

# Disaster Intervention: Long-term Psychosocial Benefits in Armenia

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**Abbreviations:**

AA = Alcoholics Anonymous  
ACPP = Association of Child Psychiatrists and Psychologists  
AMHF = Mental Health Foundation of Armenia  
NGO = Non-Governmental Organizations  
POP = Psychiatric Outreach Program  
PTSD = Post-traumatic Stress Disorder

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**Abstract**

This paper describes a unique situation in which disaster intervention following a massive earthquake led to significant, uninterrupted, psychosocial benefits to the entire country, and an intervention program that continues to evolve. The mental health program initially provided service to the victims, and then, training to local professionals during which personnel simultaneously conducted clinical research. Members of the mental health team made a life-long commitment to the country, and continue their activities to expand its impact on public health policy. The difficult history and life circumstances of the Armenian people provided the opportunity for disaster interventions to have extensive psychosocial benefits.

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**Introduction**

On 07 December 1988, a devastating earthquake in the Republic of Armenia (a Soviet Republic at the time) killed approximately 50,000 people and left 500,000 homeless. There was an immediate, unprecedented outpouring of humanitarian aid from governments and humanitarian organizations around the world. Governmental and non-governmental organizations contributed to the relief effort including medical aid, reconstruction, agricultural and energy development; but upon completion of projects, these personnel returned to their respective countries.

The unique history of the Armenian nation and a considerable diaspora provide a different perspective on and approach to disaster interventions. The Armenian people maintained a 3,000-year presence in the region; but following the genocide of 1915–1923 whereby the Ottoman Turkish government massacred 1.5 million Armenians, Armenians dispersed around the world.<sup>1</sup> In addition to the 3.5–4.0 million Armenians living in the Republic of Armenia at the time of the earthquake, one million Armenians lived in Russia, one million in Europe and the Middle East, and one million in North and South America, with the greatest majority in the United States and Canada. The yearning by all Armenians to witness a free, united, independent Armenia encouraged many to consider the earthquake as an opportunity to contribute to the growth and development of the country, something previously not possible.

This paper describes the activities of the Psychiatric Outreach Program (POP) that initially provided crises mental health services to the victims in the earthquake zone, and later, in March 1989, developing a training program for local psychiatrists and psychologists. The POP conducted a large body of trauma research, and its staff continues to provide consultation to the program. Organized by Armenians in the United States and with continued financial support, the POP has facilitated far-reaching psychosocial benefits

through its influence on public health policy and prevention.

The contributions of the POP include: (1) disaster intervention; (2) training; (3) research; (4) service; (5) public health policy; and (6) continued consultation and training. This situation is unique, in that personnel from outside of the country provide continuous disaster relief, remain with the victims, and participate in the rebuilding of a nation.

### Disaster Intervention

The Armenian Relief Society, Western Region, located in Glendale California, is a non-profit, international, humanitarian organization that provides relief to needy Armenians worldwide. One of its many projects in Armenia focused on offering earthquake relief, involved the establishment of the POP to provide emergency mental health services to the children and families in the earthquake zone. Spitak, the epicenter of the earthquake, was destroyed completely and 10,000 of its citizens died as a result of the event. Gumri (formerly Leninakan), the second largest city in Armenia, experienced damage to 90% of the city and suffered deaths of 30,000 persons. The POP established clinics in both cities. All of the people on the POP teams, including adult and child psychiatrists, psychologists, social workers, and nurse clinicians, were American Armenians who were fluent in the Armenian language.

Many survivors from both areas were relocated to hotels and sanitariums in Yerevan, the capital of Armenia, and other cities in Russia. However, most of the survivors remained in their city and lived in tents for the first six months after the earthquake; by summer 1989, families lived in rectangular metal trailers (10 x 25 feet, 1.5 x 2.8 m). All of the trailers had electricity when available and a few had water and toilets. Outhouses and community showers were erected in clusters near to the trailer complexes. Until fall 1989, schools were located in tents, at which time they were relocated to small wooden buildings on the grounds close to the original school. Occasionally, a still-standing school was renovated and used again.

