

FINAL REPORT

American Psychological Association Task Force on the Mental Health Response to the Oklahoma City Bombing

July 1997

Final Report

**American Psychological Association
Task Force on the Mental Health Response
to the Oklahoma City Bombing**

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I. INTRODUCTION

Psychological Impact of Terrorism

Over the past decade, Americans have become increasingly aware of terrorism. It is no longer something that happens in faraway places to people who seem foreign and unfamiliar to us. American lives have been touched by events such as the bombings of Pan Am Flight 103, the World Trade Center in New York City, the A.P. Murrah Federal Building in Oklahoma City, and Olympic Park in Atlanta. In all, 441 people died in these explosions. Terrorism has a presence in our lives that is unprecedented. Americans are no longer insulated from such destructive, devastating events. Our sense of security and our view of the world have been indelibly altered by acts of terrorism. With awareness of our nation's vulnerability, our fearfulness and vigilance have increased.

To be effective, psychological interventions in situations involving terrorism require a fundamental understanding of the traumatic elements of terror. The severity of the trauma is measured by, among other factors, the duration of the event, the number of people killed, the age of the victims, and the defenselessness of the victims. The traumatic impact is also magnified by the fact that acts of terrorism occur by human design. Terrorist acts are deliberate and planned, they are sudden and completely unpredictable, and they are aimed at people who are in a defenseless position. The great threat of terrorism is that anyone, anytime, anywhere can be a target. No one is immune; no one is protected.

The intent of terrorists is to demoralize their targets and to undermine their sense of confidence and security. When groups of people begin to think of themselves as potential victims, you have the ultimate hostage situation. The willingness to sacrifice innocent lives is the hallmark of the terrorists' ruthless commitment to their cause. They will use their power to vanquish their enemies through fear and intimidation. Victims are chosen precisely because they are helpless and defenseless. In this way, terrorists demonstrate the force and destructiveness they will employ to reach their goal.

A traumatic atmosphere is created when people feel that anyone can be a victim of terrorism. Killing people in the course of their day-to-day lives as they carry out the most ordinary of tasks creates a sense of vulnerability and fearfulness that

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may persist for a lifetime; it may also put a person at risk for long-term psychological difficulties. For victims and rescue workers who have experienced acts of terrorism, this atmosphere of trauma needs to be addressed with psychological interventions.

The basic law of terrorism is that even the smallest threat can ripple out to touch people a thousand miles away. The basic goal of psychological intervention is to understand the traumatic impact of terrorism and to use that understanding to minimize and contain this ripple effect within the individual, the community, and our nation.

The Oklahoma City Bombing

On April 19, 1995, a terrorist bomb destroyed the A.P. Murrah Federal Building in downtown Oklahoma City. This attack resulted in 168 deaths, including 19 children. More than 600 casualties have been reported. Terrorist assaults are rare in the United States. The number of lives lost and the amount of property destroyed in Oklahoma City represent a tragic milestone for this continent.

The characteristics of the disaster response to this tragedy were seldom seen before in this country. Local, state, and federal authorities worked side-by-side to rescue victims, gather evidence, and recover the dead. Interagency relief operations combined resources to provide comfort and compassion to the victims and their families and the rescue and relief workers.

This terrorist bombing had a significant psychological impact on the city, the state, and the nation. Psychological implications were considered during all phases of the rescue, recovery, and relief operations. Mental health providers were requested at all operational sites and in the community as well. Local mental health volunteers provided the core of the mental health team responding to the disaster relief efforts. Mental health personnel from elsewhere in the United States—representing disaster relief organizations, federal agencies, and employee assistance programs (EAPs) augmented the local mental health community with their disaster response expertise. The effectiveness and appropriateness of the mental health interventions are still being determined.

The APA Disaster Response Network

In December 1991, the American Psychological Association (APA) became the first national mental health organization to sign a Statement of Understanding with the American Red Cross (ARC) to provide pro bono mental health services to disaster victims and relief workers. Since then, the more than 2,000 doctoral-level psychologists who are part of the DRN have received training in disaster mental health and served as ARC volunteers in every major disaster. In addition, Disaster

Response Network (DRN) members provide pro bono mental health services for local disasters and other traumatic incidents.

Defining the Task Force

At the 1995 APA Convention, the APA Council of Representatives approved the following resolution regarding a review and revision of disaster response manuals and guidelines based on experiences in Oklahoma City:

The Council of Representatives will authorize and fund a task force of psychologists, appointed by the President of APA from a list submitted by the Practice Directorate's Disaster Response Network (DRN) and who have been involved in other disaster response efforts, and psychologists appointed by the Oklahoma Psychological Association who were involved in the response to the Oklahoma City bombing. The task force will review the mental health response to the Oklahoma City bombing and develop recommendations for mental health crisis intervention following terrorist and mass casualty disasters to be published by the task force. The report will conform to professional and ethical standards.

