Displacement and Separation

Description of the Situation

This stage can best be described as the time when the victims and their families have not been reunited. The victim is no longer in a situation of risk to personal safety but has not been able to be reunited with his or her family. This can last from a few minutes to hours. Some victims may have died, whereas others were injured.

A. Primary Victim

Behavioral responses. During this stage, primary victims try to connect with their families and others. They can be verbal (crying) or quiet and passive.


Psychological responses. These include but are not limited to confusion or disorientation, helplessness, fear, shock, disbelief, sadness, calmness. The emotional state can fluctuate, with some showing little if any emotional responses. Others are highly emotional.
Psychological needs. For children, a need to receive support from parents, family, and other important adults in the child’s life. Familiar primary caregivers, teachers, and friends (especially for adolescents) can mitigate the emotional impact of the traumatic event. Adults need support by loved ones and other important adults.

B. Secondary Victims

Behavioral responses. During this stage, secondary victims will often behave impatiently because they experience a lack of control and uncertainty.

Cognitive responses. A lack of concentration and an inability to stay focused. Thinking can be repetitive in an attempt to make sense of the situation.

Psychological responses. These include but are not limited to fear, anxiety, worries, sense of helplessness, anger, irritability, and frustration—especially if reunification is prolonged and if information provided is limited.

Psychological needs. To have some control of the situation and to find out that their loved ones are safe.

It is important to remember that what happens during and immediately after a school shooting—including the level of destruction of the school building as well as the injuries and deaths of students and teachers—is critical in determining how victims and their families place meaning on the experience. In general, information about school shootings is not immediately available, but as it does become available, it contributes to the meaning of the event. Additionally, the level of rescue resources and support provided as well as the time frame and the duration of the rescue contribute to the interpretation of the shooting.

Note: Stage 3 is divided into two responses: (a) responding to the loss of a loved one and (b) determining the recovery process in reunification.

Stage 3A: Loss of Loved Ones

Description of the Situation

The family has been informed that their loved one has died as part of the traumatic event. In this case, families may wait for hours before they get the death notification, sometimes after all primary victims have been reunited with their families.

A. Primary Victim

The primary victim has died.

B. Secondary Victims

Behavioral responses. During this stage, secondary victims often respond with disbelief when receiving the information.

Cognitive responses. A lack of ability to comprehend that their loved one has died. Their thinking involves such thoughts as “She was so much liked by her peers or students,” or “If anyone would survive this school shooting, he would.”

Psychological responses. These include but are not limited to disbelief, denial, sense of suspension of reality, anger, sadness, and shock (possibly hysterical behavior).
Psychological needs. The bereaved (individual family members, family subsystems, family as a whole) have the need to understand the meaning of the traumatic event. Additionally, they often have a need to find out what the loved ones were doing when they were dying. Were they being heroes, rescuing or helping others? This information can help make the death a little less senseless.

Stage 4A: Recovery

Description of the Situation

The family has to deal with the loss of the loved one. This can last from months to years, depending on the family's and the individual family member's history, level of support, and available resources.

A. Primary Victim

The primary victim has died.

B. Secondary Victims

Behavioral responses. During this stage, secondary victims go through a time of disequilibria. The family goes through a time of reorganization, learning to accept the death of their loved one and learning to live with the loss so that they eventually can progress in the family life cycle.

Cognitive responses. For secondary victims, the reality that a loved one has died can be very complicated and “not real” until they have seen the loved one’s body. For others, it can result in refusal to accept the death. Their cognitive schema (conscious and unconscious beliefs and expectations of self and others) is used to make sense of the traumatic event and deal with the loss of their loved one, either through assimilation (trying to fit the event and loss into the existing beliefs and expectations) or accommodation (changing their beliefs and expectations).

Psychological responses. These include but are not limited to, shock, disorganization, denial, depression, guilt, anxiety, aggression, resolution and acceptance, and reintegration. Families (as individual family members, family subsystems, and as a whole) are expected to go through all of these stages of bereavement. It is important to understand that they do not transition through the stages in an orderly progression but rather will transition back and forth between the stages. They move through the stages with different speeds and intensities. As families reexperience different stages of grief, their primary psychological responses are anxiety, emptiness, reactive depression, anger, guilt, avoidance, and constricted affect.

Psychological needs. The bereaved (individual family members, family subsystems, and the family as a whole) need family and societal–community support, and they need to avoid being reexposed to the situation (e.g., media coverage).

Stage 3B: Reunification

Description of the Situation

The family is reunified either in the designated reunification place or, in cases of victim injury, in the hospital. This can occur in minutes or hours.

A. Primary Victim

Behavioral responses. During this stage, the primary victim often cries uncontrollably.
Shortly thereafter, the victim generally feels an urgent need to talk about the traumatic event in an attempt to make sense of the experience. This is a very temporary behavior.