In the immediate aftermath of the earthquake, teams of mental health volunteers stayed in hotels in the capital and traveled 100 kilometers (62 miles) daily to both cities. However, soon after, to save time spent traveling, families invited volunteers to live in their trailers or homes when available. The teams included adult and child psychiatrists, psychologists, social workers, and nurse clinicians. From March 1989 to December 1989, teams of two to six mental health professionals each spent three to six weeks in each city.

The teams began their work centered at a local school, and provided consultation to the principal. Because all schools operated on two shifts, six days per week, teachers from each shift were available for group consultations, and later, for individual sessions. Most teachers suffered from the post-traumatic stress disorder (PTSD) and were eager to share their story. Group sessions enabled teachers to mourn openly, complain about the delay in reconstruction,

and also identify children with severe psychological symptoms. Frequently, teachers participated in brief individual therapy subsequent to two or three group sessions. Children were evaluated in classroom group situations, and also were referred specifically by teachers. They were seen during school hours for three to six, 45-minute, individual sessions held in vacant tents. Parents were given the opportunity to join their children in some of the individual sessions, and also were seen separately from the children in individual visits.

The response to the POP was remarkable for many reasons. Psychiatrists in the Soviet Union were not trusted because of the stigma of mental illness and past political abuses of psychiatric diagnosis. There was little experience by psychiatrists in offering outpatient psychotherapy to children and adults for anxiety disorders, personality disorders, neurotic depression, and PTSD. Psychiatrists throughout the Soviet Union treated severe mental illness in hospitals with medication; outpatient treatment consisted primarily of medication management. Moreover, there were no systematic, child-psychiatric services or guidelines for treating children with a conduct disorder, attention deficit hyperactivity disorder, depression, or PTSD. The diagnosis of PTSD was applied only after the earthquake, with the influx of mental health professionals from the United States, Canada, and Europe.

The interventions with children, parents, and teachers were brief, focusing on the pre-event situation. Therapists communicated an expectation that those treated would return to a previous level of functioning. The program included a supportive educational element, describing the natural course of PTSD, and encouraging realistic expectations from therapy. Therapists revisited the trauma (i.e., children were asked to draw pictures of their home/school before and after the earthquake), and helped those being treated by dealing with their emotions of sadness, fear and anger, and especially, their repressed/suppressed feelings.

Clinical experience indicated that there were many exaggerations and distortions in the children's thinking. Thirty percent thought that President Gorbachev was responsible for the earthquake, because the underground missiles that the Soviet Army stationed in Armenia had stored along the Turkish border had exploded. Clients were told that symptoms often do not disappear completely, and one learns to deal with them. Parents required much encouragement to allow their children to talk about the process of using avoidance/denial to cope with negative affect. A very effective model to treat traumatic experiences emerged during three to six visits that addressed the following five issues: (1) exposure; (2) reminders; (3) adversities; (4) developmental impact; and (5) grief.

From January 1990 to September 1990, the pool of volunteers was limited to five to six people who were able to stay in Armenia for relatively longer periods (three to five months). By March 1990, Psychological Treatment Centers were established in each city in trailers, in which local school teachers volunteered to work as psychotherapists. They were trained to evaluate clients using a symptom inventory, psychosocial history, and mental sta-

tus evaluation. These teachers were supervised as they learned the principles of brief, dynamically-oriented psychotherapy as described above, and became the nucleus of a staff of psychotherapists at both Centers. Volunteers from the United States continue to direct the work at these clinics, and provide consultation to schools in Spitak and Gumri.

### Training

It became clear that a small pool of volunteers could not meet the mental health needs in the earthquake zone. During summer 1990, the United States Agency for International Development sponsored a training grant to prepare local psychiatrists and psychologists in the earthquake zone to provide mental health services to the population. The formal training began in September 1990 when I took a one-year leave of absence from my full-time medical school position, and assumed the position of Clinical Director of the POP at both of the Psychological Treatment Centers.

The presence of a full-time, child psychiatrist for a one-year period offered the program much continuity and cohesiveness. An Executive Director was hired to manage all non-clinical matters such as building maintenance, supplies, as well as administrative issues at both Centers. Each Center had a full-time secretary to schedule appointments, prevent walk-ins from interrupting therapy sessions, and maintain statistics, including demographics.

