Developing a Culturally-Ecologically Sound Intervention Program for Youth Exposed to War and Terrorism

William R. Saltzman, Ph.D.\textsuperscript{1,3}

Christopher M. Layne, Ph.D.\textsuperscript{2,3}

Alan M. Steinberg, Ph.D.\textsuperscript{3}

Berina Arslanagic, M.D.\textsuperscript{4}

Robert S. Pynoos, M.D., M.P.H.\textsuperscript{3}

\textsuperscript{1} College of Education, California State University, Long Beach, California
\textsuperscript{2} Department of Psychology, Brigham Young University, Provo, Utah
\textsuperscript{3} National Center for Child Traumatic Stress, UCLA, Los Angeles, California
\textsuperscript{4} UNICEF Bosnia Herzegovina, Sarajevo, Bosnia

William R. Saltzman, Ph.D. (Corresponding author for proof and reprints)
2179 Kinneloa Canyon Rd.
Pasadena, CA 9107
(626)840-2900
(626) 798-4312 (fax)
wsaltzman@att.net

Christopher M. Layne, Ph.D.
Department of Psychology
287 TLRB
Brigham Young University
Provo, Utah 84602
(801)422-9756
Christopher_layne@byu.edu

Alan Steinberg, Ph.D.
National Center for Child Traumatic Stress
11150 Olympic Blvd., Suite 770
Los Angeles, CA 90064
(310)235-2633
asteinberg@mednet.ucla.edu

Berina Arslanagic, M.D.
UNICEF Bosnia-Herzegovina
Sarajevo, Bosnia
00 387 71 21 51 61

Robert Pynoos, M.D., MPH
National Center for Child Traumatic Stress
11150 Olympic Blvd., Suite 770
Los Angeles, CA 90064
(310)235-2633
rpynoos@mednet.ucla.edu
Synopsis

This article describes the public mental health approach used by the UCLA Trauma Psychiatry Service in developing and implementing a school-based post-war trauma/grief intervention program for adolescents in Bosnia-Herzegovina. Hallmarks of this approach include the development of multilateral partnerships with local and ministerial stakeholders, systematic assessment that yield a detailed understanding of the specific range and severity of trauma and loss experiences, current adversities and trauma reminders among the affected population, and a training program aimed at developing the capacities of local service providers and an indigenous support infrastructure so that the intervention program may be directed and sustained by people within the communities served. Concluding comments map out an expanded conceptual framework for public mental health interventions that may be appropriate for terrorist and mass-casualty events.

Keywords
School-based program, culturally sensitive treatment, trauma, trauma/grief treatment, terrorism, adolescent group therapy, post-traumatic stress disorder.
I. Introduction

In previous articles, the UCLA Trauma Psychiatry Program has described a public mental health approach to the treatment of children and adolescents traumatized by disaster or war\cite{1,2}. This approach includes guidelines for planning an effective post-disaster response with information on needed levels of organization, methods of screening for appropriate triage, training and supervision of mental health staff, design and implementation of intervention programs, and the longitudinal monitoring of course of recovery and intervention outcome. Over the past seven years, these guidelines have been applied in circumstances ranging from school shootings (Thurston High School, Springfield, OR; Columbine High School, Columbine, O; Santee High School, Santana, CA), natural disasters (earthquakes in Armenia, Japan, Greece and Taiwan), wars (Bosnia-Herzegovina), and acts of terrorism (World Trade Center). A recurring lesson in all of these applications has been that effective trauma/disaster response must be based on an in-depth understanding of, and respect for, the local culture, systematic assessment of trauma and loss exposure and current levels of distress experienced by individuals throughout the affected community or region, an understanding of especially vulnerable sub-populations, and an appreciation of the range and severity of post-trauma stresses, secondary adversities and trauma reminders that exert an enduring impact on community members \cite{1}. Furthermore, training should develop the capacities of local service providers and an indigenous support infrastructure so that an intervention program may ultimately be directed and sustained by people within the communities served \cite{3}. These considerations are as relevant for programmatic interventions following traumatic events in American communities as they are for interventions in foreign countries. Failure to pay careful attention to these issues often results in programs that will be either rebuffed by organizational gatekeepers or marginally implemented without a sense of local ownership, a perception among those served that the program does not address their real needs, and rapid programmatic decline once external support is removed \cite{4}. Taken together, these considerations comprise key aspects of a process of adaptation and accommodation that yield programmatic recommendations or interventions that are culturally and ecologically suited for a specific setting and specific trauma profile.
This article will describe the development and implementation of a post-war trauma/grief intervention program for adolescents in Bosnia-Herzegovina to illustrate the process of ecological accommodation and program adaptation to a specific setting and culture. This program was carried in 33 secondary schools located in Muslim and Serbian-controlled regions of the former Yugoslavia. Evaluations of program effectiveness indicated significant reductions in posttraumatic stress, depression, and grief symptoms among program participants with positive associations between distress reduction and psychosocial adaptation [5].