_Cognitive responses._ Primary victims experience a realization of what they might have lost, namely, their lives. They feel a need to understand what happened, where everyone had been (students, staff, teachers, and administrators), if they are safe, and when and how they were injured or killed.

_Psychological responses._ These include but are not limited to horror, extreme fear, shock (possibly hysterical behavior), disbelief, confusion, anger, sadness, and grief. The emotional state can fluctuate quickly during this stage.

_Psychological needs._ A need for safety and the repeated reassurance of it. Additionally, children have a need to receive support from parents, family, friends, and other important adults in the child’s life. Familiar primary caregivers, teachers, and friends (especially for adolescents) can mitigate the emotional impact of the traumatic event. Adults need support by loved ones and other important adults. The need for physical closeness is important in providing reassurance and a sense of safety.

**B. Secondary Victims**

_Behavioral responses._ Embracing the child (or other victim). A need to be physically close to the victim, a desire to protect.

_Cognitive responses._ A mixture of relief that the loved one is safe and a realization that they could have lost him or her.

_Psychological responses._ These include but are not limited to relief (temporary), happiness (temporary), overprotectiveness, guilt (‘I should not have sent my child to school’). These responses generally fluctuate.

_Psychological needs._ Parents of secondary trauma victims have the need to protect their children and ensure their safety (they often blame themselves for sending the child to school that fateful day); secondary trauma children need the reassurance that their parents are safe and alive.

Stage 4B: Recovery

**Description of the Situation**

The family (individual members, family subsystems, and the family as a whole) deals with the primary and secondary trauma effects of the traumatic disaster event. This process can last from months to years, and some are unable to resolve it (family therapy can be a resource).

**A. Primary Victim**

_Behavioral responses._ To their family, primary victims often appear to have made a return to normality within a few days, which is generally superficial and temporary. During this time, they avoid both talking about their experience and getting any information about the traumatic event, by not listening to the radio, watching television, or talking with others about the event. Over time, they are unable to maintain “normal behavior” on this superficial level. Behavior observed can include but is not limited to

- relationship problems (e.g., withdrawal, isolation, running away);
- self-destructive behavior (e.g., drug use, sexual acting out, stealing);
- delayed maturation: pathological stall resulting in delayed launching;
- accelerated maturation: mature, futuristic, and independent;
- hypervigilent/exaggerated startle responses;
- sleep disturbances;
- suicidal ideation and actual suicide;
- overreacting or underreacting; and
- physical complaints (e.g., stomachaches, headaches, nausea).

Cognitive responses. At onset may be a fragmentation of the cognitive narrative of the event or a sequence of events that led up to the traumatic event, as well as an intrusive memory of the disaster event, including flashbacks. Also reported are lack of concentration and problems with short-term memory. These cognitive difficulties result in school performance difficulties not experienced before the traumatic event.

Psychological responses. These include but are not limited to, irritability, confusion, anger, frustration, emotional turmoil, feelings of estrangement from others, survivor guilt, sadness and depression (to the extent of hopelessness), anxiety, numbing fear, and helpless. The emotional state can fluctuate, and it ranges in duration and intensity based upon the individual’s history and family- and community-support systems.

Psychological needs. Factual (age-appropriate) information about the traumatic event; open and honest communication about the event and the victims’ experiences. Children should not be pressured to talk about their traumatic experience (it creates additional anxiety); however, when they initiate the process, they need to be supported. Routines established before the traumatic event should be maintained, and if needed, new ones should be established (e.g., going to school, working, getting out of bed, hanging out with friends). They provide predictability in a time when stability is of great importance; changes should be avoided. Victims feel a high need for safety; protection from threats and other violence is important. Family and community support is very important.

B. Secondary Victims

Behavioral responses. Families (individual family members, family subsystems, and families as a whole) have experienced a disruption of their family life. This disruption can be dealt with (on a temporary basis) by behaving as if life has returned to normal. This generally results in a reorganization and renegotiation of family members’ positions, roles, and behaviors. Behaviors observed during the restabilizing process can include but are not limited to

- relationship problems among the couple subsystem, sibling subsystem, the family as a whole, such as over- or under-involved parents, diffused or rigid boundaries between subsystems, and triangulation;
- disruption of intimacy;
- divorce;
- self-destructive behavior of individual family members, such as drug use, especially alcohol (it provides a numbing effect);
- delayed or accelerated transition through family life cycle;
- family violence;
- suicidal ideation and actual suicide (individual family members);
- over- or underreacting; and
- physical complaints (e.g., stomachaches, headaches, nausea).