From October 1990 to August 1991, the core of the training at each Center was two weekly clinical seminars, each one hour in duration. From October 1990 to January 1991, the first seminar consisted of a lecture on normal child development from infancy to adulthood, and psychiatric syndromes of childhood and adolescence. The clinical characteristics and sequelae of depression, personality disorders, schizophrenia, and alcoholism in the adult population also were discussed. From February 1991 to August 1991, the seminar covered principles of brief, dynamically-oriented psychotherapy. Topics such as the initial interview, obtaining a history, transference-countertransference issues, establishing a therapeutic alliance, resistance, and termination were addressed. Every staff member received a syllabus of the material translated into the Armenian language. The second weekly seminar briefly reviewed all new client evaluations for the purpose of diagnosis and treatment planning. I also met individually with each staff member for weekly supervision of the treatment of their clients.

The clinical staff in Gumri consisted of three, newly trained psychologists, a speech and language therapist (logoped), one part-time adult psychiatrist, and one part-time child psychiatrist. In Spitak, there was one psychologist, one part-time psychiatrist, and a logoped. In the Soviet Union, there was a strict demarcation between disciplines. Psychiatrists and psychologists rarely communicated with each other and the discipline of social work did not exist at the time. Initially, local physicians resented being treated on an equal basis with the non-physicians, but gradually team members at the Centers came to appre-

ciate each other's contribution to help the people in need. Both Centers developed a school consultation program, and personnel visited local schools on a regular basis to consult with teachers. Previously, it had been unheard of for a psychiatrist to provide consultation to a mainstream school to discuss children's emotional condition with teachers. If a clinical situation could not be addressed in the school by working with a teacher, the consultant referred the child and family to the Center.

At the Center, all children received a traditional intake evaluation consisting of a meeting with the child together with a parent(s) or grandparent(s); an open-ended interview alone with the child, and a summary at the conclusion. Frequently, a second interview was necessary. Children aged 13 years and older were interviewed alone first and later with their parents; adults were interviewed for one or two consultation visits. A traditional intake history with psychosocial and mental status data formed the basis of a chart. Notations of all visits were kept on file. If a client's symptoms were observed to be severe during the initial appointment, or if severe psychopathology was noted during the weekly diagnostic conference or supervisory session, one of the staff psychiatrists would evaluate the client for treatment with medication. A separate medication file was maintained for all relevant clients for whom the following information was recorded: (1) brief clinical history; (2) medication prescribed; (3) dosage level; and (4) reactions to the medication.

### Research

The provision of service and training also offered an opportunity to conduct clinical research on a traumatized population. The POP carried out several clinical studies, and has contributed to the body of knowledge on trauma. Since many individuals suffered the pogroms (organized massacres of minority groups) in Azerbaijan, and then, relocated in Armenia in what became the earthquake zone, it was possible to study the effects on individuals of a double trauma. The findings indicate that there were no psychological differences in terms of symptoms and severity levels between individuals suffering a single trauma vs. a double trauma.<sup>2</sup> A second study examined the effect of trauma on the elderly (>65 years of age) compared to adults ≤65 years of age.<sup>3</sup> The findings showed that both groups were similar in the mean values of their PTSD scores, but the elderly scored relatively higher on arousal symptoms and relatively lower on intrusive symptoms. Psychiatric co-morbidity in children was studied as well, and indicates that after a catastrophic natural disaster, children are at risk for co-morbid PTSD and secondary depression.<sup>4</sup> The POP conducted the first study demonstrating that the change in the hypothalamic-pituitary-adrenal axis in adolescents with chronic PTSD is similar to that evident in adults with PTSD.<sup>5</sup>

The effect of relocating children<sup>6</sup> and their mothers<sup>7</sup> away from their community after a disaster also was examined. The findings have substantial implications for interventions in disasters throughout the world. Both mothers and children who experienced the earthquake and immediately relocated to an intact city with no damage and normal

services had equal rates of PTSD as did those who remained in the damaged city. However, the relocated individuals demonstrated higher levels of depression than did those in the non-relocated sample. This finding emphasizes the need to restore communities to their pre-disaster state of functioning as soon as is possible.

