School Crisis Interventions:
Strategies for Addressing the Consequences of Crisis Events

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Adapted from:
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There are a number of adverse outcomes potentially associated with exposure to a crisis event. Given this fact it is not surprising that a variety of school crisis interventions are be required to meet school community needs following crises. Interventions will be needed to (a) prevent and/or mitigate common stress reactions, (b) identify those who may develop psychopathology (e.g., posttraumatic stress disorder, depression), (c) prevent and/or mitigate dangerous coping behaviors (e.g., suicidal and homicidal behaviors), and (d) provide appropriate referrals to mental health professionals. In addition, school crisis interventions need to address problems that are relatively unique to the school setting. These include truancy, poor school adjustment (e.g., aggressive and/or delinquent behavior), academic failure, and the exacerbation of pre-existing educational problems (Brock & Jimerson, in press). To the extent that school crisis interventions are able to address these crisis outcomes and problems they would be considered successful (Brock, 2002c).

To facilitate the provision of school crisis interventions, this chapter provides a chronology of crisis intervention efforts, and discusses specific crisis intervention activities, related goals, and relevant research; and then concludes with a discussion of multi-component crisis intervention. This information is intended to facilitate the training of educational professionals for crisis intervention work.

Chronology of Crisis Intervention

Recognizing that the form and content of school crisis interventions will change over time (National Institute of Mental Health, 2002; Vernberg, 2002), this discussion of school crisis intervention employs a chronological system that divides crisis events into five phases (Valent,
These phases are (a) preimpact (the period before the crisis), (b) impact (when the crisis occurs), (c) recoil (immediately after the crisis event), (d) postimpact (days to weeks after the crisis event), and (e) recovery and reconstruction (months or years after the event). Making use of this system Figure 1 provides an illustration of when the different school crisis interventions occur. In the pages that follow each of these interventions will be discussed and the empirical supports for their provision identified. In addition, future research needs related to each of the school crisis interventions will be identified.

Specific Crisis Interventions

As illustrated in Figure 1, the specific school crisis interventions discussed in this chapter include (a) crisis preparedness, (b) immediate prevention, (c) medical intervention, (d) reestablishment of family and social support systems, (e) risk screening and referral, (f) psychological education, (g) psychological intervention, and (h) rituals and memorials. Table 1 lists the various activities, goals, and subgoals associated with each of

Crisis Preparedness

Crisis preparedness are activities provided during the Preimpact phase. The primary goal of these efforts is to better ensure that students and staff are able to respond or react to crisis events in adaptive ways. Crisis preparedness includes crisis education and crisis drills. Crisis education programs help students to understand the dangers associated with crisis events (typically natural disasters) and the protective actions that can be taken (e.g., standing under a doorway and away from windows during an earthquake). Crisis education may also include instruction on how to manage crisis related stress. Crisis drills include the traditional fire or natural disaster drill. The goal of these activities includes giving students an opportunity to practice the behaviors needed to mitigate the danger associated with crisis events. Recently,
some schools have begun to employ crisis drills that require students, staff, and emergency response personnel to role-play the actions they will take in the event of assaultive violence (e.g., a school shooting).

Crisis preparedness also includes Preimpact phase planning activities. Typically taken at a school system level, these activities are designed to facilitate school staffs’ response to the Impact, Recoil, Postimpact, and Recovery and Reconstruction phases. Theoretically, they place schools in the best possible position to meet student and staff needs following a crisis event. For detailed discussions of these activities refer to Brock, Sandoval, and Lewis (2001), Brock (2002d), and Brock and Poland (2002). A written document emerging from these efforts should be a school crisis management plan, detailing policies and procedures related to crisis intervention (see Jimerson and Brock, 2002 for a sample crisis management plan).

*Empirical support.* Clearly, in areas prone to certain types of recurrent natural disasters (e.g., earthquakes, floods, hurricanes, fires, tornados), crisis preparedness activities are easily justified (Vernberg, 2002). Theoretically, these activities should make certain types of crises appear more controllable and as a result less traumatic (Vernberg & Vogel, 1993). For example, one might expect that the student from California who had engaged in earthquake preparedness education would find such a crisis event less frightening, that the child who was just moved to the area and had never received such education. Despite the face validity of this hypothesis, however, the discussion that follows reveals only partial research-based support for crisis preparedness activities.

Research regarding the effects of crisis education, as it relates to natural and industrial disasters appears positive. In a survey of 440 school children (ages 5- to 13-years), Ronan, Johnston, Daly, & Fairley (2001) found that those who had participated in such programs had
certain advantages over those who did not. Results suggested that hazard-educated children had more stable risk perceptions, reduced hazard-related fears, and a greater awareness of protective behaviors. Furthermore, children involved in two or more education programs had significantly greater awareness of these protective behaviors than children who participated in only one program.

Data that may be supportive of crisis education activities designed to prepare students for crisis related stress is found in research conducted by Kisellica, Baker, Thomas, and Reedy (1994); Deahl et al. (2000); and Holaday and Smith (1995). In the Kisellica et al. study the effect of a preventive stress inoculation program was documented for a group of public high school students. This program included a discussion of stress, stressful events, anxiety and anxiety related symptoms; instruction in relaxation techniques and how they can be used to manage anxiety provoking situations; and cognitive restructuring. Results revealed greater declines in symptoms of stress and trait anxiety among the 24 program participants (as compared to students in a 24 student control group who were enrolled in traditional school guidance classes). However, this study’s support for stress inoculation as a part of school crisis education is limited, as study participants did not experience what might be considered a “crisis event” during the study period. Thus, while the effect of this high school training program on “normal stress and anxiety” is documented by this research, it efficacy as a crisis education tool can only be partially supported by these data.

However, another study by Deahl et al. (2000) directly assessed the effect crisis education on reactions to a traumatic situation. In this study 106 British soldiers received an Operational Stress Training Package before being deployed for a 6-month tour of duty in Bosnia. This half-day program included descriptions of stress and its physical, psychological,
and behavioral consequences. In addition, it described anxiety reduction and relaxation techniques, and informed soldiers of the kind of situations they were likely to encounter. Despite the fact that during their tours of duty all soldiers were exposed to potentially traumatizing events, upon their return from Bosnia rates of psychopathology were approximately 10 times less than figures reported in other military samples. However, generalizing from the results of this military research to school crisis intervention is clearly difficult. As a result, the ability of these data to support this form of crisis education in the schools is also limited.

In the Holaday and Smith (1995) study, in addition to providing a 35-minute coping skills training to 153 university students, this study also required participants to view a 31-minute videotape of disaster scenes. Approximately half of these participants (n = 70) viewed the video before the coping skills training (control group) and half (n = 83) viewed it after the training (experimental group). As they viewed the tape participants were asked to place themselves on the scene as helpers to disaster victims. Making use of a randomized control-group posttest only design, results obtained from a Coping Mechanisms Questionnaire indicated participants who had received coping skills training before viewing the disaster video used significantly more coping skills and felt more comfortable. Thus, it was suggested that this coping skills training (which emphasized social support, task-focused behaviors, emotional distancing, cognitive self-talk, and altruism) had promise as a tool for preparing individuals for disaster work. While this finding has direct implications for the training of school staff members who are members of a school crisis intervention team, generalizing these data to school children is yet again problematic. This study’s participants were young adults (mean male age 24, mean female age 27) not school children; and the focus was on preparing disaster workers for crisis work, not on helping students cope with a school crisis.
Regarding crisis drills, research by Hillman, Jones, and Farmer (1986) and Jones, Ollendick, McLaughlin, and Williams (1989) highlights the effectiveness of fire drills for 2nd through 4th grade students. The results of this research indicated that drills increase students’ fire safety skills (when compared to an untrained control group). In addition, it was suggested that such drills were most effective when an explanation was given for the drill and when there was behavioral practice (vs. verbal practice). Especially when combined with data suggesting positive attitudinal responses to hazard education (Ronan et al., 2001), these data support the practice of preparing students for certain recurrent crises such as fires and natural disasters. However, it is important to emphasize that this conclusion is specific to certain types of disasters (e.g., fires and natural disasters). From a PsycINFO database search (conducted July 2002) no research could be found that addressed the effect of crisis drills for less common events, such as school shootings.

Finally, from a PsycINFO database search (conducted July 2002) no research could be found that documented the efficacy of school crisis response planning. While the face validity of such procedures is strong and there are ample “how to” discussions of such planning (e.g., Brock et al., 2001; Petersen & Straub, 1992; Poland & McCormick, 1999) empirical data is lacking. 