Council will authorize \$8,900 for this effort from Council discretionary funds, and \$1,100 in additional funding is requested from Board of Directors funds as appropriate. This estimate was determined in discussion with the staff of the Practice Directorate who work closely with the DRN. This amount would be applied to costs of travel to Oklahoma City. Members of the task force would view the bombing site and the health and mental health facilities that responded. Meetings will be arranged with state, local and federal officials, such as, but not limited to, representatives of the governor's and mayor's office, police and fire departments, emergency medical personnel, clergy, social service agencies, school teachers and administrators, survivors of the bombing, families of the deceased, and local psychologists and other mental health professionals. The task force will have a preliminary report for presentation to Council in February 1996 and a final report for presentation to Council in August 1996.

The Task Force met in Oklahoma City on December 15, 1995, and developed the following guidelines for the delivery of its product to the APA Council of Representatives.

Mission statement. To identify the lessons of the mental health response to the Oklahoma City bombing that will assist in future disaster response preparedness, particularly in mass casualty and terrorist incidents.

Customers. The product of this Task Force will be oriented to the disaster

response decision-makers as well as the disaster relief responders. The APA Practice Directorate's DRN is considered a primary customer of our product. The implications of our findings will be relevant to local, state and federal agencies as well as national and international disaster relief organizations.

The Product. The product of this Task Force will begin with the mandated reports to the APA Council of Representatives. Our activities will directly contribute to disaster response manuals and policies, especially in regards to terrorist and mass casualty incidents. The work group process will initiate a scholastic review of the mental health response and stimulate dissemination to the global literature.

Product Development

The APA Council of Representatives resolution identified specific information be included in the Task Force report. The Task Force assigned work groups of Oklahoma psychologists to pursue these areas and others relevant to the mental health response. The work group directors were chosen because of their participation in the disaster relief efforts and their specialization in the work group themes. Many of the work group directors appointed members to assist in data collection and report writing. These work groups included not only psychologists and other mental health professionals, but also members of the clergy and personnel from the fields of law enforcement, fire service, and emergency rescue. (See the end of this section for a list of Task Force and work group members.)

The Task Force augmented the work group information by interviewing nationally recognized disaster response authorities. The ARC, Federal Emergency Management Agency (FEMA), Department of Veterans Affairs National Center for Post-Traumatic Stress Disorder (PTSD), and other agency and independent experts were consulted during the development of this report.

A symposium on April 18, 1996, brought together the work groups in a forum that laid the base for integration of materials for the Task Force. The South Central Regional Medical Education Committee, Department of Veterans Affairs, hosted the symposium at the Oklahoma City Veterans Affairs Medical Center and made continuing education credits available to participants.

The Task Force members guided the activities of the work groups and participated as discussants during the symposium. Task Force members participated in commemorative activities on April 19, personally interacting with the community, survivors, rescue and relief workers, and children. The Task Force met the next day, April 20, to discuss the proceedings of the work groups and to outline the disaster response initiatives that the work groups had generated.

Several work group directors submitted position papers following the symposium that summarized the work group activities and articulated their recommendations. These documents were reviewed by the Task Force; they are a permanent collection of the Task Force archives and are being prepared for publication in professional journals.

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Task Force Members: Elinor Lottinville, Ph.D.
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Mental health and the media

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The American Psychological Association

APA represents more than 151,000 researchers, educators, clinicians, consultants, and students in the field of psychology. Through its divisions in 49 subfields of psychology and affiliations with 58 state, territorial and Canadian provincial associations, APA works to advance psychology as a science, as a profession, and as a means of promoting human welfare. The APA Practice Directorate, established to serve the more than 60,000 licensed member psychologists who deliver psychological services to consumers, pursues a variety of advocacy and educational initiatives on behalf of practicing psychologists and people with psychological health needs.

The American Red Cross

ARC is a nonprofit independent, humanitarian organization led by volunteers. It was chartered by a Congressional Charter in 1905 "to continue and carry on a system of national and international relief in time of peace and apply the same in mitigating the sufferings caused by pestilence, famine, fire, floods, and other great national calamities, and to devise and carry on measures for preventing the same." The ARC is a part of the International Red Cross and Red Crescent Movement, and adheres to the movement's Fundamental Principles of humanity, impartiality, neutrality, independence, voluntary service, unity, and universality.

The mission of ARC Disaster Services is to ensure nationwide disaster planning, preparedness, community disaster education, mitigation, and response that will provide the American people with quality services delivered in a uniform, consistent, and responsive manner. Each year, the ARC responds to more than

60,000 disasters-house or apartment fires (the majority of disasters), hurricanes, floods, earthquakes, tornadoes, hazardous materials spills, transportation accidents, explosions, and other natural and man-made disasters. The number of disasters has increased steadily over the past 5 years. In 1995, the ARC expended \$133.3 million in disaster relief. All ARC assistance is free of charge, made possible by the generous contribution of people's time, money, and skills. In 1996, *Money* magazine rated the ARC as the most effective charity in the United States in its use of donations.

II. SERVICES TO ADULT SURVIVORS AND VICTIMS' FAMILIES

A total of 842 persons were injured or killed as a direct result of the bombing in Oklahoma City. Of these, 167 persons were killed in the blast, including 19 children, most from a day care center located in the Murrah Federal Building. Ninety-eight (59%) of those killed in the blast and 140 (21%) of those injured were federal government employees. Three (2%) of those killed and 126 (19%) of those injured were state government employees. Of the 442 persons treated in area hospitals, 83 were admitted and the other 359 were treated and released from emergency rooms. An additional 233 individuals were treated in private physicians' offices, 462 people were left homeless.