Based on these findings, an interactive model for treating post-disaster psychopathology was developed. Using this model, one of the longest treatment follow-up studies in the literature on disaster victims was completed. It sought to evaluate adolescent groups treated at the Centers. The efficacy of trauma/grief-focused, brief psychotherapy as described in the previous section in alleviating PTSD symptoms and preventing the worsening of co-morbid depression was demonstrated.<sup>8</sup>

### Service

Until 1991, PTSD and depression in adults and children represented the majority of conditions treated at both Centers. With the passage of time after the earthquake and regular announcements in the media of available services, there was an increase in use of the various mental health services offered at both Centers. These were novel and exciting times, as people frequently came out of curiosity to see what the "Americans" were offering, only to learn that the clinicians were their own people providing new services. Moreover, the presence of an American psychiatrist engendered more trust and confidence in the established medical community for people living in the area. As local pediatricians, internists, obstetricians, and gynecologists referred clients to the Centers, word-of-mouth led to increased use of the facilities.

The trust of the medical hierarchy in each city was as important as the trust of the local population. During the first two years after the earthquake, all help was accepted graciously. However, while many helping agencies left after a period of time, the POP remained. The chief medical officers in both Spitak and Gumri initially viewed the Centers with some skepticism, but eventually, they also developed trust and confidence in the psychological services.

Two events confirmed the acceptance of the Centers as part of the established medical community. During fall 2000, there was an outbreak of anthrax in a village from the sale and consumption of meat from an infected cow. Three people were mildly infected, and several family members from the village descended on the chief medical officer with expressions of panic, demanding unnecessary medical attention. Those infected were hospitalized and treated successfully with antibiotics. The chief medical officer contacted the Center immediately and requested that a psychologist and a psychiatrist consult with the infected individuals in the hospital. Then, the psychologist and psychiatrist evaluated the panicked villagers and conducted group therapy for three crisis visits to stem the panic and offer educational support about preventive measures.

The economic and social problems in Armenia contributed to other crises in the medical management of traumatic events. Following the earthquake and the establishment of Armenia as an independent country,

many necessary services for survival such as gas for heating were not available. When gas did become available in Gumri, there were frequent gas explosions, because homes often had malfunctioning heaters. In the home of one family, there was an explosion when the gas was turned on unexpectedly. The mother and son were killed, and the father and daughter survived with serious injuries. The medical officer again called upon the psychological staff at the Center to counsel the father and daughter in crisis intervention in an effort to soften the blow of their loss. What appears to be a natural and usual process in the management of severe trauma became established through the activities of the POP.

In addition to the earthquake, social struggles such as unemployment, the political turmoil as the country was struggling to establish a democracy, the economic blockade by Turkey, and corruption resulted in enormous stress on individuals. This led to more depressive reactions and marital conflicts. However, treatment that previously was unavailable and unthinkable now was sought by individuals and couples in efforts to deal with adjustment disorders, marital problems, and personality disorders. Children often were the identified clients because they exhibited mood disorders, behavior problems, somatization, or learning inhibitions. After careful evaluation, the children received appropriate individual psychotherapy; however, often the child was the presenting problem for family conflicts that then were evaluated and treated.

Some estimates indicate that alcoholism in men was 30% higher than before the earthquake.<sup>9</sup> The alcohol dispensaries were very effective in detoxifying individuals with an alcohol withdrawal syndrome. However, there was no follow-up of those treated, and individuals with frequently repeated alcoholism problems were dealt with in the criminal justice system, without further treatment. The first Alcoholics Anonymous (AA) meeting in the former Soviet Union took place in Armenia on 24 April 1991 in Gumri. The 12 steps were translated into Armenian by POP staff, and AA principles were introduced through regularly scheduled AA meetings at the Alcohol Dispensary.