Future research. It is suggested that research examining the efficacy of crisis preparedness activities needs to address four related questions, as they related to different types of crisis events. Specifically, we need to know if crisis preparedness results in (a) a reality based understanding of crisis events (i.e., concern about the crisis event is consistent with the actual degree of danger); (b) improved Preimpact knowledge of protective actions to be taken during crisis Impact; (c) adaptive actions actually being taken during crisis Impact, Recoil, and
Postimpact phases (i.e., actions that mitigate crisis dangers and reactions), and (d) a reduction of adverse Postimpact outcomes.

As was just discussed, student self-reports do suggest that some forms of crisis education develop positive attitudes toward, and knowledge of, certain types of natural and industrial disasters (Ronan et al., 2001). However, it has yet to be documented if in fact such education facilitates realistic views and helpful knowledge of other types of crises. For example, given the relatively low incidence of school associated violent deaths (Anderson et al., 2001), it is possible that the emotional costs of holding “lockdown” drills and providing children instruction in taking cover and avoiding attention during an attack, out weighs any potential benefit (Vernberg, 2002). Empirical study is needed to determine the degree to which this type of crisis preparedness either makes students feel more secure, or generates a climate of fear within which school violence is viewed as unrealistically likely. At present the role of these drills in contributing to school safety and crisis preparedness is not understood (Pagliocca, Nickerson, & Williams, 2002).

In addition, it has yet to be documented if in fact crisis education facilitates adaptive Impact, Recoil, and Postimpact phase actions and adjustments among school aged youth following exposure to a crisis event. For example, does crisis education translate into actions that make the situation less dangerous following a crisis? Does crisis education result in the used of adaptive coping strategies following such events? Regarding this later question, it is suggested that future research might employ a design similar to Holaday and Smith (1995), but enlist school aged youth (not college students) as participants.

While the Deahl et al. (2000) study suggests that preparing soldiers for war related stress does have certain benefits when it comes Postimpact outcomes (i.e., lower than expected rates of psychopathology), the ability to generalize these findings to schools and school children’s crisis
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preparedness is limited. Thus, it must be concluded that it has yet to be determined if school crisis preparedness translates to positive Postimpact outcomes.

Finally, while the need for school staff to engage in crisis response planning appears to be self-apparent (schools that prepare for the crisis response should be better able to implement such a response), there is nevertheless a need to examine if in fact this planning is an effective use of resources. Do schools that engage in system-wide crisis planning respond to crisis events significantly better than schools that do not engage in these efforts? In other words, is crisis response planning worth the effort? Assuming that it is an effective use of resources, there is still the question of what are the most important elements of crisis preparedness (Brock & Poland, 2002; Pagliocca et al., 2002). In addition, are there certain crisis planning activities that have an effect on specific Postimpact outcomes (e.g., do activities that are designed to develop psychological interventions translate to the identification of students with traumatic stress reactions?).

Immediate Prevention

These activities take place during the Impact and Recoil phases of a crisis and are designed to mitigate the physical and emotional harm generated by the event. Immediate prevention activities include protecting and/or shielding students from physical and emotional harm. This may be done by implementing crisis preparedness strategies (e.g., fire drill, lockdown, evacuation procedures, etc.). Immediate prevention also involves minimizing exposure to traumatic stimuli during the Recoil phase. This can be done by directing children who are ambulatory away from the crisis site, and away from severely injured students (National Institute of Mental Health, 2001). Minimizing such exposure may also involve restricting television viewing of crisis events.
The need for these activities is documented by research that demonstrates the relationship between degree of exposure to a crisis event and subsequent stress reactions (Applied Research and Consulting et al., 2002; March, Amaya-Jackson, Terry, & Costanzo, 1997; Pynoos et al., 1987). Regarding television exposure, research by Gurwitch and her colleagues (2002) has suggested it to be a risk factor for PTSD. They report that following the 1995 Oklahoma City bombing, children who were not physically or emotionally proximal to the bombing, but who reported having had extensive television viewing of the event, also reported having a higher number of traumatic stress symptoms than did other children who reported lower amounts of such television viewing. From these findings it is suggested that either direct exposure or simply being a passive observer of a traumatic event, even by viewing it on television, may place students at risk for traumatic stress reactions.

Finally, restoration of both actual and perceived safety during the Recoil phase has been suggested to be a primary factor in promoting the natural adjustment to crisis events (Brewin, 2001; Gurwitch, Sitterle, Yound, & Pferrerbaum, 2002; Yule, 2001). It is not enough for students to actually be safe immediately following a crisis. For recovery to begin, students must believe that the potential for harm has past and that they are no long in any danger. Thus, it would appear important to make certain that the steps taken to ensure student safety following crises are not only effective, but also concrete and visible (e.g., having a strong police presence on campus following acts of violence).

Psychological education and intervention activities (to be discussed further later in this chapter) may also be important tools in facilitating perceptions of safety. Specifically, by helping students to gain cognitive mastery over the event (i.e., understand the reality of the danger) students may feel safer. An example of how this might work is provided by Brock et al.
(2001) who report that following a school shooting there was a persistent rumor that only one of two gunmen has been accounted for. In reality the lone gunman had committed suicide after his assault. Interventions that dispelled this rumor were important to helping students to accurately understand that the danger of being shot had past. This knowledge combined with a strong police presence on school grounds for the first few days following the shooting, helped students to believe that they were safe.

**Empirical support.** Clearly, protecting students from harm and danger, and minimizing exposure to the crisis will reduce the degree of physical and psychological trauma. However, from a PsycINFO database search (conducted July 2002), no studies were identified that investigated the effectiveness of specific immediate prevention activities designed to achieve these goals. In addition, no research could be located that investigated the effectiveness those immediate prevention activities designed to facilitate students’ feelings of safety following a crisis event.

**Future research needs.** The need for crisis preparedness research that was just discussed would also address the future research needs in the area of immediate prevention. For example, it is important to identify those preparedness strategies that are most beneficial in preparing students and staff to engage in procedures that protect them from harm and/or minimize their exposure to the crisis event. In addition, future research should investigate the effects of restricting television viewing of crisis images on rates of traumatic stress? Is the relationship between amount of such viewing and degree of traumatic stress a casual relationship or is there a causal connection?

It would also be important to identify those interventions that are most helpful in ensuring students’ subjective sense of safety and security following a crisis. For example, does a
prominent police presence actually help students feel better, or does it create the impression that
danger is still present? Are there interactions between such interventions and a student’s
developmental level? It is possible that police presence may be very reassuring for older
students while very frightening for younger students. Finally, a related question is whether there
are any specific actions associated with increases in subjective security following specific crisis
events. For example, does a police presence increase feelings of safety following natural
disasters as well as following school violence?

Medical Intervention

Although often not considered a “school crisis intervention,” (as it is typically provided
by professionals who are not school staff members) the primary importance of addressing the
medical needs during the Impact and Recoil phases argues for its inclusion in this discussion.
With the exception of those crisis interventions that prevent injury in the first place, all other
forms of crisis interventions are secondary in importance to medical treatment (e.g., triage and
first aid) of crisis victims. In addition, it is important to acknowledge the need for medical
interventions may guide crisis intervention. Specifically, some forms of crisis intervention (e.g.,
psychological debriefing) are contraindicated for those with acute physical injury (Everly &
Mitchell, 2000).

Another medical treatment issue that is germane to this discussion is that of medical
triage. Following a major disaster the meeting of medical needs may require medical triage,
which involves the screening and classification of the injured to determine priority needs for
medical intervention (Thomas, 1993). When this procedure is used, psychological trauma (due
to secondary exposure to crisis events) may be reduced by conducting triage in a location that
cannot be directly viewed by non-injured students (Brock et al., 2001).
Finally, it will be important for all crisis intervention teams to be aware of pre-existing medical conditions and to make certain that the crisis event does not disrupt the treatment of these conditions (American Red Cross, 1991; National Institute of Mental Health, 2002). Clearly, failure to treat a pre-existing condition following a crisis event will only serve to make matters worse. For example, the failure to treat diabetes following a crisis event may turn a moderately stress full event into a critical medical emergency.

*Empirical support.* From a PsycINFO database search (conducted in June 2002) it would appear that there is not any empirical research (at least in the psychological literature) that guides school crisis intervention practices associated with the meeting of medical needs in the school setting following crisis events. However, the importance of not exposing students to grotesque crisis scenes, such as medical triage, is supported research suggesting increases in the probability of severe post crisis reactions is associated with such exposure (Vogel & Vernberg, 1993).