In order to exemplify the movement from “concept to culture” for the trauma/grief intervention program, this article will begin with a brief summary of the developmental model and treatment foci which inform the UCLA Trauma Psychiatry approach to assessment and treatment. Subsequent sections will offer a description of the initial consultations and development of broad programmatic recommendations in Bosnia-Herzegovina, an iterative process of program development that involved repeated cycles of needs assessment, program design, pilot implementation, and program redesign, and a description of the intervention program components. Concluding comments will map out an expanded conceptual framework for public mental health interventions that may be appropriate for terrorist and mass-casualty events.

II. Developmental Model of Childhood Traumatic Stress

Increased awareness of the extent to which children and adolescents are exposed to violence in their communities has led to efforts to better understand the nature and prevalence of such exposure, to identify risk factors for exposure, and to rigorously characterize the resultant distress and long-term developmental consequences. There are also increasing efforts to determine child intrinsic, social and ecological factors that moderate and mediate outcome, to document biological and social sequelae, and to design and evaluate proposed preventive and therapeutic interventions. Over the past decade, the UCLA Trauma Psychiatry Program has developed and refined a conceptual model for integrating these many aspects of childhood trauma. In so doing, it suggests avenues for research and approaches to treatment.
The model assigns a tripartite multiple stress diathesis etiology to acute posttraumatic reactions, as these arise from aspects of the traumatic experience, proximal trauma and loss reminders, and proximal trauma-related stresses and adversities. Particularly salient are the worst moments of a complex traumatic experience [9], which typically involve both objective features of injury to self, or the injury or death of others, and subjective features of intense fear, horror and helplessness. Both objective features of traumatic experiences (including life threat, physical injury, and life loss) and subjective features of traumatic experiences (including intense terror, horror, and helplessness) have been shown to predict severity of posttraumatic reaction [10]. Proximal trauma reminders, which can be ubiquitous in the aftermath of trauma, are associated with intense psychological and physiological reactivity, and serve to provoke and maintain post-trauma distress. These distressing reminders also underlie avoidant behavior, as children and adolescents restrict their activities to avoid confronting powerful reminders that evoke traumatic images and reactions. Trauma-related secondary adversities constitute an additional source of stress, and interfere with the ability to cope with posttraumatic reactions [1].

Acute posttraumatic distress is mediated by appraisals of the magnitude of danger and catastrophic consequence, by emotional and physiological reactions and efforts at regulation, and by estimation of the efficacy of protective intervention during and in the aftermath of the traumatic experience. Acute distress is also mediated by child intrinsic factors, (including developmental task, coping style, temperament, etc.), and moderated by a variety of extrinsic factors in the ecology of the child, (including family, peer, school and community factors). Distress encompasses acute posttraumatic reactions, as well as other comorbid reactions, including depression, anxiety and somatic symptoms. Guilt, shame and blame of others also constitute acute post-trauma distress.

The impact on proximal psychopathology includes a range of child and adolescent psychiatric disorders that have been reported after traumatic exposures, (including PTSD, comorbid depression, complicated bereavement, etc.). The impact on proximal development encompasses areas including the achievement of developmental tasks that make up the ontogenesis of developmental competencies, and the negotiation of developmental transitions. Recently acquired developmental achievements appear to
be particularly vulnerable to disruption \cite{11}. Proximal effects on development also include alterations in neurophysiological maturation and function \cite{12,13}.

Enduring trauma reminders and secondary stresses interact with on-going development and psychopathology. Prospective longitudinal studies documenting distal developmental outcome are sparse. Our studies, for example, have documented an acceleration in aspects of moral development, accompanied by disturbances in conscience functioning among adolescents years after a catastrophic earthquake in Armenia \cite{14}. Traumatic experiences may skew expectations about the world and the safety and security of interpersonal life. These expectations map on to core schemas of risk, danger, injury, loss, safety, security, protection and intervention, which in turn may be incorporated into the developing personality \cite{15}. The links between traumatic exposure, proximal factors, and distal pathology also remains to be studied. The literature currently suggests that, in addition to chronic PTSD and other comorbid psychiatric disorders, distal consequences may also encompass physical health and life trajectory outcomes, vulnerability to future life stress and difficulties in the treatment setting \cite{7}.

**Therapeutic Foci**

Based on the developmental model, five primary therapeutic foci have been deemed necessary components of our group psychotherapeutic intervention for youth exposed to trauma or traumatic loss. These foci are briefly described below.

1. **Traumatic Experience.** A comprehensive intervention for traumatized adolescents must systematically address both the objective and subjective features of the traumatic experience. This focus often begins with psycho-education regarding age-appropriate reactions to trauma and loss. This is essential in order to help adolescents identify trauma/loss related distress reactions and difficulties, and to reduce the adolescents’ perception that his/her reactions are bizarre or related to personal shortcomings. Treatment must also include repeated opportunities to revisit the traumatic experience via trauma narrative exposure exercises, in which group members are guided to weave together objective and subjective features of the traumatic experience to render a coherent, temporally ordered narrative. Repeated re-telling of the trauma experience in a safe and supportive environment serves to increase
tolerance for traumatic memories and to decrease traumatic avoidance. Guided exploration of the worst moments of the experience helps to clarify and restructure cognitive distortions and maladaptive beliefs, including misunderstandings and misattributions linked with excessive guilt and shame, and to identify skewed trauma-related expectations regarding self, others, social agencies and institutions, and the future.