Immediately following the blast, mental health professionals provided services at the bombing site, local hospitals, and the local chapter of the American Red Cross (ARC), where family members gathered to get information about their missing relatives or friends. Many were psychologists (over 70 local psychologists responded the first day) who were activated by the state Disaster Response Network (DRN) chair within an hour of the bombing.

Within 24 hours, centralized operation sites were established to address victim needs. These sites were (1) an ARC shelter for persons displaced from a nearby apartment complex that was severely damaged; (2) a family assistance center at St. Luke's United Methodist Church; and (3) a centralized death notification/family assistance center at First Christian Church operated by the Oklahoma State Office of the Chief Medical Examiner, which became known as the Compassion Center. This latter operation at the Compassion Center required the extensive use of mental health services and is described in depth below. Services to children are outlined in a separate section of this report.

The Compassion Center

The medical examiner's office, in association with members of the Oklahoma State Funeral Directors' Association as official representatives of the medical examiner's office, had prepared a planned response for a mass fatality incident and had pre-selected the First Christian Church as a site for providing services. This church, located 3 miles from downtown, became the site for the Compassion Center. It was a highly complex operation involving a multidisciplinary, multiagency cooperative effort, under the direction of the state medical examiner's office, to care for surviving families and to obtain reliable information to aid in the identification of the deceased. The medical examiner's representatives, the ARC, the Salvation Army, the Oklahoma County Sheriff's Department, the Oklahoma National Guard Military Police and Military Chaplains Service, Tinker Air Force Base, Department of Veterans Affairs Oklahoma Medical Center, Department of Veterans Affairs Emergency Management

Preparedness Office, and members of the local clergy cooperated to operate the center.

Mental health services were provided by mental health professionals serving as ARC volunteers. Almost 400 mental health professionals a day were involved over the course of the 18 days the center was in operation. These mental health services were organized into four primary functions (see figure 1): support services, family services, death notification, and staff mental health services for all volunteers in the center. Each mental health function was headed by a coordinator, who reported to an assistant officer. All coordinating staff had cellular phones to facilitate communication and responsive decision-making.

A commitment was made to use local mental health professionals and to place them in key coordinator positions. Interestingly, psychologists were in all lead or supervisory mental health positions. There was also a mental health agency liaison who worked closely with other agencies involved in setting up the transition to community mental health. Both the assistant officer and the agency liaison were recruited from the ARC Disaster Services Human Resources (DSHR), the ARC national disaster team, and had experience in responding to multiple mass casualty incidents.