Further, a school consultation service was established through the local Education Ministry. Many schools were assigned a school psychologist whose primary function was to assist teachers in enhancing academic performance. However, they had no practical experience in talking with staff or children about emotional issues. To provide consultation for children with emotional problems, psychologists and child psychiatrists from the Center visited schools on a rotating schedule, first meeting with the principal, and then, with teachers. In addition, lectures were conducted on how to identify problem children. Those children identified then would be counseled in school with parental approval. If more extended therapeutic intervention was indicated, they then would be referred to the Center. A psychologist or child psychiatrist directly interacting with a child in the school setting had been unheard of in the past.

### Public Health Policy

Armenians throughout the world rejoiced on 21 September 1991 when the independent Republic of Armenia was established. Nonetheless, separation from the Soviet Union brought hardships in every aspect of life: Armenia was land-locked; it was surrounded by hostile neighbors; its economy was shattered by the earthquake; a war with Azerbaijan over the Nargono-Karabagh enclave was raging; and there was corruption in the government. The Health Ministry still was responsible for providing free medical care to the population, but lacked adequate funds to support these services.

Several initiatives stimulated by the continued contact with the POP staff from the United States led to innovative, creative changes in public health policy in the private sector, and a different system of delivering mental health services. The concept of a non-governmental organization (NGO) providing services previously under the domain of the government was novel. Once introduced, it stimulated the creative talent of many young Armenians, and spread to many areas of life. The NGOs were established in all sectors of society in such industries as construction, real estate, transportation, and in the mental health area.

In 1996, the Mental Health Foundation of Armenia (AMHF) was established as a NGO to encourage national legislation to draft mental health laws and to change the attitude of society towards mental health. A priority of the AMHF was to create a movement away from segregating and dehumanizing patients with mental illness, thus moving from institutional-based to community-based models. This goal currently is being accomplished by several programs receiving financial support from charitable organizations in Europe, the United Kingdom and the United States. In addition, the Legal Aid Center was established in Armenia to provide legal protection to mentally ill individuals. During the Soviet era, there was much abuse of psychiatric diagnosis for political purposes, and the practice of diagnosis continued to carry a cultural stigma.<sup>10</sup>

The AMHF organized a number of programs. It founded the first Day Center (day hospital) in Armenia, with the expressed goal of integrating hospitalized patients with mental illness back into the community through a process of rehabilitation. The Day Program is comprised of 20 clients at a day facility where they receive individual and group therapy, medication, art therapy, and occupational counseling. The average client stay is six months, and there currently is a one-year waiting list. A Youth Support Center also was established, with a telephone hot line operating six days per week, 12 hours per day. Counseling is available for young adults up to age 25 years, and it is advertised on radio, television, and in news releases. An Employment Program to aid patients with mental illness to seek gainful employment was founded as well. Furthermore, the AMHF organized workshops to disseminate information to former clients on methods to establish self-help groups, with the goal of reintegration of patients into the workforce.

The legislative efforts of AMHF are its most impressive accomplishment, since a group other than the government, reaching out to international agencies was non-existent during Soviet times. The AMHF organized and partici-

pated in partnership with the Armenian Health Ministry, in conferences on mental health legislation with the following groups: the World Health Organization; Mental Disability Rights International; United Nations Children Fund (UNICEF); and the American Bar Association. In addition, the AMHF has provided publications for the lay public through brochures on "How to Cope with Stress", "Youth and Mental Health", "Psychological Problems among Refugees", "Equal Educational Opportunities", "Self Help Series", and a translation of the American with Disabilities Act. A number of the activities of the AMHF are familiar functions supported by many who advocate mental health issues in the developed countries in the world. What is impressive and exciting, is the emergence of such activities in a country in which these activities were unthinkable only five years previously.

In November 1997 in Armenia, the Association of Child Psychiatrists and Psychologists (ACPP) was established as an NGO with the goal of promoting issues relevant to the mental health of children, including prevention and treatment. The members pursued these goals by conducting clinical research on child mental health, continuing education of the members of the association, further training for young colleagues, protection of the rights of the mentally ill and handicapped children, and participation in the international community of child mental health advocates.