2. Trauma Reminders. Research has indicated that the course of trauma-related symptoms is mediated by reactions to trauma or loss reminders \(^{16,12}\). Trauma and loss reminders are features of the individual’s environment or subjective experience that trigger intrusive re-experiencing of distressing memories and are associated with both psychological and physiological reactivity. Treatment must provide a means to identify current and future trauma/loss reminders and help the student understand the links between the traumatic experience, his/her reactions, and current maladaptive behavior. Efforts to increase coping and adaptive responses include facilitating cognitive discrimination between the present and past, increasing tolerance for expectable reactivity, reducing unnecessary exposures to non-therapeutic reminders, and the development of appropriate support seeking and anxiety management skills for the periods before, during, and after exposure to distressing reminders.

3. Grief. When traumatic circumstances accompany the death of a family member or close friend, there is an interplay between the trauma and the process of bereavement. Normal grieving requires the ability to positively reminisce about the deceased \(^{17}\). If the death involved violence, mutilation, disfigurement or extreme tragic elements, the grieving adolescent may well avoid thinking about the deceased because such efforts result in upsetting and painful memories. The result is a form of complicated grief with prolonged symptoms and maladaptive coping responses. The therapeutic response must first deal with the trauma inflicted on the adolescent in order to reduce traumatic avoidance and free up psychological resources for the grieving process. Specific therapeutic tasks undertaken toward this goal include psycho-education about grief reactions and the course of bereavement, framing grief reactions and bereavement as beneficial processes that facilitate accommodation to the on-going absence of the loved one, and in cases in which traumatic intrusions “eclipse” attempts to remember and reminisce, construction of a non-traumatic mental representation of the deceased. Other tasks include
increasing tolerance for current and future loss reminders, making healthy changes to further accommodate to the loss, and addressing conflicts over past interactions that evoke regret, guilt, or shame. This therapeutic work serves to promote acceptance of traumatic losses, mobilizes adaptive coping strategies, and facilitates a more normative grieving process.

4. **Secondary Adversities.** Effective treatment for war-exposed individuals must not only include a therapeutic focus on the immediate effects of trauma, but on the adversities they generate, or on pre-existing adversities that they may exacerbate. Typically, a series of adverse life changes follow in the wake of a traumatic event or death of a loved one, including financial hardship, family estrangement, dissolution or displacement, and adolescent assumption of adult responsibilities. Our research suggests that the presence of such secondary adversities may exacerbate the impact of trauma and traumatic loss on current levels of adaptive functioning\[18\]. Intervention is focused on enhancing coping skills, identifying current difficulties, developing pragmatic coping and problem-solving strategies to contend with the adversities, and enhancing social skills needed to communicate appropriately about trauma and loss, and to seek appropriate forms of support.

5. **Developmental Impact.** It is critical that a comprehensive trauma-grief treatment program address ways in which trauma or grief related reactions may have contributed to an adolescent withdrawing from developmentally important activities and relationships, failing at school, engaging in more aggressive, antisocial, risk-taking, or self-destructive behavior, and associating with a maladaptive peer group. Guided by an understanding of normative developmental competencies, tasks, transitions and expectations, a treatment program must identify missed developmental opportunities, support resumption of compromised developmental activities, facilitate an active future orientation, and challenge maladaptive developmental expectations and coping responses.

**III. A Public Mental Health Approach to Post-War Psychosocial Planning**

After the 1995 Dayton Accord, the UCLA Team was contracted by UNICEF Bosnia-Herzegovina to provide consultation to UNICEF and government agencies within the Bosnian Federation and the Republika Srpska, focusing specifically on the psychosocial needs of war-exposed Bosnian children and
adolescents. The Team’s first objectives were to assess the psychosocial needs of youth in the post-war period, review existing mental health service programs sponsored by governmental and non-governmental sources, evaluate available resources to address those needs, and provide assistance to UNICEF in developing a plan of action for their Psychosocial Program.

The needs assessment and subsequent planning followed our public mental health model. This model proposes that three levels of organization are necessary as a pre-requisite to the implementation of a population-based mental health intervention for children and adolescents. First, such interventions require a well-organized governmental response to mobilize public, private, education, health and mental health resources. Consulting with, and gathering coordinated support from key governmental and non-governmental organizations is critical. Conflicts between education, health, and political institutions regarding their appropriate roles and authority and prioritization of goals is frequently the cause of individual or organizational obstruction or premature termination of an intervention program.

In Bosnia-Herzegovina, the Bosnian Muslim and Serbian Ministries of Health, Ministries of Education and the associated Pedagogic Institutes were key stakeholders with whom it was essential to develop a collaborative relationship. Following the recommendations of Rune Stuvland, UNICEF’s Psychosocial Director for the Former Yugoslavia, we developed parallel post-war interventions for both warring entities, one generally perceived as being the aggressor and one the victim. Although this approach presented a range of logistic and diplomatic difficulties (e.g. different versions and translations of treatment and training materials, separate trainings, and negotiation and coordination with separate institutional establishments), the program provided an early and enduring bridge between mental health professionals and educators in both national entities.