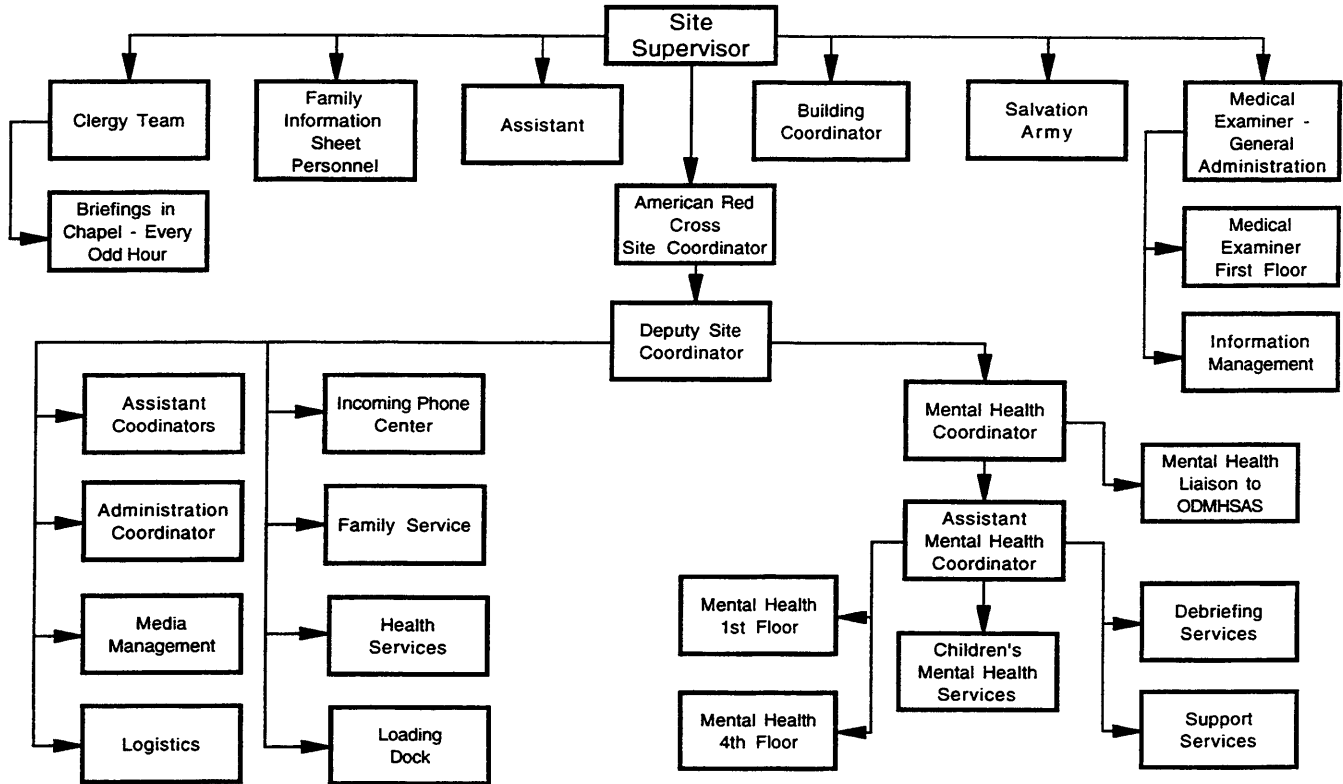
Support Services

Over the course of the operation, thousands of individuals called the Compassion Center or simply arrived there to offer assistance in providing mental health services; the situation created an overwhelming logistical problem. Consequently, support services were quickly developed to implement a system for credentialing mental health professionals; documenting and screening them for experience, specialized training, and skills; scheduling; and preventing unauthorized persons from entering the center. A centralized database was created to organize this information and develop daily schedules. Unfortunately, the processing of mental health volunteers occurred at the center, creating a logistical nightmare.

Family Services

Hundreds of family members, relatives, and friends gathered at the Compassion Center at First Christian Church to wait for news and to provide detailed descriptions, photographs, and medical/dental records of people missing. Mental health professionals were available to help families in any way and to serve as a link to the medical examiner's office; to provide emotional support, and to offer practical guidance such as encouraging people to eat, sleep, and talk with friends and relatives. It should be noted that not all surviving family members chose to utilize the Compassion Center.

Figure 1
Organizational Chart
Oklahoma City Community
Family Assistance Center
(Compassion Center)



A family room was created to provide a safe environment that met the physical and emotional needs of families, serve as an information center, and protect families from intrusions from the press and secondary re-traumatization. Regular briefings for the families, conducted by both the medical examiner's office and the liaison with the Governor's office, provided information and updates about the rescue and recovery effort. There were areas in the family room where people could receive messages, meals, and refreshments, and families could make private phone calls using donated long-distance service. Cellular phones were also available. An area was also developed where the special needs of children could be addressed (see section on Services to Children). A mental health professional was assigned to each family checking into the Compassion Center. The counselors in the family room were referred to as "escort" rather than "therapist/counselor."

Death Notification Teams

The death notification teams were headed by two representatives from the medical examiner's office and included a mental health professional and a member of the clergy. Given the stressful nature of providing death notifications, doctoral level psychologists and psychiatrists, or clinicians with extensive counseling experience in death, grief, and bereavement were selected to participate as members of the death notification teams. Each shift lasted 3 hours and began with a pre-briefing. Defusings were required for the teams after each death notification. Most of the mental health professionals on the death notification teams were psychologists, and their role was to provide support and practical assistance to the families. One of the difficulties for team members was the long hours spent waiting to do notifications because of the delays in body recovery and positive identifications. Mental health professionals on the teams were also used to screen all the literature donated to the center for families; they determined which were appropriate for those waiting in the family room and which should be saved for use at a later date.

Stress Management and Staff Mental Health

A separate mental health staff provided mental health/stress management services for staff at the center. Professionals with specialized training in critical incident stress management (CISM) and disaster mental health were recruited to staff this function. At first it was not possible to conduct CISM due to the limited number of professionals available with this type of expertise. A week after the bombing, additional ARC DSHR staff were brought in from outside the area, allowing for more consistent and dependable staffing of this function. Defusings were then made available every hour from noon until 10:00 p.m. All Compassion Center staff were required to participate in exit defusings each day after completing a shift. Additionally, stress management staff provided education, pamphlets, and handouts to staff on stress reduction exercises, coping strategies, and individual stress management.

Members of the stress management team were also available for trouble-shooting, consulting with administrative staff, serving as backup to the death notification debriefing team, and addressing staff difficulties on an individual basis. Nevertheless, there continued to be a shortage of mental health professionals with specialized training in both CISM and disaster mental health.

Note that although rescue and recovery teams and some other emergency responders refer to these duties as "stress management," these duties are referred to as "staff mental health" within the ARC.

Recommendations

1. *Adequate numbers of mental health professionals, reasonable shifts.* The operation of death notification/family assistance centers following mass casualty incidents are often complex, multiagency operations in which large numbers of volunteer mental health professionals are called on to staff and provide services over long hours and extended periods of time. Although the immediate aftermath of a mass casualty incident may require long hours, adequate staff can be recruited either locally or through the ARC DSHR system to avoid continuing the long hours over extended periods. Shifts need to be normalized as quickly as possible to prevent unnecessary and potentially damaging stress for the mental health team.

2. *Increased numbers of mental health professionals well-trained in disaster mental health.* The staffing and operation of these centers require mental health professionals with specialized experience and training, including disaster mental health, ARC procedures, critical incident stress management, death notification, traumatic stress, and grief. There is a need for states to actively recruit qualified mental health professionals and to provide additional training in the various components of disaster mental health.