Cognitive responses. Short-term memory problems and concentration problems (experienced by primary and secondary victims) not experi-
enced before the traumatic event. Additionally, the traumatic event can affect beliefs and values held about themselves and others—their basic sense of security and view of the world. The changed values and beliefs need to be filtered through family’s existing schemas (assimilation), or existing schemas need to be reshaped (accommodated) (Piaget, 1971). This holds true for both the primary and secondary victims, and it needs to occur on multiple family-systems levels.

Psychological responses. These include but are not limited to irritability, confusion, anger, numbing, frustration, guilt, sadness (to the extent of hopelessness), anxiety, helplessness, and unpredictability. The emotional state can fluctuate, and ranges in duration and intensity for family members based on their individual history, family, and community support system.

Psychological needs. The family (individual members, family subsystem, and the family as a whole) has four primary needs:

1. **safety:** gradually regaining belief in their self-safety as well as other’s safety; knowing that their children, spouses, and other family members are safe and not at risk;
2. **trust:** gradually regaining the ability to self-trust, which will allow them to reengage with others, including their own family; redeveloping trust in others, to fulfill their need to stay connected with their family, extended family, friends, and community;
3. **intimacy:** regaining the desire for both self-intimacy, to enjoy spending time alone, and intimacy with others, to enjoy time spent with others and being connected with others; and
4. **control:** regaining a sense of self-control and power over their own feelings and behaviors (Pearlman & Saakvitne, 1995).

These psychological needs may fluctuate in degree of achievement and means of achieving them, based on the family member’s age and developmental stage.

In consideration of the recovery process, it is important to remember that the traumatic effects of a catastrophic school shooting can be prolonged even after the violence or threats have ceased, such as in situations where (a) family members or peers are injured or killed, or rescue is prolonged; (b) family members are displaced or separated; (c) buildings are destroyed (library, classroom); and (d) family members, friends, or peers require emergency care. Van der Kolk and Fisler (1994) reported that “traumatized adults with childhood histories of severe neglect have a particularly poor long-term prognosis” (p. 185). Researchers believe that it is difficult to predict how children and adolescents will react to catastrophic school shootings. Children and adolescents are believed to be more vulnerable to the psychological effects of catastrophic school shootings, especially when going through early adolescence, a particularly stressful and confusing time already (Brooks-Gunn, 1992). Increased vulnerability also holds true in situations of “financial hardship of the family, educational disability, illness” (O’Halloran & Copeland, 2000, p. 106) as well as in situations with students who suffer from neglect (Cohen, Berliner & Mannarino, 2000), abuse (physical, sexual, emotional), or biological or psychological challenges (depressive and anxiety disorders, attention deficit–hyperactivity disorder, conduct disorder, substance abuse, borderline personality traits).

Discussion

The trauma and recovery model for catastrophic school shootings is designed to provide
insight for mental health professionals who work with victims and their families, with regard to the behavioral, cognitive, and psychological effects and needs during the stages of trauma and recovery. It is important for mental health professionals to remember that adjustment to the school shooting by victims and families is influenced by risk factors, such as their experience during the shooting in the loss or injury of a loved one as well as their preexisting family problems and mental health issues. For example, shortly after the Columbine High School shooting, the media reported that the mother of one of the students went into a gun shop, bought a gun, and committed suicide in the store. The media later revealed that the mother had struggled with mental health issues prior to the Columbine High School shooting but felt overwhelmed after the shooting and unable to go on. Mental health officials need to know about the impact that school shootings have on victims and their families, and they need to understand that preexisting risk factors can not only prolong the recovery process but can also save lives. The positive influence of stress buffers and resiliency as well as early treatment (CISD, EMDR, group treatment, individual and family therapy) cannot be overlooked in addressing the development of PTSD.

When looking at this model, mental health professionals need to consider some of its limitations. This model is based primarily on a middle-class white population after a catastrophic suburban school shooting; therefore, before applying the model, one needs to consider the cultural and socioeconomic factors that play a major role in how victims and their families experience and recover from a school shooting. Issues such as acculturation and ethnic identity should be considered before applying this model. Additionally, this model should be applied exclusively in cases of catastrophic school shootings, not others.

**Conclusion**

For a catastrophic school shooting, there has thus far not been a trauma and recovery model that provides insight for mental health professionals on how victims and their families experience the trauma and recovery process. Even with the model presented here, many questions still need to be answered, such as how the model might be different when dealing with ethnic or culturally diverse populations. Also, what treatment strategies and modalities are most effective at each stage? How different is internal processing versus external reality in affecting the healing process—that is, respectively, “If I had not sent my child to school, she or he would not have gotten hurt” versus “The school shooting was unpredictable; parents have the responsibility to send their children to school.” When considering the questions posed here, one should not forget the importance of asking questions that focus on prevention of catastrophic school shootings and not only on trauma and recovery. These questions need to be further explored and researched not only by school officials and mental health professionals but also by legislators, in an attempt to once more make our schools a safe place where children can focus on learning.

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