The second and third levels of organization involve the school community and intervention teams. Our experience from international and national recovery efforts strongly indicates that schools constitute the most effective and cost efficient setting in which to provide post-disaster or post-war mental health assistance to children and their families [2]. They offer a familiar, non-stigmatizing setting for mental health services that provide the broadest access to children and their families, and facilitate the
coordination of mental health and educational responses. In Bosnia-Herzegovina in particular, the schools also offered an important touchstone for the community because of the heroic fashion in which schools continued to function throughout the war, often in basements and “floating” locations, despite shelling, snipers and starvation.

Our work with the school community involved visits to schools and after-school programs throughout the former Yugoslavia, meeting with officials from the Pedagogic Institutes, and principals, teachers, and counselors at schools in areas most severely impacted by the war. We also gathered information directly from students in two rounds of screening and interviews in the cities of Sarajevo, Banja Luka, and Mostar. Screening efforts were focused on secondary students because data was already available for younger students and because it appeared that adolescent populations had been somewhat overlooked in regard to psychosocial remediation and support services.

The initial round of screening indicated substantial exposure to trauma and loss, with regional variation among high school students from different cities. For example, students in Sarajevo were far more likely than their peers in Banja Luka to have experienced shelling, sniper shooting, and witnessing a massacre, while adolescents in Banja Luka were more likely to have experienced forced expulsion from their homes and relocation. Despite significant differences in levels of exposure to war experiences among children in different cities, there were comparable rates of distress within each level of severity of exposure across cities. Irrespective of geographical location, the children who experienced the most severe levels of exposure including injury, torture, rape, and other forms of extreme direct life threat, were most at risk for severe and persistent post-traumatic reactions. These students represented an important population of youth that would be targeted for intervention.

In discussions with adolescents and counselors at schools and various youth programs sponsored by non-governmental organizations, we learned that students returning to full-time schooling were having substantial difficulty adapting to the schedule and the demands placed on them. They had difficulty concentrating, frequently felt irritable, and were described by teachers as oscillating between apathy and aggressive behavior in the classroom. Unfortunately, many of the school personnel interpreted these
behaviors as signs of non-cooperation or lack of motivation rather than seeing the students’ difficulties as secondary to war-related posttraumatic stress, grief and depressive reactions. The disparity between the needs of these adolescents and the educational approach offered in secondary schools was heightened by the post-war reversion to traditional curricula that were based on highly structured and didactic forms of instruction and extensive memorization of academic content.

The second round of student screening was substantially revised to include additional questions about war-related traumatic events reported by respondents to the initial survey, and to better assess selected pre-war and post-war life events and circumstances that affect the course of recovery. Measures of depression and grief, and several open-ended questions focusing on the identification of trauma reminders, post-war adversities, and challenges to adolescent development, were also added.

Results of the second survey indicated that the effects of war-related traumatic exposure were persistent and associated with significant interference with normal development. Highly elevated scores on measures of PTSD, depression, and grief were routinely observed, with some adolescents reporting that "life without my father is getting worse and worse." The survey results also indicated that the effects of war-time trauma were significantly exacerbated by post-war circumstances of loss and stress, including living as a war refugee, living without a parent killed in the war, living with a grief-stricken or depressed parent, poverty, overcrowding, physical relocation, and living in a violent or abusive family environment. Refugees and students who lost a parent appeared to be in greatest need of services due to continuing adversities and distress symptoms. Adolescents also identified many common events and objects, such as damaged buildings, loud noises, and signs of political instability, as distressing reminders of traumatic wartime events. The adverse developmental effects of the war and its aftermath were described as forcing one to "grow up quickly and roughly," and identified as the cause of many lost developmental opportunities (e.g., "I spent the best years of my life in a basement").

The open-ended survey questions were an especially rich source of qualitative information about the lives of adolescents and the challenges they faced in their daily lives. They were designed to gather information relevant to our five treatment foci. Following its administration, data from the surveys were
then reviewed with the local school counselor and program supervisors to better understand the cultural context, reactions, and difficulties experienced by students. This method was supplemented by individual clinical interviews conducted with selected students, and with in-depth discussions with participating school counselors and clinical supervisors focusing on the types of exposure, reminders, distress reactions, adverse life events, and developmental challenges observed among local youths.

These methods generated a large amount of qualitative and quantitative data that greatly expanded our knowledge of the war-related experiences and associated needs of Bosnian youths. For example, we were struck by the great variability in the types and magnitudes of “most traumatic” experiences they described. These experiences ranged in type from fear for the safety of loved ones (“fear regarding my father's safe return”), to loss of one’s home and becoming a war refugee (“abandoning my childhood home and the town I grew up in with the enemy on our heels—everybody was panicking”), to witnessing extreme violence (“my best friend was killed one half meter in front of my eyes. It was the first time I saw someone's death”), to the death of loved ones, direct life threat, and serious physical injury (“death of my brother: He died, and I was wounded by the same grenade.”).