3. *Use of mass casualty-experienced supervisory personnel/use of shadow team to train local supervisory personnel.* If a mass casualty incident occurs in a state with less experienced or insufficient numbers of mental health professionals who are organized, trained, and ready to respond, it is recommended that more experienced professionals from the ARC DSHR be quickly recruited to assist local teams. Mass casualty incidents are unique and even mental health teams with substantial disaster experience may benefit from working with experienced mass casualty ARC DSHR staff. These experienced leaders can formally mentor a "shadow team" of local mental health professionals, working side by side with the DSHR personnel in the supervisory positions to prepare the local professionals better for subsequent incidents. Similarly, experienced state DRN chairs can offer to mentor a less experienced DRN state chair.

4. *Choice of compassion center site.* Several participating agencies recommended that a nonreligious site be selected for death notification/family assistance centers; these operations can be lengthy and therefore disruptive to the congregation. Possible sites are a university, hotel, civic center, or other neutral site that has enough available room and can be secured.

5. *Need for security at compassion center.* Disaster plans need to include provisions for appropriate law enforcement procedures that maintain a membrane of security against media intrusion into sensitive areas at the center where recovering victims and grieving family members congregate. Unarmed, nonlaw enforcement "gatekeepers" are not adequate for deterring the aggressive and persistent efforts of individuals and the national media typical in mass casualty events. It needs to be noted, however, that many national media representatives conduct themselves in a professional and respectful manner. This recommendation is not intended to impugn the professionalism of all media personnel.

6. *Identification of mental health professionals.* Mental health professionals providing professional services need to be identified as mental health professionals. For years there have been well-intentioned efforts to identify disaster mental health professionals as something other than what they are, for example as "escorts." Three significant problems arise with this approach.

First it reinforces any stigma attached to receiving mental health services, instead of educating the public. As long as mental health professionals themselves feel that it stigmatizes individuals to speak with mental health professionals, the stigma will certainly remain. In other mass casualty incidents such as the crash of Flight 800, all disaster mental health personnel were clearly identified, and large numbers of people either accepted or requested such services.

Second, recipients of mental health services have the ethical (and, in some states, legal) right to know that the person to whom they are speaking is a mental health professional. If they do not want assistance, they can decline the services. People have the right to refuse mental health services. Would anyone accept the notion that a physician should operate without proper identification, slipping medications to people without their knowledge? How much resentment might be felt by a client who has been working with an "escort" for days when he or she discovers that the individual is a mental health professional? Or, if people identified as "escorts" let all their clients know that they are mental health professionals, how much does the "escort" label destigmatize mental health services?

Third, people who might seek or request mental health services do not realize that mental health resources are immediately available to them. It is very common for disaster mental health professionals on duty to have someone approach them for help after seeing their identification as a member of a mental health team.

7. *Effective delivery of critical incident stress management/staff mental health*

to all responders. It is essential that stress management services/staff mental health be provided to all volunteer staff, including mental health professionals providing services to victims and their families after a mass casualty or large-scale terrorist incident. It is recommended that more disaster mental health training be devoted to CISM, and that these individuals be identified within the state DRN and in the ARC DSHR so that they can be readily recruited to fill this function. Outside experienced mental health professionals are often needed for this function because local mental health professionals are often first responders and may themselves be too deeply involved in the incident to serve in this capacity. It is also critical to select mental health professionals who are comfortable in providing staff mental health; some mental health professionals are only interested in working with victims and their families. It is also recognized that there is a greater need for mental health professionals as CISM personnel in mass casualty incidents than in some other critical incidents, because of the increased level of traumatic stress and associated clinical symptomatology.

8. *Understanding the chain of command, the role of the mental health professional, and the operational changes that take place daily.* It is important to educate and orient mental health professionals about the chain of command and the role of mental health in the organizational chart, particularly in multiagency operations. It is particularly critical that mental health professionals understand their role in a death notification/family assistance operation. It is essential, therefore, that appropriate operational trainings be conducted for workers on their first shift, and that briefings be conducted for all personnel at the beginning of each shift to update them on the rapidly changing operation.

9. *Collaboration between community mental health and the disaster response.* It is critical for local community mental health agencies to begin placing some staff members trained in disaster mental health to work alongside the ARC mental health staff at all sites serving victims as soon as possible. (In the aftermath of Flight 800, city, state, and county community mental health personnel worked as members of the response team starting the first evening and continuing throughout the operation.) This procedure will allow a more seamless transition from the emergency response to immediate and long-term care. It also facilitates a greater awareness and acceptance of mental health services.

10. *Training and selection of mental health personnel for death notification teams.* Mass casualty incidents need mental health staff with specialized training in death notification procedures and protocols. Although ARC mental health professionals never provide the actual death notification, they are often asked to participate on death notification teams or provide education and training to team members. Many mental health professionals have not had experience or prior training that prepares them specifically for this difficult and emotionally stressful work.

Mothers Against Drunk Driving (MADD) has developed a death notification training program, funded by the U.S. Department of Justice, for mental health professionals, victims, law enforcement and medical professionals, the clergy, and funeral directors. This kind of training should be made available to DRN state coordinators and DRN members.