While the empirical literature may not offer guidance on how the school crisis intervention can effectively support the meeting of medical needs, there are studies that can be interpreted as supporting the primary importance of medical treatment and the contraindication of some crisis interventions for those with acute injury. Specifically, Bisson, Jenkins, Alexander, & Bannister (1997) and Mayou, Ehlers, and Hobbs (2000) report that psychological debriefing, when provided as an individual and isolated crisis intervention temporally proximal to acute burn trauma or road traffic accident, may have had adverse long term outcome (as documented by traumatic stress reactions).

*Future research needs.* Evaluation of school crisis intervention strategies for supporting, and working with, medical personnel during the Recoil and Postimpact phases of a crisis is needed. Documenting specific crisis intervention strategies that both facilitate medical treatment
and also minimize student exposure to those students who have been severely injured would be helpful.

*Re-establish Support Systems*

It has been suggested that individuals with strong familial and social support systems are better able to cope with life stressors than those without such supports (Cohen & Willis, 1985). Given this suggestion it is not surprising that the re-establishment and use of naturally occurring supports is a frequently recommended crisis intervention (American Red Cross, 1991; Brewin, 2001; Foa, Hebree, Riggs, Rauch, & Franklin, 2001; Gurwitch et al., 2002; Litz, Gray, Bryant, & Adler, 2002; National Institute of Mental Health, 2002; Norris, Byrne, Diaz, & Kaniasty, 2001, December). During the Recoil phase this crisis intervention initially involves reuniting students with (or at least locating and determining the status of) parents, and other caregivers and loved ones. Priority is typically given to reuniting younger students with their parents (Brock et al., 2001). Later, typically during the Recoil and/or Postimpact phase, this intervention would include reuniting students with their close friends, teachers, and classmates. Facilitating communication among families, students, and community agencies and organizations may also facilitate natural support systems that are available in communities (Gist & Lubin, 1999). In addition, given the suggestion that the resumption of familiar roles and routines as soon as possible following crises reduces the intensity and duration of crisis reactions (Omer & Alon, 1994; Prinstein, La Greca, Vernberg & Silverman, 1996; Vernberg & Vogel, 1993), returning students to school as soon as possible is an important intervention (Vergnberg, 2002).

The importance of facilitating family and social supports has been documented for both adults and children following several different traumatic stressors. For example, among adults, specifically Vietnam War veterans, it has been documented that dysfunctional and low quality
social supports are associated with psychiatric disorders (Boscarino, 1995; King, King, Fairbank, Keane, & Adams, 1998). Further, among those veterans with posttraumatic stress disorder, it has been documented that their social support had systematically declined over time relative to comparison groups (Keane, Scott, Chavoya, Lamparski, & Fairbank, 1985). Among elementary grade students who survived a hurricane it was found that higher levels of social support were associated with lower levels of traumatic stress reactions (La Greca, Silverman, Vernberg, & Prinstein, 1996; Vernberg, La Greca, Silverman, & Prinstein, 1996) and it was suggested that multiple sources of such support were important to meeting different support needs (La Greca et al., 1996). Interestingly, however, among Kuwaiti children exposed to the traumatic stressors of the Gulf War, social support buffered the effect of trauma on girls, but not on boys (Llabre & Hadi, 1997). This may point to culturally specific reactions to social support and/or the differential effects of this particular stressor on boys and girls.

It should also be noted that psychological education (which will be discussed in greater detail later) is also important to the reestablishment of social supports. Specifically, it will involve encouraging students (and staff) to access their existing social supports and educating caregivers about how to most effectively provide such support.

*Empirical support.* From a PsycINFO database search (conducted July 2002) only one study of a specific intervention to facilitate social support was identified. Specifically, Hansell et al. (1998) report that caregivers of children with HIV (who themselves were not ill) benefited from a “social support boosting” intervention as documented by increased social support levels. This individual intervention involved working with caregivers to identify stressful problems and the social supports available to help deal with the stressors. However, among caregivers who were themselves ill this intervention did not improve social support. This suggests that
caregivers who are themselves significantly impaired (e.g., those who are suffering from a trauma related psychopathology), their ability to provide social support may be limited. This finding illustrates that social support systems have certain limitations and may not be able to meet the needs of all crisis victims.

While there is a lack of research specifically investigating interventions designed to promote social support systems, there are several studies that document the importance of other crisis intervention practices in this area. For example, the importance of ensuring the reunification of students with their parents as soon as possible is supported by research suggesting that parents and family are judged by children to be their primary sources of support following crises (Klingman, 2001; Leffler & Dembert, 1998; Vernberg et al., 1996). Prinstein et al. (1996) document that after a hurricane elementary age children reported receiving the most coping assistance from their parents.

Support for the practice of making reunification between younger children and parents a priority is found in reports that preschool and kindergarten age children show the strongest reactions (when compared to older students) when separated form parents during stressful events. Following an earthquake preschool children showed more behavior problems if they had been separated from their parents during the quake (Vogel & Vernberg, 1993).

After parents and family, close friends and teachers are also reported to be important social supports (Klingman, 2001; Vernberg et al., 1996). For example, Prinstein et al. (1996) documented that children reported friends as primary providers of emotional processing coping. In addition, it is important to note that among soldiers, support from military leaders was found to moderate the relationship between this populations accumulated exposure to traumatic events and measures of health (Martin, Rosen, Durand, Knudson & Stretch, 2000). This finding may
point to the importance of school administrator leadership and support in helping school staff members cope with crisis events.

Data that may support a quick return to school following a crisis is offered in a study of elementary grade children following a hurricane. Prinstein et al. (1996) found children’s self reports to yield an association between more severe traumatic stress symptoms and low levels of a return to pre-disaster roles and routines. In addition, it is obvious that a failure to return to pre-crisis settings will minimize opportunities for ongoing social support, the effects of which have been documented by Milne (1977). Results of this study revealed significantly higher disaster related fear and school problems among children who were evacuated and unable to return to their community (as compared to those were either not evacuated or who were evacuated but had returned to the community).

The importance of encouraging students to make use of their social support systems has been documented by Jeney-Gammon, Daugherty, Finch, Belter, & Foster (1993) who found that following a natural disaster, the levels of depression among 3rd, 4th, and 5th graders were lower among those students who had sought out social support (vs. those who did not seek such support). With adults, Pennebaker and O’Heeron (1984) have documented that among the spouses of suicide and accident fatalities, fewer health problems were associated with the ability to discuss these deaths with friends. It was speculated that not confiding in others increased physiological activity and had a cumulative stress on the body, with the long-term consequence being an increased probability of stress related disease.

Future research needs. Crisis intervention research needs to systematically examine the effectiveness of programs designed to re-establish social support systems following crisis events. Questions that need to be addressed include whether there are specific actions that schools
should undertake to most effectively facilitate the re-establishment of familial and social support? In addition, are there specific strategies (such as parent meetings) that schools can employ to ensure that the potential of these support systems is realized?

It would also be helpful if future research were to give school crisis intervention guidance regarding which specific social supports are most important for specific age groups and populations. For example, is it most important to reunite younger children with parents and relatively more important to reunite adolescents with their close friends? And are there specific crisis events that make re-establishment of particular social supports more or less important?

It is important to acknowledge that while naturally occurring social support systems provide important protections against adverse crisis outcomes, these very systems are themselves vulnerable to crises and as a result may decline or deteriorate in strength (as was documented by Hansell et al., 1998). In addition, it has not been established that naturally occurring social support systems are powerful enough to overcome the effects of severe crisis events (e.g., school shootings), which points to the importance having more direct services (such as the psychological interventions discussed later in this chapter) be a component of school crisis intervention (Norris et al., 2001, December). Given this observation it would be helpful if future research were to examine the relationship between the power of social support systems, and nature and impact of certain types of crisis events.

**Risk Screening and Referral**

Risk screening and referral (also known as psychological triage) is a dynamic process that includes activities provided during the Recoil, Postimpact, and Recovery and Reconstruction phases. Recognizing the fact that not all individuals will be equally effected by a crisis event (Stallard, 2000), and that different individuals will likely benefit from different interventions
(Turner, 2000), their primary goals are to identify students (and staff) who are at-risk for, and/or display adverse crisis outcomes, and to make appropriate referrals. These interventions help school crisis intervention teams identify those individuals who do and do not need their services. While the need to identify and assist students who are in need of support is readily apparent, less obvious is the need for crisis intervention teams to identify students who may not require assistance and to allow them to manage crisis reactions and problems independently. Providing crisis intervention assistance to students who do not need such support may unintentionally send the message that they are not capable of coping with the crisis independently. It may also stigmatize students and generate self-fulfilling prophecies (Litz et al., 2002).