There was also a great deal of variety and breadth in the types of distressing reminders identified by the youths. Trauma reminders ranged from the relatively common (e.g., “loud noises”, “places where massacres occurred”) to the idiosyncratic (e.g., “scarves”, graffiti—I saw blood puddles next to one”, “A local song, ‘Sunday’—all bad things happened to me on Sundays”). Loss reminders, although less frequently identified, nevertheless emerged as an important clinical phenomenon. These ranged from reminders of the current absence of loved ones (e.g., “being with my dead friend’s mom and sister”; “being all alone when I wake up”) to ongoing challenges with accommodating to a prior loss (e.g., “getting used to a new system at school”).

Interestingly, many students identified their grief reactions to traumatic deaths, separations, and disappearances as a significant post-war adversity and developmental challenge. Examples included feelings of loneliness and sadness (“I lost my friends and I have no new ones; that's why I'm often depressed”), painful thoughts and images of lost loved ones (“memories of a dead friend or father”, “I
miss my friends of a different nationality”), anxieties regarding the fate of missing loved ones (“uncertain destiny of my missing relatives”), and contending with hardships generated by the absence of loved ones (“uncertainty without father”).

The youths also described a broad spectrum of stressful post-war adversities. These ranged in type from “existential” difficulties (e.g., “financial problems—we don’t have enough for family necessities, and not enough pocket money”, “overcrowding”), to impacts on family and friendships (“psychological problems of mother due to father’s death”, “my best friends are scattered everywhere”, “father is aggressive after he returned home”). The economy (“father is unemployed”, “there are no jobs”), and ongoing political and territorial tensions (“the war is over, but I cannot return home”, “uncertainty regarding whether the peace will last”) were also commonly identified.

Also notable was the great variety in students’ descriptions of their developmental challenges. These ranged from concerns about motivation and ability (“lack of concentration”, “lack of will”), to lamentation over the loss of a precious developmental period (“I grew up quickly and roughly”, “I’ve become too serious to think about teenage things”), to challenges in developing and maintaining healthy friendships and romantic relationships (“hard to find good friends in whom I can trust because a lot of friends betrayed me and went to the other side”, “difficult to adjust and fit in and talk about what one feels without others who did not experience the same things”). Also notable were problems associated with an absent or dimmed sense of futurity (“I can't think in advance about my future education”, “I want to get as far away from here as possible”), and fears about other’s delinquency or of becoming delinquent oneself (“I’m fearful I'll meet bad friends who will ruin me”, “drugs and alcohol”, “it is difficult to live because 80% of teenagers live by the law of the street—many possess weapons”).

The information gleaned from these methods allowed us to refine and increase the ecological validity of our working model. Using these data, the Team revised its screening scales so as to better measure the five treatment foci. During the 1997-1998 school year, scales were developed to measure war-related trauma exposure, exposure to trauma reminders, exposure to loss reminders, traumatic grief
reactions, post-war stressful life events and circumstances, and perceived social support. Following an iterative procedure, a number of these instruments were revised further during subsequent years.

The data from the screenings and field reports also informed the adaptation of the UCLA Trauma Psychiatry protocol for trauma/grief group psychotherapy for use in the schools. For example, we developed specialized measures and additional group activities for learning to identify and cope with trauma and loss reminders, we devoted multiple sessions to acknowledging and dealing with current difficulties and daily challenges, and we increased the number of sessions focusing on traumatic bereavement in response to feedback from students and group leaders that accommodation to loss was one of the most widespread and painful challenges confronting adolescent students. Adaptations in program implementation included encouragement for group leaders to adopt a training and consultative role toward their teaching colleagues to help them distinguish post-traumatic reactions from purely behavioral and disciplinary problems. We provided intensive training in group process during our seminars to help group leaders develop more flexible and interactive approaches to their therapeutic and teaching activities. In response to the dire financial circumstance of teachers and counselors in the Bosnian schools, we also developed creative ways to channel reimbursement for many of the school staff who participated in the program.

Taken together, the survey results and the field observations indicated that many youths attending public secondary schools in Bosnia-Herzegovina experienced multiple exposures to highly traumatic war-related events. The results also suggested that the adverse psychosocial effects of these exposures were chronic. These results pointed to a great need for the development and implementation of a school-based intervention program designed to assess, identify, and treat the adverse effects of war-related exposures and post-war adversities among highly exposed youths.

From a broader sociological perspective, it was argued in a position paper [19] that services for the post-war adolescent population were important because of the pivotal role this age group will play in the nation’s recovery. As the first generation to enter adulthood in the post-war period, their academic achievement, their economic productivity, the stability they bring to marriage and family life, and their
view of their social institutions and their role in society will be vital to the future of this region. Their recovery from the catastrophic violence and post-war adversities will be essential for the well-being of Bosnia-Herzegovena. Prior research among adolescent populations exposed to political violence and large-scale disaster indicated that this group can become a "lost generation", at significant risk for compromised academic performance and occupational achievement, impaired physical and mental health, and disrupted social and moral development (21).

