mented in Soviet Armenia after the 07 December 1988 Spitak earthquake. It presented:

1) The steps considered essential in the selection, preparation, and support of mental health workers for the relief work;
2) A method for screening and treating large numbers of students in their classrooms;
3) The rate of post-traumatic stress disorder and major depressive disorder of 532 victims clinically evaluated prior to entering treatment three to six months after the earthquake;
4) Clinical observations of significant psychological problems that may be overlooked in brief crisis-oriented psychotherapy; and
5) Multiple severe post-earthquake adversities that contributed to the psychological problems of the victims and delayed their recovery.

On 07 December 1988 at 11:41 hours, an earthquake with a magnitude of 6.9 (Richter Scale) struck Armenia Soviet Socialist Republic (population approximately 3.5 million). The tremor lasted about one minute. This was followed four minutes later by an aftershock with a magnitude of 5.8. The Spitak earthquake (named after the city closest to the epicenter of the earthquake) was one of the most devastating natural catastrophes of this century. It caused destruction of four major cities and 350 villages, killing at least 25,000 people according to Soviet estimates and as many as 100,000 according to European sources, and leaving 530,000 people homeless.

Initial screenings of therapists were used to identify and exclude applicants who lacked sufficient clinical experience, who were overly anxious, or expressed only research interest. Preparatory work included joint meetings of the prospective candidates with the therapists from the outreach program who previously had worked in the earthquake zone. Discussions included considerations of the psychological condition of the victims, therapeutic techniques, and transference/countertransference issues. Videotapes were viewed depicting the physical hardship of working and living in the earthquake zone and the condition of the victims. In addition to providing necessary information to the therapists, these meetings enhanced the sense of unity among them.

One major goal of the mental health program was to extend mental health support and treatment to children and their families. The most effective way of working with children in their schools was to meet with the head teachers and assist them with their stress-related problems, while concomitantly introducing them to our work. After a positive relationship was established, we approached the teachers in a group setting to discuss their problems as well as those of the students, having in mind that teachers may fail to recognize the extent of psychological problems of children. Finally, we worked with the students.

Evaluations of children in their schools were carried out to identify those who needed treatment, as well as to provide the students with psychological first-aid. For those children who were more disturbed, further therapy was provided in the form of individual or group therapy, sometimes by combining students from different classrooms. Approximately 75% of the total children treated in the schools received group therapy.

Of 532 individuals evaluated three to six months after the earthquake, 74% met criteria for Post-Traumatic Stress Disorder (PTSD) and 22% for major depressive disorder. Very few of these individuals had a history of premorbid psychiatric disorders.

The issues listed were considered to have an important impact on the course of the victims' evolving psychological problems: 1) Anger and Suppression of Feelings; 2) Separation Anxiety; 3) Avoidance and Passivity; 3) Concealing the Truth from Children; 4) Survival Guilt; 5) Helplessness and Martyrdom; 6) Alcohol Abuse; 7) Grief Resolution; 8) Suicide; 9) Jealousy and Envy; and 10) Distortions.

The persistence of post-traumatic stress symptoms after the earthquake was related to the unremitting multiple post-disaster adversities that exacerbated symptoms or interfered with their resolution. These adversities included recurrent aftershocks which reactivated fears, separation of family members, relocation of families, lack of housing and crowded living conditions, for example, many families lived in "domigs" (10 x 15 foot, make-shift, poorly insulated shacks), unemployment, disruption of community life and services, inadequacy of mental health services, and shortages of food, gasoline, and medical supplies due to the blockade by neighboring Azerbaijan. Finally, the undisposed debris and destroyed buildings served as constant reminders of the earthquake.

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The Los Angeles Earthquake of 1994

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At 04:31 hours on 17 January 1994, an earthquake measuring 6.7 (Richter Scale) with the epicenter located in Northridge, California, violently shook homes and businesses in the Los Angeles area. The quake took its toll ranging from the total collapse of some structures, to internal structural damage on others. The estimated damage totals were 57 people killed (22 by heart attack), approximately 10,000 injured, 25,000 people homeless, and more than [US]$20 billion dollars in property damage.