During the Recoil phase, risk screening involves an initial screening based on known crisis facts and prior knowledge of individual student vulnerabilities. From these data students at greatest risk for adverse crisis outcomes (e.g., those who were physically and/or emotionally proximal to the crisis event, have pre-existing psychopathology, lack social resources, etc.) are identified and psychological first aid made available (Brock, 2002b; Brock et al., 2001).

During the Postimpact phase, risk screening involves individual screenings conducted as a part of the initial psychological interventions (e.g., psychological first aid and group crisis debriefings), implementation of referral procedures (i.e., mechanisms that allow students, staff and parents to refer to the crisis intervention those who need crisis intervention support), and school-wide screenings (i.e., questionnaires and rating scales complete by all students that further identify those in need of support). Because of the fact that virtually any one with sufficient exposure to a traumatic stressor will display initial crisis reactions (they are normal reactions to abnormal situations), initial referrals are typically directed toward psychological first aid resources (not to professional mental health resources) and are designed to flag those
individuals who may require mental health intervention because they are statistically more likely to develop psychopathology (Litz et al., 2002). However, if dangerous coping strategies are displayed (e.g., substance abuse, suicidal/homicidal ideation, inappropriate expressions of anger) then immediate psychotherapeutic referrals to mental health professionals would be appropriate. Otherwise screening for psychiatric disturbances (e.g., posttraumatic stress disorder) due to traumatic event exposure would typically not begin until a week or more after the crisis event (Brewin, 2001; Litz et al., 2002).

While the intensity of traumatic memories and crisis reactions typically fades over time, memories of a traumatic event never completely go away, and a variety of life events can re-trigger intense reactions to the trauma (Young, Ford, Ruzek, Friedman, & Gusman, 1998). As a result, it is important to continue to conduct individual screenings during the Recovery and Reconstruction phase and provide both psychological first and psychotherapeutic interventions as indicated. For further discussions of risk screening and referral refer to Brock et al. (2001), and Brock (2002b).

Empirical research. Arguably, the most important outcome that would support the effectiveness of any risk screening and referral protocol would be a low incidence of failure to identify and refer students who have significant mental health problems secondary to crisis exposure. Based upon a PsycINFO database search (conducted July 2002), there is no research that assesses the effectiveness of any school-based risk screening and referral protocol. There is, however, substantial data that can be used to validate the inclusion of specific risk factors in risk screening. These factors include physical proximity and duration of exposure to the crisis, emotional proximity to the crisis (i.e., having significant relationships with crisis victims and threat perceptions), the severity and type of crisis reactions (e.g., the diagnosis of an Acute Stress
Disorder is a powerful predictor of later PTSD), and a host of external and internal resources (Brock, 2002b; Litz et al., 2002). It is important to acknowledge, however, that the individual development of psychopathology will depend upon a complex interaction between the nature of the crisis event, the survivor’s unique crisis experiences, and his or her personal vulnerabilities. To date these interactions have not been studied (Silverman & La Greca, 2002) and are poorly understood.

Additional data indicate that specific symptoms are especially significant and suggestive of the need for psychotherapeutic referral. Specifically, research conducted by McFarland and Yehuda (1996) revealed that individuals, who displayed dissociative or panic reactions during a crisis event, were more vulnerable to posttraumatic reactions. They also reported that “enduring exaggerated startle response, hypervigilance, increased irritability, sleep disturbed memory, and concentration” (p. 172) differentiated crisis survivors who developed PTSD from those who did not. Conversely, they suggested that distressing and intrusive memories, in the initial days after the crisis event, were common indicators of normal reappraisal. Thus, it can be suggested that a psychotherapeutic referral might be particularly appropriate to consider for the individual who panics or dissociates during the trauma and who have ongoing difficulty regulating their arousal levels (Brock, 2002b), and/or have been diagnosed with an Acute Stress Disorder.

**Future research needs.** The primary research need is to establish the efficacy of existing risk screening protocols (e.g., Brock et al., 2001; Brock 2002b). This would include establishing the effectiveness of initial risk screenings, psychological first aid, group crisis debriefings, and school wide screenings in risk assessment. The outcome variable of interest to such research would be the degree to which interventions are able to identify individuals in need of assistance (in particular psychotherapeutic assistance). To the extent that individuals in need of such
assistance are not identified and offered appropriate referrals, these interventions could be judged ineffective. For example, the fact that two-thirds of New York City public school children who have reported symptoms of traumatic stress have not obtained any treatment (Applied Research and Consulting et al., 2002), might signal an ineffective risk screening and referral procedure. In addition, the importance of identifying low risk individuals and giving them opportunities to independently cope with crisis events needs to be assessed. The question of whether it is counterproductive to provide psychological intervention assistance (e.g., psychological first aid, group crisis debriefings) to those who would be able to recover without it needs to be explored.

In addition, questions regarding the possible interactions between specific crisis events, unique crisis experiences, and personal resiliency and vulnerability needs further study. Such research would inform decisions regarding appropriate psychotherapeutic referrals.

Finally, the question of when to begin screening for psychotherapeutic referrals requires future research (Yule, 2001). This is a difficult question as the optimal time for beginning such treatment is not easily identified and has been the subject of some debate (Vernberg & Vogel, 1993). This question has, however, been addressed to a certain extent by diagnostic criteria. For example, the American Psychiatric Association’s (2000) diagnostic criteria for post traumatic stress disorders suggests that traumatic stress symptoms must be present for at least 4 weeks before this diagnosis can be made. Thus, following a crisis event it would appear inappropriate to immediately begin to conduct psychotherapeutic treatment screening.

Psychological Education

Psychological education includes a variety of activities provided primarily during the Recoil and Postimpact phases. However, they also continue to be important during the Recovery and Reconstruction phase (Vernberg, 2002). The primary goal of these activities is to provide
students, staff, and caregivers with knowledge that assists in understanding, preparing for, and responding to the crisis, and resulting problems and reactions. During Recovery and Reconstruction phase activities are designed to predict and prepare the school community for anniversary reactions. Bisson, McFarlane, and Rose (2000) and McFarlane (2000) have suggested that such procedures should help to contain distress and facilitate coping. Advantages of these activities include their ability to present an array of intervention options to individuals (Litz et al., 2002). Specific activities include psycho-educational groups, caregiver trainings, and informational bulletins or handouts.

Supporting the need for psychological education following crisis events is found in research conducted by Allen, Dlugokinski, Cohen, and Walker (1999). These researchers studied over 6,000 elementary school children in Oklahoma City following the bombing of the Murrah building and found that younger children need to be provided with crisis facts. These children were the least likely to understand what was going on, were the most likely to be confused, and had the highest number of facts wrong. In addition, this same study highlights the need to provide students (particularly younger students) with adaptive coping strategies, as this group was most likely to use avoidance as a coping mechanism.

Psycho-educational groups (also referred to as crisis management briefings, Everly, 2000) may include small group discussions, classroom meetings, or school-wide assemblies. These gatherings are highly directive and involve the dissemination of important information that will aid in coping with crisis problems and reactions. Specifically, these groups hope to achieve the following goals:

- Crisis facts are understood and rumors are dispelled. Students gain a degree of cognitive mastery over the event.
• Common crisis reactions are normalized. Students are prepared for common crisis reactions that might be seen in themselves or among their peers.

• Stress management strategies are identified and/or taught. Students develop their own plan for coping with crisis reactions.

• Problematic (psychopathological) crisis reactions and coping strategies are discussed and referral procedures identified. Students are able to identify psychopathological reactions and coping strategies, and know how to make referrals for professional assistance.¹

Caregiver training is very similar to the psycho-educational group, however, its focus is on caregiver knowledge. These gatherings are also typically very directive and involve the dissemination of information that will help parents, teachers, and other caregivers to effectively support their children. The importance of this type of psychoeducation is documented by research conducted by Harvey, Orbuch, Chwalisz, & Garwood (1991), who found that among adult sexual assault survivors, it was “empathic reactions” occurring early after the assault were associated with more successful coping than were “non-empathic reactions.” Thus, it would appear that at least among some groups of trauma victims, there are certain types of care giving reactions that are helpful and certain types that are not.

Specifically, the psychoeducation offered to caregivers hopes to achieve the following goals:

• Crisis facts are understood and rumors are dispelled. Caregivers have the facts needed to help children understand the crisis event.