IV. Programmatic Recommendations

Drawing on the foregoing information and consultations, the Team formulated a three-tiered, public mental health model of intervention that guided its subsequent efforts. Table 1 presents the objectives, targeted populations, and resources necessary to implement each tier. The three tiers provide, respectively, (a) general psychosocial support to the general population of students (Tier 1), (b) specialized support to traumatized students at significant risk for severe persisting distress and developmental disturbance (Tier 2), and (c) a professional network through which school counselors obtain regular expert consultation and can refer high-risk students to community mental health specialists (Tier 3). The objectives, content, and resources necessary to implement each tier are described in the next section.

-----Insert Table 1 about here-----

Tier-1 intervention. As currently implemented in the Bosnian secondary schools, Tier-1 intervention consists of general psycho-educational, skill-building and support-oriented activities designed to increase understanding of the long-term effects of trauma exposure and loss, to normalize and validate stress-related experiences and reactions, and to provide skills for coping with common post-war adversities. These activities may be conducted by teachers, school counselors, or other school staff and require minimal amounts of training and professional supervision. Presentations to adults include a focus on young people’s post-war needs and the description of methods for supporting war-exposed youths. Structured activities are described in detailed guides to help staff teach basic problem-solving, anxiety management and coping skills.
**Tier-2 intervention.** The second tier of intervention consists of specialized, school-based psychosocial services provided to students whose histories of trauma exposure place them at risk for severe, persisting psychological distress and developmental disruption. These students are identified through a variety of screening methods; the primary instrument consists of a classroom-based risk screening survey, which is supplemented by referrals from teachers, parents, administrators, student peers, and the students themselves. This level of intervention consists of individual interviews, trauma/grief-focused group therapy, and where appropriate, individual supportive therapy. Tier-2 intervention is implemented at the schools by trained school psychologists and pedagogues (roughly the U.S. equivalent of academic counselors), and requires comparatively intensive training and ongoing supervision by trained community mental health professionals.

**Tier-3 intervention.** The third tier of intervention is intended for severely distressed and at-risk students, including youths with severe depression, suicidal behavior, or psychotic disorders, whose needs and associated risks exceed the mental health resources available at the schools. Accordingly, Tier 3 intervention consists of a professional network among school counselors and community mental health professionals that permits timely consultation and the referral of these high-risk students for specialized mental health services in the community.

These three tiers of intervention are designed to compliment one another and, where appropriate, to link together to provide continuity of care. For example, Tier 1 presentations can both educate the school community regarding signs of serious psychological distress, and provide information regarding referrals to qualified school and community mental health professionals. Tier 2 and Tier 3 activities can mutually benefit from active linkages between school and community mental health professionals. For example, a psychiatrist from a local medical school or community clinic can both prescribe antidepressant medication for, and consult with school counselors regarding, a depressed student participating in school-based group psychotherapy.

The UCLA Trauma Program took primary responsibility for the development and implementation of the “Tier-2 Intervention”, a specialized school-based program conducted by trained school staff for
those students who experienced severe trauma exposure with concurrent persistent psychological distress and developmental disruption. In order to insure consistency and quality of the program, and provide a detailed guide for relatively inexperienced school staff to conduct the group psychotherapy intervention, the UCLA Team drafted a treatment manual providing session-by-session instructions. Detailed protocols for screening, group member selection, and monitoring of recovery were also developed along with specialized measures for program evaluation. A key part of the program was the development of a local infrastructure for on-going supervision and support for the group leaders. Experienced clinicians in each region agreed to attend specialized training and host regular supervision meetings with the school group leaders. Over the course of four years, the UCLA provided regular trainings in each region and, in collaboration with selected supervisors and group leaders, further refined the group therapy program to better address student needs. In 2001, when UNICEF funding for the UCLA Team was gradually phased-out, the program continued under the leadership of a number of the supervisors and school principals.

V. The UCLA Trauma-Grief Group Psychotherapy Program

As currently implemented, the UNICEF School-Based Psychosocial Program for War-Exposed Adolescents consists of nine components [20]. These components are designed to systematically identify and treat students whose histories of trauma and loss place them at risk for severe and persisting distress and developmental disturbance. These program components also facilitate the referral of students whose specialized needs exceed school mental health resources (e.g., those with psychotic symptoms, suicidal behavior, severe drug abuse) to qualified mental health professionals in the community. Table 2 and Figure 1 present the program components and implementation plan flow-chart, respectively.

The first program component consists of psycho-educational presentations by the school counselors to students, teachers, school administrators, and parents. These presentations are designed to increase general awareness of common reactions to trauma, trauma reminders, and post-war adversities, to establish the role of the counselor as a provider of this specialized support, and to identify problems for which a referral to the school counselor is appropriate.
The second component is a self-report screening survey designed to identify students at risk for severe, persistent posttraumatic reactions and developmental disruption. Screening items include selected pre-war life events, war-related events comprising eleven objective dimensions and three subjective dimensions of trauma exposure, an open-ended written description of the student’s “most traumatic” war-related experience, screening measures of PTSD symptoms, depression symptoms, and normal and complicated grief reactions.

The third program component consists of hand-scoring the screening surveys by the administering school counselors. This hand-scoring, performed at the participating schools soon after the surveys have been administered, serves the dual purpose of quickly identifying potentially high-risk students, and educating the school counselors regarding the rates of trauma exposure and associated distress reported by students at their schools.