Only professionals with the highest level of expertise and training should be allowed to participate on death notification teams. Psychologists, particularly those within the DRN, are often the best trained or most experienced professionals within the community to perform this function. It needs to be noted, however, that there are also experienced grief counselors in other fields of mental health who may be valuable members of death notification teams.

Specialized training is not a sufficient qualification for participating on death notification teams, however. These mental health professionals also need an excellent ability to communicate empathy, warmth, and sensitivity, and an ability to be comfortable with merely being present for the family.

11. *Selection of their personnel for death notification teams.* Careful consideration should be given by both disaster mental health leadership and other nonmental health agencies before assigning personnel to death notification teams who have participated in the initial rescue and recovery efforts in any capacity at the site of the incident.

12. *Long-term care.* The intense psychological impact of mass casualty and terrorist events needs to be better recognized and handled. There is a need for well-planned and adequately funded long-term disaster mental health services. State and federal authorities, with the help of the American Red Cross, have made significant progress in preparing for the immediate aftermath of a disaster, but substantial efforts are still needed to provide for the long-term needs of those affected.

The Robert T. Stafford Disaster Relief and Emergency Act, the 1988 federal law authorizing Federal Emergency Management Agency (FEMA)/Center for Mental Health Services (CMHS)-funded crisis intervention grants, limits the use of these funds to individuals with short-term needs. A new law may be necessary to authorize the provision of long-term services to those who need such services as a result of devastating disasters; state mental health programs seldom have the capacity to handle the long-term needs of people who have been through catastrophic and mass casualty disasters.

13. *Links between research and services.* The scientist/practitioner model, which lies at the heart of much of psychology, recognizes the need for linkage between research and the provision of services. Needs assessment studies provide

information on the numbers and locations of people needing services and the nature of the services they may require. Program evaluation provides information regarding the quality of services provided. Treatment research has the capacity to evaluate the relative merits of different techniques for the provision of services. These types of research are critical to the service provider to ensure that those in need receive the most effective treatment possible in an efficient manner.

The FEMA/CMHS-funded crisis intervention programs need to communicate actively with researchers studying the aftermath of the disasters that necessitated the crisis intervention program, learning from researchers in the immediacy of the moment, rather than relying solely on studies of previous incidents. Ideally, the Stafford Act, would be modified to fund the critical work of the researchers, allowing science and practice to work together as a refined team and maximizing the value obtained for the funds expended in these efforts.

III. SERVICES TO CHILDREN

The loss of so many children and the anguish of their families underscored the horror of the Oklahoma City terrorist bombing. If there is a part darker than any other of the Oklahoma tragedy, it lies in the wreckage of the federal building day care center. If the random and senseless destruction of a government building shows a nation how vulnerable it is, the random murder of innocent children shows how deep the pain can be.

Statistics provide a glimpse of just how many children's lives were forever marked by this tragedy. Nineteen children died in the explosion (15 children in the Murrah Federal Building day care center and 4 children visiting the building with relatives). Only 5 children in the day care center survived the blast, but all were injured and hospitalized. A YMCA day care center adjacent to the Murrah building was also severely damaged, injuring 52 children and 9 of the day care staff. Thirty children were orphaned, and 219 children lost one parent. Many more children, both locally and across the nation, were indirectly affected by this event due to the extensive media coverage.

The immediate mental health response identified three major groups of children who would need targeted services: (1) children of families at the Compassion Center with missing relatives; (2) children at the YMCA and other local day care facilities; and (3) children in the Oklahoma City school system. The responses to each of these target groups is outlined below.

Compassion Center

Many children accompanied their families to the Compassion Center (see Adult Survivors and Victims' Families section of this report). The need for a play area for the children was immediately recognized. Initially, this area was separated from the adults, which caused distress in both some adults and some children. Within 24 hours, the children's area was relocated within the general family room. The activities in the children's area were coordinated by a psychologist and staffed by mental health professionals with expertise in working with children. Activities were developed to provide structure, distraction, and opportunities to be physically active. Materials were also provided to help children express themselves through art and play. Certified pet-therapy animals were also used, to the benefit and delight of both the children and adults.

Most of the formal death notifications were conducted at the Compassion Center. Within 48 hours, a need for a child mental health specialist on the death notification teams was recognized. Following the death notification, parents and other family members often had questions about what to tell their children, how children at

various ages might react, and how to manage their own grief in front of their children. Questions related to funerals were also common. Given these concerns, a child mental health specialist was present on all death notification teams.

YMCA

To address the needs of the YMCA children, teams of mental health professionals from the University of Oklahoma Health Sciences Center, with specialized training in children's issues, were deployed the day after the bombing to the new temporary location of the YMCA day care center. These mental health teams remained on site at the YMCA on a daily basis and provided debriefings, consultations, and education for staff, parents, and the children (on both group and individual bases).

Given both the intensity and severity of the emotional reactions observed in the YMCA children (many of whom showed characteristics of posttraumatic stress disorder), plus the concerns of parents and staff, the mental health services for the YMCA children continued over a period of many months. These services included debriefings, education and consultation with parents, therapeutic play activities, and individual play therapy sessions with the preschool children. Team members were available daily for three months after the bombing and two to three times a week subsequently. All families were offered comprehensive trauma assessments and clinical intervention services as needed.