Members of the ACPP conducted clinical research on adolescent depression and presented their findings at psychiatric conferences in Europe and the United States. At the annual meetings of the American Academy of Child and Adolescent Psychiatry in New York City in October 2000, the ACPP was recognized as an affiliate organization during the opening ceremonies. The Association of Child Psychiatrists and Psychologists members participated in a symposium on the effects of politics on child development, and research on adolescent depression. In October 2003, the ACPP continued its participation in the international psychiatric community by co-sponsoring the first Psychiatric Congress in Armenia in conjunction with Italian and Russian psychiatric organizations.

#### Continued Consultation and Training

In order to provide continued medical education to the local POP staff, three POP psychiatrists from the United States rotate to Armenia annually for 10 days to consult with the clinical staff at both Centers. During this 10-day period, each consultant addresses three areas: (1) overall treatment; (2) medication; and (3) administrative issues. The first area involves the supervision of client treatment by direct review of case notes, and interviewing clients together with their therapists. In Armenia, clients welcome the opportunity to be interviewed by American psychiatrists in order to have their treatment discussed. This consultation is enhanced further by clinical case conferences attended by all staff, along the lines of a clinical case presentation conference in any psychiatric residency training program.

The second area of focus is consultation with psychiatrists, medication administration to patients, and accurate

records with notation of reactions to medications. Many of the medications used at an outpatient psychiatric clinic in the United States are not available in Armenia; therefore, these medications are brought to Armenia as part of the continued service. The third area of consultation relates to administrative issues with the local health ministers and the physical facility, including supplies, furniture, upkeep, and uninterrupted heat, electricity, and water. However, the most important contribution of this consultation is the moral support to the local professionals and population that provides evidence that we have not forgotten, and that they are not alone.

Many publications on child development, principles of therapy, and diagnostic categories have been translated into the Armenian language, and have served as the nucleus of a library. The opportunity to receive further training in the United States has been an incentive for the staff at both Centers to learn English. To date, six psychiatrists and psychologists have come to the US for a period of one month to receive training in diagnostic and treatment methods. Because the POP has established professional ties with such organizations like the Association of Child Psychiatrists and the AMHF, the POP clinicians at both Centers are invited to and attend the local conferences in Yerevan.

### The World Trade Center Attack and Armenia

What does 11 September have to do with Armenia? I was scheduled to go to Armenia at the end of September 2001 to participate in the formal opening of the new facility in Spitak, the epicenter of the earthquake; we had worked in deplorable conditions for 11 years. I live and practice on the North Shore of Long Island, where hundreds of families lost one or sometimes two family members who worked in the World Trade Center. I felt obliged to cancel my plans and provide crisis intervention to traumatized families in my own area. The disaster that I had been working with in Armenia was a natural one; the disaster in my own community was human-made. All of the clinical experience that I developed while working in Armenia during the previous 12 years was now called upon at home. On 21 November 2001, I presented a paper entitled "From Spitak to New York: With Love" at the Yerevan State Medical Institute at a conference entitled "Natural and Man-Made Catastrophes and Their Psychosocial Sequellae", sponsored by the ACPP. The paper was about what we did and learned from 12 years of work in Spitak, and how these experiences had helped in New York. The crisis intervention discussed previously in this paper became the model for crisis intervention on Long Island, New York. A group of colleagues and I organized a series of presentations on disaster intervention. We first addressed our individual reactions to the World Trade Center attack, as we all were victims. The entire population in the New York metropolitan area was a victim of the World Trade Center attacks since proximity to the disaster impacts both the victim and health provider.

Most mental health clinicians had little experience in dealing with acute trauma, so all became students again.

After several scheduled conferences through the District Branch of the American Psychiatric Association and the Department of Psychiatry at North Shore University Hospital, we applied our expertise to provide help to the community. We advertised through the local newspapers, radio, school districts, and religious institutions, a schedule of community forums to discuss individuals' reactions to trauma. We went to school districts and met with teachers, helping them identify signs and symptoms of acute stress reaction and PTSD in the teachers themselves and their students. Also, psychiatric evaluation and treatment was available free of charge at North Shore University Hospital's Department of Psychiatry.