The fourth program component serves as a supplementary mechanism for identifying high-risk students and consists of teacher, parent, peer, and self-referrals to the counselor concerning the need for specialized services.

The fifth component consists of an interview, conducted by the counselor with the identified “high risk” students. This interview was designed to gather further information concerning the student’s current life circumstances and level of adjustment in order to determine level of need for Tier 1 (general support), Tier 2 (school-based individual or group treatment), and Tier 3 services (traditional community-based psychiatric treatment).

The sixth component consists of a pre-group clinical interview with students who have been deemed appropriate for group treatment. This interview was designed to promote group cohesion by building rapport, to begin to orient the student to group work by training in group skills, to create positive expectancies, and to permit the clinician and student to select a focal traumatic event to work on in the group.

The seventh program component consists of the manualized conduct of the trauma/grief-focused group psychotherapy intervention program. The group therapy protocol consists of 16-20 sessions
offered once per week at the school site, and includes four modules covering: 1) psycho-education and anxiety management skills; 2) trauma narrative construction and exposure; 3) traumatic bereavement; and 4) resumption of developmental progression.

The eighth program component consists of guided support for group members to engage in pro-social community activities oriented toward improving the school and community. Activities include co-leading psycho-educational presentations, demonstrating learned skills, and helping to rebuild or improve the appearance of the school.

The ninth component consists of periodic “booster” sessions designed to reinforce treatment gains, detect potential relapse, and to address developmentally-linked concerns as they emerge.

VI. An Enhanced Model for Public Mental Health Interventions to Deal With Terrorist Events.

There have been previous foreign and domestic acts of terrorism on the United States, including the bombings of the World Trade Center in 1993 and the Alfred Murrah Federal Building in Oklahoma City in 1995. However, the coordinated catastrophic attacks of September 11, 2001 and subsequent anthrax bio-terrorism awakened an entire country to enormous tragedy, and put the nation on heightened alert to extreme danger. The nature of terrorism and terrorist attacks requires special modification in the ecological model of planning and intervention described for war-affected youth. Terrorism is strategically designed to inflict significant civilian tragedy and to induce a lasting atmosphere of fear of recurrence across a large population. The center of the direct attack may be highly circumscribed, but the radius of personal impact and the perceived risk zone can be nation-wide. Within a few moments, perceptions of danger, safety, protection, risk, effective intervention and prevention can be radically altered. While producing a concentrated population of severely traumatized and bereaved citizens, terrorism can cause a reverberating wave of persistent danger signs and responses that permeate the environment of children, their families, schools and communities. The post-9/11 period in America, then, requires a new framework for understanding and identifying risk factors, corresponding interventions and strategies to promote resiliency.
In the aftermath of an actualized threat, children, youth and families are exposed to a plethora of objective signs and symbols of the danger of terrorism. Children, youth and families live in an atmosphere of real threats and false alarms. Principles of psychological first aid suggest that repeated clarifications of threat information is needed to help young children with misunderstandings, and their tendency to bring fears closer to home and concretize them in their daily lives. Both parents and young children may experience an abrupt sense of disruption of the usually expected parental protective shield, requiring graduated strategies of restoration and repair. School aged children are likely to develop incident-specific new fears, that should not be over pathologized, for example as diagnosable phobias, without proper reference to their origins in details of terrorist events and threats, and without provision of psychological support for ongoing fears of recurrence. Under normal circumstances, children and parents are constantly renegotiating the capacity of children or adolescents to appraise danger and be self-reliant, with the dangers under discussion often changing with age and cultural circumstances. After terrorist attacks, parental concerns about safety in public places can run into conflict with adolescent’s differing appraisal of risks and unwillingness to compromise their developmental opportunities. Open discussions about these parental and adolescent concerns, with adjustments seen as temporary but renewable, are important to maintaining parental guidance and adolescent progression toward independence.

Children, youth and families are exposed to increased media coverage, objective signs of heightened security (for example, national guard at airports, police presence at entrances to tunnels and bridges) and real threats, as well as false alarms. Strategies to assist recovery from false alarms should be an integral component of a public mental health plan for families, schools and communities. In New York City after 9/11, for example, students at one high school were exposed for weeks to repeated evacuations because of bomb threats at a nearby police headquarters. Our findings after the Northridge earthquake in Los Angeles indicated that children and parents who had difficulty calming down after aftershocks were at increased risk of severe and chronic posttraumatic stress reactions [24]. False alarm recovery strategies include clarification of threat information, a period of support that enhances emotional regulation and physiological recovery and pro-active steps to decrease false alarms.
Modulation of information exposure presents a challenge, especially to directly affected families, where there is a continued need to gather relevant information about missing family members, clarification of the tragic circumstances, issues of accountability and estimation of the need and type of ongoing protective action.