Oklahoma City Schools

Most of the mental health services to the Oklahoma City schools were formally implemented in November 1995. The school administration, in conjunction with the U.S. Department of Education, convened a national assessment team to help develop crisis counseling services for the school system. The outcome, Project Heartland, was a collaborative effort between the Oklahoma City public school system and the Oklahoma Department of Mental Health and Substance Abuse's Federal Emergency Management Agency (FEMA)/Center for Mental Health Services (CMHS)-funded crisis counseling program, to provide services to children in the schools.

All school-related intervention services were provided by the Oklahoma City school district as a subcontractor to Project Heartland. The services under this contract ended in the Fall of 1996. The schools reported that, within approximately nine months, they had logged 10,000 contact hours with children; 691 of the children had a direct impact from the disaster and 1653 were indirectly affected. The Project Heartland contract provided guidelines for the contracted school counselors, allowing no more than 10 individual sessions but permitting unlimited group sessions. The major emphasis was on supportive counseling and crisis intervention as mandated by

provided to the schools, University of Oklahoma Health Sciences Center personnel are providing the necessary intervention in the Oklahoma City public schools.

There is concern within the community about whether the long-term emotional needs of children are being adequately addressed. At the time of this report, the available data suggest that fewer than 7% of children initially seen in the community crisis counseling program were referred for immediate and/or long-term mental health services. Although services for both immediate and long-term intervention were available, due to transportation issues, parents' unwillingness to follow through, and other factors, it is unknown how many children were actually seen. The early identification of children at risk and referral to the appropriate level of care (crisis intervention versus immediate/long-term psychological intervention) is an important issue to be addressed by all agencies involved in serving children after mass casualty events and other types of disasters.

Helping the Children Heal Hotline

One component of services to children in the aftermath of the bombing did not take place in Oklahoma City. The ARC reported that local chapters around the country were receiving calls from parents asking how to help their children deal with their fears after seeing television scenes of the bodies of young children being carried from the rubble, and experiencing the general intense focus of the national media coverage on the children's deaths. Parents reported that their children had lost a sense of safety.

In response to these concerns, the ARC, APA, AT&T, and the University of South Dakota Disaster Mental Health Institute cosponsored a nationwide telephone hotline to help children impacted by the bombing of the Murrah Building. This hotline was the first of its kind to be conducted by the ARC. It was located on the campus of the University of South Dakota. At the start, two 30-minute television programs were broadcast during the school day to public broadcasting stations nationwide over the Instructional Television Network. One was targeted to elementary school children, the other to middle school and high school students. More than 300 calls were received from 37 states. The hotline was open 24 hours a day for five days.

Recommendations

1. *Presence of child specialists at compassion centers and availability to death notification teams.* It is recommended that child mental health specialists be available to death notification teams and on site at compassion centers often established following mass casualty events. Appropriate educational brochures for parents also should be available. (A bibliography is available from the Emergency Services and Disaster Relief Branch, Center for Mental Health Services Clearinghouse, 800-789-

FEMA guidelines. Children in the schools requiring further or more intensive services were to be referred to outside community agencies. As of April 19, 1996, it was reported to the Task Force that of the nearly 2500 children seen by school counselors funded by Project Heartland, only 169 children had been referred for outside intervention services.

The public school administration also consulted with mental health professionals from the University of Oklahoma Health Sciences Center and with national trauma and disaster experts to develop and conduct an initial needs assessment. In June 1995, approximately 4,000 middle and high school students were assessed through a paper/pencil survey. A similar survey of approximately 6,000 elementary school children (grades 3-5) was completed in the winter of 1995-1996. In spite of a recommendation by the school administration, approximately 25 of the nearly 60 elementary schools chose not to participate in the needs assessment. The results indicated that nearly 35% of the school children reported knowing someone who was killed or injured in the bombing. An additional 20% reported having a family member killed or injured, including relatives beyond the immediate family. Even if the numbers are over reported by the children, the data indicate the level of impact the children perceived. Of the children surveyed, 70% indicated some Post-Traumatic Stress Disorder (PTSD) symptoms, with 5% of the scores clinically elevated. Sixty-two percent of the children reported never having seen a counselor to aid with coping. These results were shared with both the school administration and the Oklahoma Department of Mental Health and Substance Abuse staff who operate Project Heartland. The findings of this initial survey underscore that a large percentage of Oklahoma City children were intensively affected.

In addition to the needs assessment, "listening groups" were conducted by members of the Department of Psychiatry and Behavioral Sciences at the Oklahoma University Health Sciences Center, within 28 schools (grades 1-12) in Oklahoma City to assess the psychological needs of children qualitatively. These groups consisted of approximately 6,000 children. It is important to note here that this assessment identified 500 children at risk for emotional difficulties. This information was shared with Project Heartland school counselors.