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Shortly after the quake, numerous emergency service workers and relief agencies started responding to the needs of the masses. World Relief, an international relief agency, and Christian Relief, a Des Moines-based multi-church coalition were present to offer assistance to churches in the area interested in helping quake victims

Christian Relief was formed in response to the Great Iowa 500 Year Flood that took place in July, 1993. The mission of both World Relief and Christian Relief is to provide local churches with guidance and training in the formation of a locally run coalition of churches. The purpose of the training is to provide physical, emotional, and spiritual support to disaster victims. *Physical needs* are met by offering: 1) Temporary Shelter; 2) Food, clothing, medicine, etc.; 3) Help with clean-up and repairs; 4) Furniture, lumber, appliances; etc. *Emotional needs* are met by offering: 1) Group stress debriefings; 2) One-on-one interventions; 3) Stress education; 4) Referrals for professional help; and 5) Assistance in dealing with the Federal Emergency Management Agency (FEMA), the American Red Cross, and other relief agencies. *Spiritual needs* are met by offering: 1) Prayer; 2) Spiritual/Biblical answers to questions; 3) Bibles; 4) Church repairs or relocation; and 5) Hope for the future.

The thoughts and fears experienced by the people in the quake area *during* the quake included: 1) Thought it was the "Big One"; 2) Thoughts of personal death; 3) Fear of injury or death to family or relatives; 4) Fear of heart attacks; and 5) Feeling totally out of control. *After* the quake, there were feelings of *fear and despair* due to: 1) Damaged or lost homes; 2) Loss of personal items; 3) Loss of work; 4) Extreme fatigue; 5) Aftershocks; 6) No quake insurance; 7) Having quake insurance, but a high deductible; and 7) Loss of family and friends to relocation or death.

It has been nine months since the quake and Northridge has lost over 20,000 residents to relocation. Those who continue to show signs of trauma are children, (usually ≤10 years of age and younger), the elderly, and those with pre-existing emotional conditions.

Appendix I: Christian Relief: After The Critical Incident (Educational Materials)

HAVING JUST EXPERIENCED THE SHOCK AND PAIN OF A CRITICAL INCIDENT, YOU MAY EXPERIENCE SOME NORMAL EMOTIONAL REACTIONS AS A RESULT OF THIS INCIDENT. **SOME COMMON AND NORMAL REACTIONS ARE:**

- Sadness/Apathy/Fear
- Feelings of Helplessness
- Loss of Appetite
- Headaches
- Agitation/Anger
- Gastro-Intestinal Symptoms
- Memory Loss
- Nightmares
- Sleep Disorders
- Inability To Concentrate
- Skin Disorders/Rashes
- Increased Use Of Alcohol
- Depression/Anxiety/Guilt
- Urge To Cry Or Hide
- Fatigue
- Difficulty Making Decisions

Many people involved in critical incidents will experience at least one of these reactions. Being aware of your feelings and acknowledging them is the first step towards feeling better.

1) Other things to do to help in your emotional recovery include: Talk about your experience: share your feelings rather than keeping them to yourself;
2) Don't be afraid to reach out for help if stress, anxiety, depression, or physical problems continue;
3) Keep a journal: write your way through those sleepless hours;
4) Take care of your health by getting physical exercise;
5) If possible, take time for yourself. Get away from home for a few hours by going to a movie or out for dinner, read a book, visit friends, get a hobby or activity which takes your mind away from work;
6) Pray. Have a conversation with God about your feelings and ask for His help and strength;
7) Do not depend upon alcohol or other drugs to manage stress;
8) Do not expect perfection from yourself or others; and
9) Go to a church worship service or continue to keep a regular routine of attending the church of your choice.

Public Health Problems After Large-Scale Disasters

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Ensuring the health of people over a long-term period after a disaster often is more difficult than dealing with the immediate consequences of the disaster. Broad and specific policies and procedures need to be developed well in advance of disasters, if these are to be implemented in a timely manner and the long-term health of the public is to be preserved.

We do not have such policies and procedures in place. It will be necessary to involve a wide range of public health professionals to devise the preventive strategies necessary for maintaining the physical and psychological well-being of populations who have been subjected to major disasters. For example, millions of people and thousands of scientists have been involved in the process of recovery

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