Children have the same basic needs, but the manner in which information is provided, by whom, with what immediate clarification and support, and with what limitations, differs from adults in many respects. Television can be a major source of unnecessary secondary exposure to traumatic details. While television reporting can provide important clarifying information, the briefness of news items and televised images can serve to elicit fear and anxiety reactions that interfere with information processing and enhance danger responses over time. Care must be exercised in other ways in which children and youth are engaged in discussion or provided with information, including class activities, for example, the use of drawings and other group exercises. Interventions with children and youth need to be respectful of differing exposures, further perceived threats to extended family, and always conclude with an additional drawing or plan to restore or enhance a constructive sense of safety and their own personal futures.

Fears of recurrence are pervasive and contagious, and are easily fed by rumors, myths and confusion. Even with the clear end of a known threat, fears of recurrence persist and are not bound by the same exposure parameters that typically predict PTSD. They can significantly disrupt children’s family and school behavior. Adolescents are prone, not only to propagate rumors, but to manufacture prophesies that are then shared among the adolescent peer group and culture. For example, within the first week after 9/11, adolescents had spread over the Internet supposed writings of Nostradamus that predicted a catastrophic collapse of two giant towers in the 21st century. It was weeks until the writings were exposed as fraudulent, but by then, many adolescents across the United States had fueled their own internal set of catastrophic expectations.

Children and families are challenged by living with uncertainty about future dangers. Doing so generates behaviors aimed at protection and safety. Children and adolescents can exhibit a wide range of responses that are fearful, anxious, restrictive, aggressive and reckless. The consequences of these
behaviors differ by age, circumstance and community. For example, among children, reckless behavior can lead to minor injuries; in adolescents, with access to cars, drugs and firearms, reckless behavior can prove lethal. In addition, danger typically invites more group cohesion, which, while providing important support, can also challenge adolescent appraisal of threat and group behavior. At the same time, the lonely or isolated adolescent is at risk of enduring danger responses without appropriate support.

A key cognitive component of an anxious or fearful response to danger is to use categorization rather than discrimination in the appraisal process. As a result, all age groups are vulnerable to intolerance of other groups who are categorized as threatening. Young children are handicapped by not having very sophisticated abilities to discriminate, and need educational help from parents and schools to achieve it, while older children need additional support to regain these functions. Schools can provide adolescents with academic curricula to enhance abstract thinking that promotes constructive approaches to reduce risk of group intolerance and objectification of others, for example, through study materials on comparative religion.

Danger also has reverberations through the family because it raises ongoing worries about significant others, affecting many circumstances of separation and reunion. This type of worry is also not necessarily related to PTSD, but is commonplace after a catastrophic event, especially when family members were separated and at different distances from the danger. In addition, children and parents face redefinitions of what constitutes a high-risk profession or working circumstance, as occurred with airline and post office personnel after 9/11 and the anthrax bio-terrorism. As parent’s confidence erodes in their ability to protect their children, parental demoralization can occur, which then permeates affects the family environment and the developmental course of children and adolescents. Furthermore, special attention needs to be placed on assisting traumatized and bereaved parents with the challenge of parenting while recovering from their own posttraumatic stress and complicated bereavement reactions, and ongoing responses to a sense of danger.

This schema has direct implications for Tier 1 interventions. Special attention needs to be given to children and caretakers with prior anxiety conditions. Inherent in their anxious predisposition, they
may be less able to modulate information exposure, either to excess or avoidant to a degree that they do not get clarifying information. They may be less able to make use of proper reassurance and support, and they may have greater interference with needed skills of cognitive discrimination. They are therefore vulnerable to fears of recurrence and maladaptive safety or protective behaviors. In addition, children with histories of insecure attachment are also vulnerable, especially since they may not have a properly formed sense of a protective shield from early childhood, nor confidence in the protective agency of others. Children of parents in high-risk professions, often newly redefined, are also at risk. Children and families who are members of groups that are misappraised as dangerous require help with cultural perceptions of being a feared object and experiences of intolerance.

Terrorism also requires modifications in Tier 2 and 3 planning and interventions. The ecology of youth may include pervasive reminders of an actualized terrorist attack as well as a world filled with cultural signs and symbols of danger. A broadly-based Tier 1 program similar to the module on trauma and loss reminders is especially warranted in the aftermath of terrorism. In addition, approaches to assisting parents with parenting while they recover from their trauma and loss experiences can be critical. In addition, as indicated by the NYC Board of Education Needs Assessment (and our school-based community violence adolescent intervention program, there can be an ecological reservoir of youth with prior trauma and loss histories who are at risk of exacerbation of prior posttraumatic distress or heightened reactions to current terrorism. Tier 1 and Tier 2 interventions must acknowledge this large group among the youth population. In addition to trauma and the risks of PTSD, the deaths of several thousand victims multiplies to hundreds of thousands of directly grieving immediate and extended family, and personal friends, across the United States and beyond, bringing substantial attention to the overlapping field of complicated bereavement. The risk of depression among bereaved youth, especially those with an individual or family history of depression, suggests the need to integrate Tier 2 and 3 interventions for this group. Terrorist attacks, similar to disasters, can result in enormous physical damage, environmental impact, community disruption, and economic repercussions. The modular components that address cascades of secondary stresses and adversities need to be invoked in proactive
prevention strategies for families and youth. Lastly, in the midst of terrorism dangers, inter-current trauma and loss constitute an important parameter that should not be overlooked.
References