The treatment model developed in Armenia useful in applying brief, crises intervention, consisted of three to six sessions for affected individuals in New York. Exposure to the traumatic event is first and foremost. Parents and children viewed the collapse of the towers, where some of the children's parents worked, on television. Other working parents escaped from the lower floors of the Towers, and some saw one of the planes hit the Tower while on their way to work. We all were affected by reminders by seeing the smoldering smoke for weeks, signs of the American flag everywhere, national guardsman with rifles at tunnels and airports, or the sound of jet fighters overhead patrolling the skies of the New York metropolitan area. The adversities were many, including substantial economic hardship in the area, delays in transportation, relocation of thousands of residents and employees from the financial district in lower Manhattan, many of whom lived on Long Island. The developmental impact on children required attention in order to take into account their cognitive development and understanding of such an event and the meaning of the danger. Finally, the grief must be worked through, whether it is loss of a family member, material goods, or economic loss.

Following the initial disaster intervention to people who reached out for the free services available, the federal and local governments through the Substance Abuse and Mental Health Services Administration (SAMHSA) and Project Liberty provided funding for more systematic screening procedures and treatment interventions. These services are ongoing. There is optimism that much new information will be learned from the current clinical efforts, including research on trauma and therapeutic intervention.

Many people viewed the attack in terms such as "disbelief" and "the unthinkable". However, stress and human suffering require relief and comfort, whether in a far-away village tucked in the mountains of Armenia or the metropolis of New York City. In a strange set of circumstances, a method of providing comfort to disaster victims in Armenia appears to have proved very beneficial in providing comfort to the disaster victims in New York.

### Conclusion

This paper describes an unusual set of circumstances in which a group of mental health professionals provided crisis intervention to a population who suffered a terrible nat-

ural disaster of great magnitude. Everything that followed was atypical in the annals of disaster interventions. Usually, the team arrives, provides help, possibly trains the local professionals in psychotherapeutic methods, and leaves. In Armenia, the helpers in the mental health program from the United States were of Armenian nationality who spoke the Armenian language and had a deeper incentive to help. A larger disaster took place because the country chose to change from its Communist government to pursue a democratic republic, while waging a war and fighting an economic blockade. So the helpers stayed, and continued to participate in the evolution of a society.

These efforts have had a far-reaching impact on the delivery of mental health services, establishing NGOs to provide Western-type psychiatric treatment, and affect legislation for the protection of the mentally ill. The earthquake in Armenia provided an opportunity for a group of professionals to introduce a new system of delivering mental health services while helping victims in need of emotional support and comfort.

## References

1. Balakian P: *The Burning Tigris: The Armenian Genocide and America's Response*. New York: Harper Collins, 2003.
2. Goenjian AK, Najarian LM, Pynoos RS, et al: Post-traumatic stress reactions after single and double trauma. *Acta Psychiat Scand* 1994;90:214-221.
3. Goenjian AK, Najarian LM, Pynoos RS, et al: Post-traumatic stress disorder in elderly and younger adults after the earthquake in Armenia. *Am J Psychiat* 1994;151:895-901.
4. Goenjian AK, Pynoos RS, Steinberg AM, et al: Psychiatric comorbidity in children after the 1988 earthquake in Armenia. *J Am Acad Child Adolesc Psychiat* 1995;34:1174-1184.
5. Goenjian AK, Yehuda R, Pynoos RS: Basal cortisol dexamethasone suppression of cortisol and MHPG in adolescents after the 1988 earthquake in Armenia. *Am J Psychiat* 1996;153:929-934.
6. Najarian LM, Goenjian AK, Pelcovitz D: Relocation after a disaster: Post-traumatic stress disorder after the earthquake. *J Am Acad Child Adolesc Psychiat* 1996;35:374-383.
7. Najarian LM, Goenjian AK, Pelcovitz D: The effect of relocation after a natural disaster. *J Traum Stress* 2001;3:511-526.
8. Goenjian AK, Karayan I, Pynoos RS: Outcome of psychotherapy among early adolescents after trauma. *Am J Psychiat* 1997;154:536-542.
9. Personal Communication, Ministry of Health, Republic of Armenia, May 1992.
10. Bloch S, Reddaway P: *Psychiatric Terror: How Soviet Psychiatry Is Used to Suppress Dissent*. New York: Basic Books, 1972.