¹ The importance of providing information about self-referral is emphasized by reports that two-thirds of students with PTSD subsequent to the events of September 11th have not sought any treatment (Applied Research and Consulting et al., 2002).
• Common crisis reactions are normalized. Caregivers are prepared for common crisis reactions that might be seen in their children and/or among themselves.

• Stress management strategies are identified and/or taught. Caregivers are given tools that can be used to help their children cope with crisis reactions and/or problems.

• Specific helpful reactions (i.e., empathetic reactions) to children’s traumatic stress are identified. Caregivers are instructed on how to best respond to their children. This includes educating them about the importance of their own crisis reactions in shaping their child’s perceptions of the crisis event. ²

• Problematic crisis reactions and coping strategies are discussed and referral procedures identified. Caregivers are able to identify psychopathological reactions and coping strategies, and know how to make referrals for professional assistance. ³

Table 2 provides a list of suggestions for parents and teachers that might be used during a caregiver training.

Informational handouts parallel the information disseminated through psycho-educational groups and caregiver trainings. They are designed to facilitate understanding of the crisis event, predict possible crisis consequences, and to identify available supports. Litz et al. (2002) have suggested that these documents be routinely made available. They are documents that be can used as complements to other psychological education activities. Everly (2000), for example, suggests that each psycho-educational group participant should be provided with a reference

² Green et al. (1991) and McFarlane (1987) highlight the importance of educating parents about how their own reactions influence the reactions of their children. Specifically, these researchers found that parental reactions to disaster (an a dam disaster and an Australian bushfire) were better predictors of child post-traumatic stress reactions, than was direct exposure to the disaster.

³ Handford et al. (1996) highlight the importance of educating caregivers about possible crisis reaction among their children. This study found that children reported much stronger and more symptomatic responses to the Three Mile Island nuclear accident, than their parents reported having observed.
sheet that describes common crisis reactions, stress management techniques, and local professional resources. Alternatively, they can be disseminated via mail and/or media outlets. Brock (2001, Fall), Brock (2001, October), and Brock (2001, September) provide examples of such flyers.

Anniversary preparations may employ group discussion and/or informational handouts. The primary goal of the Recovery and Reconstruction phase activity is to ensure that students, staff and caregivers are made prepared for the possible effects of crisis anniversaries and other significant dates. Brock and Jimerson (2002, June) offer an example of a handout used for this purpose.

*Empirical research.* Three studies were identified that may document the effectiveness of psychological education activities following crisis events. Unfortunately, each of these studies examined the degree to which these activities benefited adults not children. The first study, conducted by Chemtob, Thomas, Law, and Cremniter (1997) assessed the effectiveness of a combination of group psychological debriefing and two hours of lecture. The lectures described reactions to disaster, phases of recovery, and what to expect. Results revealed that substantial reductions in hurricane distress relative to controls. However, given that psychological education was combined with group debriefing, it is not known the degree to which results were due to psychological debriefing or education.

A second study by Rose, Brewin, Andrews, & Kirk (1999) assessed the effect on traumatic stress reaction of three different individual treatment conditions (control group, education only group, and debriefing plus education group) among victims of violent crime. The education intervention lasted on average 30 minutes and involved providing information on normal reactions to traumatic stress and when there was a need to find help. No statistically
significant differences were found in posttraumatic stress reactions among the three groups. All three demonstrated declines in stress reactions (as measured by a posttraumatic stress scale) over time. This lead to the conclusion that there was no evidence for the effectiveness of brief one session educational intervention (or debriefing plus education) for the victims of violent crime. However, it is interesting to note that the largest declines in traumatic stress scores from baseline were found among education group participants. This observation combined with the fact that the intervention lasted on average only 30 minutes (vs. Chemtob et al., 1997, two hours of lecture), and did not provide information on coping strategies, gives reason to question this finding as an indication that psychological education is ineffective.

The final study, by Herman, Kaplan, and LeMelle (2002) examined the effect of an intervention for governmental and non-profit agency workers following the events of September 11th, 2001. The 90 to 120 minute interventions gave information about emotional responses (both normal and pathological), how to help children, and practical coping strategies. There were 203 individuals who participated in 12 different groups sessions. Of this number 129 (64%) responded to the survey designed to assess participant perceptions of the intervention. Results revealed that the vast majority (82%) found the sessions to be helpful. Ten percent reported that it did not help and three percent (n=4) reported that the intervention had been harmful (eight percent had no opinion). Seventy three percent reported that the sessions assisted them in talking to their children about crisis events. Within the respondent subgroup who where “high exposure” (i.e., had lost someone in the disaster), 92 percent reported the intervention to have been helpful. Within the respondent subgroup that reported having crisis symptoms, 97 percent reported the intervention to have been helpful. This research, however, does not document the actual effects of the intervention on individual crisis outcome. Rather it simply
provided treatment acceptability data. In addition, the four participants who reported the intervention to have been harmful clearly argue for additional research in this area.

Future research. While the available data is suggestive, it is far from conclusive. Thus, there is a continued need for controlled research of psychological education interventions (Bisson et al., 2000; Everly, 2000). Regarding our current understanding of psychological education practices, Vernberg (2002) states:

To date, little research has been conducted on the usefulness of postimpact-phase distribution of information related to children’s psychological reactions. Common sense, as well as the continuity principle, argues that well conceived, factually accurate information should be made available as widely as possible. At the same time, it would be helpful to evaluate the scientific basis of information disseminated following disasters and to study how parents, teachers, and children interpret and use that information (p. 63).

Especially relevant to school crisis intervention, there is a need to document the effect of these interventions on children and adolescents. Additional research questions include whether different types of interventions are more effective than others. For example are programs that teach coping strategies more helpful than those that simply predict crisis reactions? Are group interventions more effective than individual educational sessions. Does the amount of education provided effect outcome? Also, there is the question of whether there is an interaction between psychological education and specific types of trauma. For example, do individuals who have experienced a natural disaster benefit more from a certain type of psychological education than do victims of violent crime? In addition some have raised questions regarding how much information about a crisis event should be given to students. Gurwitch et al. (2002) has suggested that being given “too much” information about the more frightening consequences of a
criterion may sensitive individuals to the crisis instead of alleviating distress. This suggestion of course begs the question: How much is too much? Finally, it is important to acknowledge that the common school crisis intervention practice of disseminating informational handouts has yet to be empirically evaluated. Research on the efficacy of these materials is also needed (Vernberg & Vogel, 1993).

**Psychological Intervention**

Psychological interventions include a variety of activities provided during the Recoil, Postimpact, and Recovery and Reconstruction phases. The primary goal of these activities is to directly facilitate coping with crisis problems and reactions in a fashion that allows for a return to pre-crisis functioning levels. Psychological interventions include psychological first aid, empowerment, group crisis debriefings, psychotherapy, and anniversary reaction support.

Psychological first aid is the immediate helping response offered to students affected by crisis events, and typically occurs during the Recoil and early Postimpact phases. It requires the school crisis intervenor to make psychological contact with the person in crisis, identify crisis problems, examine possible solutions, help the person to take concrete problem solving action, and when necessary ensuring connections to appropriate helping resources. Its primary goal is to re-establish immediate coping. In doing so it places students in a position to resolve crisis problems (Slaikeu, 1990).

Empowerment activities elicit student involvement in the process of identifying (and as appropriate implementing) strategies designed to prevent and/or mitigate the future occurrences of the crisis event (e.g., crisis prevention and preparedness). Their primary goal is to encourage students to engage in activities that involve some form of concrete action and, as a result, move them from the position of a victim to that of an actor. In doing so it aims at making the crisis
appear more controllable and thereby less traumatic. Although these activities are often a part of other psychological interventions (e.g., group crisis debriefing may include empowerment activities), they are also used as discrete interventions and thus are treated separately in this discussion.

Group crisis debriefings are typically provided during the Postimpact phase. The activities that are typically part of debriefings are very similar to psycho-educational groups. In fact psycho-educational groups are sometimes referred to as a debriefing. However, unlike psycho-educational groups, group crisis debriefings actively explore and process individual crisis experiences and share individual crisis reactions. In doing so, these interventions hope to help students feel less alone and more connected to their classmates by virtue of their common experiences and reactions. They also help to normalize these experiences and reactions (Brock, 2002a).

Psychotherapeutic interventions are typically provided during the latter part of the Postimpact and in the Recovery and Reconstruction phases. These are professional mental health interventions that are not typically provided by school personnel. However, given that the possibility that a substantial minority of students exposed to a crisis event may have crisis outcomes that require this intervention, consideration of these activities needs to be a part of school crisis intervention. While school-based personnel may not deliver this intervention, ensuring that such services are at least made available to all who need it is definitely a school crisis intervention responsibility.

The final psychological intervention involves providing psychological first aid assistance during significant dates and anniversaries that occur during the Recovery and Reconstruction phase. As was mentioned earlier in this discussion it is not unusual to find a re-awakening of
crisis reactions during periods temporally proximal to significant dates and crisis anniversaries. The goal of these interventions are to normalize the re-awakening of crisis reactions, offer assistance coping with these reactions, and making connections to additional helping resources as needed.

*Empirical support.* Very little research exists regarding the efficacy of psychological interventions following crisis events. Making use of a PsycINFO search (conducted July 2002) no research examining psychological first aid or empowerment within the school setting was found. However, given that these interventions facilitate active or approach coping strategies (i.e., they aim a helping students to take concrete problem solving actions), and that research has suggested that such coping is associated with lower rates of mental illness (Seiffge-Krenke, Weidemann, Fentner, Aegenheister, & Poeblau, 2001) and avoidant coping strategies are predictive of post traumatic stress (McFarlane, 1988), these interventions may be said to have some support.

Study of psychological debriefings, in particular group crisis debriefings has recently been the subject of empirical investigations. Table 3 provides a summary of the peer reviewed group comparison investigations considered. Because none of these studies focused on children, it is at best difficult and at worst dangerous to generalize these findings to school crisis intervention. Furthermore, generalization is difficult, because of the unique effects of different types of exposure to different types of crisis events. While some have suggested that the available data does not support the continued use of psychological debriefing with following crisis events (Litz et al., 2002; Rose, Wessely, & Bisson, 1998), the authors feel it is premature to make such a broad conclusion. Rather, it is suggest that more specific and relatively limited
conclusions regarding this form of psychological intervention be drawn from the available literature. These conclusions are offered in Table 4.

From the information provided in this Tables 3 and 4, it is suggested that group crisis intervention is contraindicated as a brief (less than 60 minutes), stand alone, individual (1:1) intervention for adult acute physical trauma victims. On the other hand, it might have some promise when used as a more involved (more than 60 minutes and/or combined with other interventions) group intervention for adults who have experienced a crisis, but were not physically injured.

While there is limited research examining the immediate crisis response, the literature regarding the psychotherapeutic (or professional mental health response) is much more substantial. In particular cognitive-behavioral treatments have been found to be effective treatments for psychological trauma (Foa & Meadows, 1997; 1998). These treatments included exposure-based therapies, anxiety management, and cognitive therapy. Of these treatments exposure-based therapies are suggested to be the most effective. Based upon basic principles of human learning (i.e., classical and operant conditioning), these treatments involve asking psychological trauma victims to systematically confront their fears.

From their review of the empirical literature Foa and Meadows (1997; 1998) suggest that Prolonged Exposure is the most efficacious treatment approach for traumatic stress reactions. Their description of this treatment indicates that it has the following five components: (a) information gathering, (b) breathing retraining, (c) psychoeducation, (d) imaginal exposure (i.e., mentally reliving the traumatic event) and (e) in vivo exposure (i.e., directly confronting reminders of the trauma). The last component involves instructing the traumatized individual to begin to visualize the traumatic event. The visualization is narrated in the present tense and the
individual is instructed to provided as much detail as possible (including related thoughts, perceptions, and feelings). At the end of this visualization period, the individual is asked to use previously taught relaxation skills. The power of this treatment approach is thought to rest in the pairing of a sense of physical calm (resulting from use of relaxation techniques) with the traumatic stress.

Finally, from a PsycINFO database search (conducted July 2002) no research was found that addresses interventions designed to support individuals who experience a re-awakening of their symptoms associated with significant dates or crisis anniversaries.

Future research needs. When considering future research needs it is critical to acknowledge the complexity of psychological interventions following crisis events. This is due to the fact that the negative outcomes which these interventions address are the result of complex interactions between specific types of crises (different events generate different effects), the environments within which crises occur (some environments are better able to respond to crises), the individual’s pre-crisis history (some individuals are more vulnerable to crises than others), and the individual’s unique crisis experiences (some individuals will judge a crisis as more threatening than will other). As a result, it is clear that future research will not be able to give us absolute answers to our questions about the efficacy of psychological interventions following school crisis events. Rather, for now we must consider such data as guides that will influence, but not dictate, our actions. With this caution in mind the following offers some ideas for future research in this area.

Perhaps most importantly, future research should study the efficacy of psychological interventions when used with children. As was previously stated, much of the existing research examines the effects of these interventions with adults. Generalizing such research to our work
with children is very difficult if not dangerous. And of course, it would be especially helpful if this research were to be conducted in the school setting.

Future research should examine the efficacy of psychological interventions following crises by using outcome variables other than traumatic stress. Specifically, it will be important to use the prevention or mitigation of other psychopathologies and maladaptive coping, and the impact on crisis effects unique to the school setting (e.g., school avoidance, academic failure, behavior problems) as measures of the success (or failure) of school crisis intervention. In addition, it would be important to identify if these interventions increase treatment alliances and acceptability (as has been suggested by Bisson et al., 2000). A finding that early psychological interventions make it more likely for individuals to seek mental health assistance would be especially exciting given that individuals with traumatic stress symptoms often do not seek treatment (Applied Research and Consulting et al., 2002).

Methodological problems abound in this literature. The failure to clearly standardize the independent variable is arguably the most problematic. Thus, it is recommended that future research clearly operationalize their interventions and that whenever possible a well developed standardized protocol be employed. This argues strongly for school crisis intervenors to continue to develop and document their practices.

Finally, it will be important for future research to begin the long process of helping crisis intervenors to understand the complex interrelationship between specific crisis events, specific crisis event settings, and specific individuals or populations. What works best for whom and under what circumstances are questions that will provide important guidance to school crisis intervention? The issue of timing also requires further investigation as it is unclear as to when is the optimal time to begin to provide psychological interventions.
Rituals and Memorials

The final group of school crisis interventions to be discussed are rituals and memorials. These activities occur during the Postimpact and Recovery and Reconstruction phases. Their primary goal is to engage students in activities that provide mutual support, security, and reduce feelings of isolation and vulnerability; opportunities to express shared grief and remembrance, and interpretations of the crisis event. They also are designed to begin the process of closure where in the crisis event is placed in the past as survivors begin to move on with their lives.

Rituals include religious services and memorials. They may involve relatively simple activities such as listing the attributes of lost friends or loved ones; developing memory books; planting a flower or a tree; saying a prayer; and writing a poem, story, or song about the person(s) who died (Brock & Jimerson, 2002, June; Vernberg & Vogel, 1993)

Empirical support. From a PsycINFO data base search (conducted June 2002), no research addressing the efficacy of rituals and/or memorials was identified. However, given the timelessness of such activities across all cultures, it can be strongly argued that these activities have at the very least a strong appeal, if not an adaptive function (Vernberg & Vogel, 1993).

Future research needs. While the universal and timeless appeal of rituals and memorials speaks for itself, future research would nevertheless benefit the practice of school crisis intervention. Knowing what type of memorial or ritual is most appropriate for given groups and individuals following specific types of crisis events would be helpful. It seems likely that while some people benefit from certain types of memorials, under certain types of circumstances, other individuals may find them to be counter productive. It seems likely that ethnic, cultural, and/or religious factors may play a significant role in determining whether a given memorial activity will be of benefit or not.
Multi-component Crisis Intervention

As highlighted in the discussion of various intervention strategies, there is no single activity that will provide resolution for all in the aftermath of crisis events. When it comes to crisis intervention, it is clear that one size does not fit all. Considering the complexity inherent in the multitude of individual and contextual factors influencing responses following a crisis and recognizing changes that are likely across time, systematic, and multifaceted crisis intervention approaches are encouraged. Making use of a chronological framework, the intervention strategies discussed above address unique considerations of crises impacting children in the school context. Insights based on research, practical experience, and theory should be incorporated into school crisis management plans aimed at facilitating the coping and adjustment of students in the wake of crises. School crisis management plans should include strategies to (a) prevent and/or mitigate common stress reactions, (b) identify those who may develop psychopathology (e.g., posttraumatic stress disorder, depression), (c) prevent and/or mitigate dangerous coping behaviors (e.g., suicidal and homicidal behaviors), (d) provide appropriate referrals to mental health professionals, and (e) address unique school related issues (e.g., truancy, achievement, behavior problems, learning problems).
References


the International Society for Traumatic Stress Studies (pp. 39-59, 317-319). New York: Guilford Press


Figure Caption

Figure 1. School crisis interventions during the different phases of a crisis event
<table>
<thead>
<tr>
<th>Preimpact (The period before the crisis)</th>
<th>Impact (When the crisis occurs)</th>
<th>Recoil (Immediately after the crisis)</th>
<th>Postimpact (Days to weeks after the crisis)</th>
<th>Recovery/Reconstruction (Months or years after the crisis)</th>
</tr>
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<tbody>
<tr>
<td><strong>Psychological Interventions</strong></td>
<td></td>
<td>Psychological first aid</td>
<td>Psychological first aid</td>
<td>Crisis prevention/preparedness</td>
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<td></td>
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<td>Group crisis debriefings</td>
<td>Group crisis debriefings</td>
<td>Anniversary reaction support</td>
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<td>Psychotherapy</td>
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<td>Crisis prevention/preparedness</td>
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<td><strong>Psychological Education</strong></td>
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<td>Psycho-education groups</td>
<td>Psycho-education groups</td>
<td>Anniversary preparedness</td>
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<td>Caregiver trainings</td>
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<td>Informational flyers</td>
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<td><strong>Risk Screening &amp; Referral</strong></td>
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<td>Individual screening</td>
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<td>Referral procedures</td>
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<td>School wide screening</td>
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<td><strong>Support Systems</strong></td>
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<td>Reunite with friends &amp; teachers</td>
<td>Reunite with friends &amp; teachers</td>
<td>Anniversary preparedness</td>
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<td>Return to school</td>
<td>Return to school</td>
<td>Caregiver trainings</td>
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<tr>
<td><strong>Medical Interventions</strong></td>
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<td>First aid</td>
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<td>Isolate medical triage</td>
<td>Isolate medical triage</td>
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<td><strong>Immediate Prevention</strong></td>
<td></td>
<td>Protect from harm and danger</td>
<td>Protect from harm and danger</td>
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<td></td>
<td></td>
<td>Minimize crisis exposure</td>
<td>Minimize crisis exposure</td>
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<td>Ensure actual and perceived safety</td>
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<td><strong>Crisis Preparedness</strong></td>
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<td>Crisis education</td>
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<td>Crisis drills</td>
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<td>Crisis planning</td>
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Table 1

*School Crisis Interventions and Activities, Goals and Sub Goals*

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Goal</th>
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<tbody>
<tr>
<td></td>
<td>Students and staff are prepared to adaptively respond to crises.</td>
</tr>
<tr>
<td>Crisis Preparedness</td>
<td>Students gain knowledge needed to respond to crises in a fashion that mitigates crisis related dangers and traumatic stress.</td>
</tr>
<tr>
<td>1. Crisis education</td>
<td>Students practice behaviors needed to respond to crises in a fashion that mitigates dangers.</td>
</tr>
<tr>
<td>2. Crisis drills</td>
<td>Staff develops a crisis management protocol for responding to crises and provides appropriate training and materials such tat all school community members are familiar with the plan and procedures.</td>
</tr>
<tr>
<td>3. Crisis management planning</td>
<td></td>
</tr>
<tr>
<td>Immediate Prevention</td>
<td>Physical and emotional harm is mitigated.</td>
</tr>
<tr>
<td>1. Protect from harm/danger</td>
<td>Students are removed from harmful/dangerous situations</td>
</tr>
<tr>
<td>2. Minimize crisis exposure</td>
<td>Students are shielded from crisis images.</td>
</tr>
<tr>
<td>3. Ensure actual and perceived</td>
<td>Security procedures are implemented in a fashion that reassures students of their</td>
</tr>
</tbody>
</table>
Medical Interventions

Medical crisis interventions are the primary interventions, supported by all resources.

1. First aid
2. Isolate medical triage
3. Meet pre-existing medical needs

Re-establish Support Systems

Naturally occurring social supports are located and reunited with students following crises.

1. Reunite/locate primary caregivers
2. Reunite with close friends and teachers
3. Facilitate community communication
4. Return to school

Risk Screening and Referral

Students who are at risk for and/or display adverse crisis effects are identified and referred.

1. Initial risk screening
2. Individual risk screening

1. From crisis facts and knowledge of individual student vulnerabilities, students at greatest risk for adverse crisis outcomes are identified and referred for appropriate
3. Referral procedures

2. From initial psychological interventions, students at-risk for adverse crisis outcomes are identified and referred for appropriate psychological intervention.

3. Procedures are implemented that allow students, staff, and other caregivers to refer themselves and/or others for psychological intervention, including follow-up procedures to ensure that those referred receive appropriate support and assistance.

4. School-wide risk screening

4. Questionnaires and/or rating scales are completed by all students to identify those at risk for adverse crisis outcomes and are referred for appropriate psychological intervention.
### Psychological Education

*Students, staff, and caregivers acquire knowledge that assists them in understanding, preparing for, and responding to the crisis and the problems and reactions it generates.*

1. **Psycho-educational groups**  
   - Students understand the crisis, are prepared for possible crisis reactions, acquire self-care strategies, and know how to obtain assistance.

2. **Caregiver training**  
   - Caregivers understand the crisis, are prepared for possible crisis reactions (both in themselves and among students), acquire strategies for supporting students, and know how to make referrals for additional support.

3. **Disseminate informational handouts**  
   - Informational handouts are made available (through the school and/or the media) that facilitate understanding of the crisis and its possible effects, and identify available supports.

4. **Anniversary preparations**  
   - Students, staff, and caregivers are made aware of the possible effects of crisis anniversaries.

### Psychological Interventions

*Students are able to adaptively cope with the problems and reactions generated by crises, and are able to achieve pre-crisis functioning levels.*

1. **Psychological first aid**  
   - Psychological contact is made, crisis problems are identified, immediate coping is reestablished, and connections are made to appropriate helping resources.
2. Empowerment

Students engage in crisis prevention and preparedness activities that involve some form of concrete action and, as a result, move them from the position of a victim to that of an actor.

3. Group crisis debriefing

Crisis facts are understood, crisis experiences and reactions are shared/normalized, coping actions taken (or at least planned), and the need for additional helping resources identified.

4. Psychotherapy

Ongoing professional mental health assistance is made available as needed.

5. Anniversary reaction support

Making use of psychological first aid, students are able to cope with crisis reactions associated with significant anniversary dates and/or connections are made to appropriate helping resources.
Rituals and Memorials

Students engage in activities that provide mutual support, opportunities to express shared grief and remembrance, and interpretation of crisis events and survivor actions. These activities also facilitate the process of bringing closure to the crisis event.

1. Ritual participation
   1. Students are given the opportunity to participate in rituals that allow for public expressions of shared grief and mutual support, summarizes and interprets the crisis, and begins the process of closure.

2. Memorial
   2. Students are able to develop and implement appropriate crisis related memorials.
Table 2

*Suggestions for Caregivers*

- Give yourself a bit of time to come to terms with the event before you attempt to reassure children.
- Take care of yourself so that you can take care of children.
- Explain the episode of violence or disaster. Replace crisis rumors with crisis facts. At the same time, however, do not give children unasked for details that might increase their threat perceptions.
- Encourage children to express their feelings and listen without passing judgment.
- Let children know that it is normal to feel upset.
- Allow time for children to experience and talk about their feelings.
- Don’t try to rush back to ordinary routines too soon. However, a gradual return to routine can be reassuring.
- If children are fearful, reassure them that you will take care of them.
- Stay together as much as possible.
- If behavior at bedtime is a problem, give children extra time and reassurance. Let him or her sleep with a light on or in your room for a limited time if necessary.
- Reassure children that the traumatic event was not their fault.
- Do not criticize regressive behavior or shame children with words like “babyish.”
- Do your best to let children know that you understand their perception of the crisis event. Try to put yourself in their shoes.
- While it is important to understand children’s crisis event perceptions, it is also important to
correct misperceptions.

- Allow children to cry or be sad.
- Encourage children to feel in control. Let them make some decisions about meals, what to wear, etc.
- Encourage children to develop coping and problem solving skills and age-appropriate methods for managing anxiety.

Adapted from National Institute of Mental Health (2001)
<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Intervention(s)</th>
<th>Participants</th>
<th>Stressor</th>
<th>Intervention Groups and Timing</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bisson, Jenkins,</td>
<td>45-min Mitchell</td>
<td>65 adults</td>
<td>Acute</td>
<td>Random assignment of individuals to debriefing and control (no intervention)</td>
<td>At 13-month follow-up, interview and questionnaire data suggested the debriefing group to have significantly worse symptoms of depression, anxiety, and traumatic stress than the control group. Also, among debriefed individuals, the temporal relationship of the trauma to the debriefing, the worse the outcome.</td>
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<tr>
<td>Alexander, &amp;</td>
<td>Model of</td>
<td>(Consecutive admissions to a hospital)</td>
<td>physical trauma</td>
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<tr>
<td>Bannister (1997)</td>
<td>Debriefing (Adapted for use with individuals and couples)</td>
<td>burn unit)</td>
<td>(burn)</td>
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</tr>
<tr>
<td>Authors</td>
<td>Study Type</td>
<td>Duration</td>
<td>Participants</td>
<td>Event</td>
<td>Intervention</td>
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<tr>
<td>Campfield &amp; Hill (2001)</td>
<td>Mitchell Model of Debriefing</td>
<td>60 to 120-min</td>
<td>77 civilian employees</td>
<td>Robbery (no physical injuries, gun not used)</td>
<td>Random assignment of individuals to two groups. Immediate group, debriefing provided less than 10-hours post-trauma. Delayed group, debriefing provided more than 48-hours post-trauma.</td>
</tr>
<tr>
<td>Chemtob, Thomas, Law, &amp; Cremniter (1997)</td>
<td>Group sharing and normalization of crisis experiences and reactions + Lecture</td>
<td>300-min</td>
<td>43 adults (Group 1, FEMA counseling project staff; Group 2, Local mental health staff)</td>
<td>Hurricane exposure (Average exposure = homes damaged but inhabitable)</td>
<td>Intact groups assigned to one of two groups. Group 1, intervention offered 6-months post-disaster. Group 2, intervention offered 9-months post-disaster.</td>
</tr>
<tr>
<td>Study</td>
<td>Intervention Description</td>
<td>Sample Characteristics</td>
<td>Methodology</td>
<td>Results</td>
<td></td>
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<tr>
<td>Conlon, Fahy, &amp; Conroy (1999)</td>
<td>30-min “Psychological Debriefing”</td>
<td>40 Road traffic accident victims 40 consecutive trauma clinic attenders (16-65 years of age)</td>
<td>Random assignment (coin flip) of individuals to two groups: Intervention group (n=18) or monitoring group (m=22).</td>
<td>At 3-month follow-up interview and self-report questionnaires did not reveal any significant differences between groups. Four monitoring group and two intervention group members developed PTSD. This distribution was not significant.</td>
<td></td>
</tr>
<tr>
<td>Deahl et al. (2000)</td>
<td>1/2-day pre-deployment crisis education + 120 min Mitchell Model of Debriefing</td>
<td>106 British soldiers War (6-month in Bosnia)</td>
<td>All participants were provided pre-deployment crisis education. Immediately following return from Bosnia, random assignment of individuals to two groups:</td>
<td>At 3-, 6-, and 12-month follow-ups, both groups showed lower than expected rates of PTSD. However, the debriefed group showed lower rates of alcohol misuse than was found in the non-debriefed group.</td>
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<tr>
<td>Hobbs, Mayou, Harrison, &amp; Worlock (1996)</td>
<td>60-min “Psychological Debriefing”</td>
<td>106 adults (Consecutive admissions to a hospital)</td>
<td>Acute physical trauma (hospitalization following a traffic accident)</td>
<td>Random assignment of individuals to an intervention group (n=54) and to a control group (n=52). Intervention offered 24-48 hours after the accident in most cases.</td>
<td>At four-month follow-up interview and self-report questionnaire did not find either group to demonstrate a significant reduction in post-traumatic symptoms, mood disorder, anxiety, intrusive thoughts or travel anxiety, PTSD, or phobic anxiety.</td>
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<tr>
<td>Kenardy et al. (1996)</td>
<td>Group stress debriefing (No information provided regarding the models that may have been used)</td>
<td>195 emergency response &amp; disaster personnel</td>
<td>Earthquake</td>
<td>Participant self-reports regarding whether or not they had participated in a group stress debriefing session were used to create intervention groups. No information available regarding the form or timing of the “debriefing.”</td>
<td>At an average follow-up of 27-, 50-, 86-, and 114-weeks post-disaster, questionnaire results did not suggest there to be any differences between groups. Self-reports of having been “debriefed” did not yield lower scores on measures of event impact, general health, or level of stress.</td>
</tr>
</tbody>
</table>
| Mayou, Ehlers, & Hobbs (2000) | 60-min “debriefing” 61 adolescents and adults (Individual review of the accident, expression of emotions, & psycho-education) Acute physical trauma (hospitalization following admission to a hospital following traffic accident) | Random assignment of individuals to an intervention group and to a non-intervention group. Intervention offered within 24 hour after hospital admission or as soon as the individual was physically able to be “debriefed.” | At 3-year follow-up questionnaire data suggested the intervention group did not appear to benefit from debriefing. They had worse physical and functional outcomes than the control group. Of those with high initial traumatic stress, individuals in the intervention group had a worse outcome than those in the non-intervention.
Richards (2001) evaluated the Mitchell Model of Debriefing or Pre trauma training, debriefing, & individual support for 524 bank employees after an Armed robbery (no physical injuries, gunshots, or hostage taking). Intact groups of robbery victims were initially offered debriefing as a stand-alone intervention. Subsequently, different groups of victims were offered the services of an integrated stress management system that included pre trauma education and individual support.

At 3 to 12 month follow-up groups who had received support from an integrated stress management system scored lower on measures of psychological trauma and had fewer clinically significant cases than did groups who were offered debriefing as a stand-alone intervention.
| Rose, Brewin, Andrews, & Kirk (1999) | 30-min Psychoeducation and/or 60-min Mitchell Model of Debriefing (Adapted for use with individuals and couples) | 157 adults (Victims of actual or attempted physical or sexual assault, or bag snatching) | Random assignment of individuals to assessment only, education only, and education + debriefing groups. | At 11-month follow-up rating scales suggested all groups to improve over time. No significant differences between groups were found. | 2161 solicited, 243 replied, 157 eligible | Intervention offered within one month after the crime (mean 21 days). However, the assessment only group had the lowest baseline and the highest posttraumatic stress scale scores at follow up. |
Conclusions About Psychological Debriefing

- Among adults who experience property damage due to a natural disaster, the sharing and subsequent normalization of crisis experiences and reactions, combined with psychological education, offered several months after the crisis event, appears to facilitate reductions in the impact of the crisis event (Chemtob et al., 1997).

- Among civilian employees who are robbery victims (but were not physically injured nor threatened by a gun), immediate debriefing (offered less than 10-hours after the crisis) appears to result in more rapid reductions of traumatic stress symptoms than does delayed debriefing (offered more than 48-hours after the event; Campfield & Hill, 2001).

- Among soldiers exposed to war, debriefing offered immediately upon return from a war zone does not appear to add to the benefits of pre-crisis education when it comes to reducing traumatic stress. However, it would appear to reduce the rate maladaptive coping strategies (i.e., alcohol misuse; Deahl et al., 2000).

- Among adults and adolescents who were acute trauma victims (i.e., suffered a physical injury requiring hospitalization and/or were the victims of a violent crime), individual debriefings are not sufficient to prevent psychopathology (Bisson et al., 1997; Hobbs et al., 1996; Mayou et al., 2000), and do not appear to promote a more rapid rate of recovery than would occur without intervention (Rose et al., 1999).

- Among adults who suffer an acute physical injury requiring hospitalization (such as a burn), individual debriefings may cause harm when offered in close temporal proximity to the injury (Bisson et al., 1997).
• Among adolescents and adults who suffered an acute physical injury requiring hospitalization (following a traffic accident) an individual one hour intervention (that includes a review to the traumatic event, expression of emotions and education about stress reactions, the value of talking about the crisis, and time importance of returning to normal travel) may make those who were most psychologically traumatized worse (Mayou et al., 2000).

• Among adolescents and adults who suffered a minor physical injury not requiring hospitalization (following a traffic accident) an individual 30-minute intervention (that includes expression of emotional and cognitive reactions and education about traumatic stress symptoms and coping strategies) does not appear to promote a more rapid rate of recovery than would have occurred without intervention (Conlon et al., 1999).

• Natural disaster worker self-reports of having been “debriefed” are not associated with a more rapid rate of recovery (as compared to those who did not report having been debriefed; Kenardy et al., 1996).

• Among bank employees who were victims of armed robberies (but not injured, shot at, or taken hostage) a combination of pre-crisis education, debriefing, and individual support is associated with lower rates of psychological trauma than is debriefing as a stand-alone intervention (Richards, 2001).