A grant was provided by the Children's Hospital Foundation (CHF) of Oklahoma City to psychologists at the University of Oklahoma Health Sciences Center to provide services for children impacted by the bombing. The services were offered free of charge. In addition to treatment services, assessments to determine the impact of the trauma were also available. This information was shared with Project Heartland on a regular basis. Less than two dozen referrals were made to this program for long-term services for children. In the fall of 1996, funds were also made available for mental health professionals to provide consultation to Project Heartland counselors. Services through the CHF grant continue. Since the close of the FEMA-funded services

2647).

2. *Involvement of local child mental health specialists in planning and response.* Most communities have psychologists with specialized training in child-related issues. Consultation with experts from other states and national agencies is extremely important, but local professionals should be included in developing disaster mental health plans, and in all aspects of assessment and service delivery planning for children's services, and program evaluation. In this way, as external experts depart, local specialists will be available to serve as consultants, providers, trainers, and supervisors of other local mental health professionals, making for a seamless flow of long-term mental health services and expertise to the children in need.

3. *Preparation of school disaster mental health plans.* Many schools have formed disaster mental health plans and response teams to provide crisis counseling services following a relevant incident. Where these plans do not exist, it is important that schools develop them. Where they do exist, it is important that the plans include a mass-casualty or large-scale terrorist event component. Clearly, large numbers of children are both directly and indirectly affected by such incidents, as seen by the impact of the Oklahoma City bombing. Schools are often concerned about unfamiliar mental health professionals coming into the schools, particularly at a time of crisis. DRN members need to contact local school districts to explain how they can help and to establish a mutual aid agreement, prior to the incident, that would allow them to provide needed assistance to local school personnel and school counselors. It would assist the schools in the immediate delivery of crisis counseling services, when needed. An excellent free videotape, prepared by FEMA entitled *Children and Trauma: The School's Response* (see resource section), is available to schools.

4. *Crisis counseling grants.* FEMA/CMHS-funded Crisis Counseling Grants need to make appropriate provisions for services to children both in the schools and in the community at large. Staff should not only include paraprofessionals, but also child specialists skilled in both the planning and execution of the programs.

Schools play a critical role in helping children recover from disaster and community-wide trauma. Mental health clinicians can work with entire classrooms at a time, individual students, parents, school officials, teachers, and school counselors (see resource section for suggested materials). Teachers and counselors can be provided with brief training on how to conduct classroom exercises and how to identify children that should be evaluated for the need for further professional mental health services. Several types of interventions have been used in the schools, although few have been empirically validated. These interventions need to be tailored to the type of disaster, age of the child, have clearly established goals, involve parents, and be well-designed to prevent intensifying children's fears or feelings of helplessness and vulnerability. Some of these interventions include: (1) discussion of disaster-related

events through verbal and nonverbal activities, (2) debriefing groups using both art and verbal expression, (3) informal "drop-in" groups and/or educational meetings, and forums for parents, (4) provision of psychoeducational information regarding normal and prolonged stress response syndromes, (5) administrative Information and Teacher's Inservice Meetings, and (6) early identification of children at-risk and referral to appropriate level of care.

5. *Long-term care.* The exceptional psychological impact on children of mass casualty and terrorist events needs to be better recognized and provided for. The deaths of children increase the incident's impact on children and adults alike. There is a need for well-planned, adequately funded long-term developmentally appropriate disaster mental health services for children. With the help of the ARC, state and federal authorities are making progress in preparing to assist children in the immediate aftermath of disaster incidents. Substantial efforts are still needed, however, to provide for the long-term needs of those children affected.

The Robert T. Stafford Disaster Relief and Emergency Act, the federal law authorizing FEMA/CMHS-funded crisis intervention grants, limits the use of these funds to individuals with short-term needs. A new law may be necessary to authorize the provision of long-term services to those who need such services as a result of devastating disasters; state mental health programs seldom have the capacity to handle the long-term needs of people who have been through catastrophic and mass casualty disasters.

6. *Links between research and services.* The scientist/practitioner model, which lies at the heart of much of psychology, recognizes the need for linkage between research and the provision of services. Needs assessment studies provide information on the numbers and locations of people needing services and the nature of the services they may require. Program evaluation provides information regarding the quality of services provided. Treatment research has the capacity to evaluate the relative merits of different techniques for the provision of services. These types of research are critical to the service provider to ensure that those in need receive the most effective treatment possible in an efficient manner.

The FEMA/CMHS-funded crisis intervention programs need to communicate actively with researchers studying the aftermath of the disasters that necessitated the crisis intervention program, learning from researchers in the immediacy of the moment, rather than relying solely on studies of previous incidents. Ideally, the Stafford Act, would be modified to fund the critical work of the researchers, allowing science and practice to work together as a refined team and maximizing the value obtained for the funds expended in these efforts.

IV. SERVICES TO FIRST RESPONSE TEAMS AND RESCUE AND RECOVERY WORKERS

Research and experience with emergency personnel (e.g., fire fighters, paramedics, police officers, and disaster workers) indicate that these helpers are exposed to stressors that can produce an array of psychological, social, and physical reactions and difficulties. We also know that the most stressful incidents for disaster workers and emergency personnel are those involving large loss of life, particularly loss of children's lives, unsuccessful attempts to rescue survivors, death of a law enforcement or other first responder, excessive media attention, and a protracted and difficult recovery effort in dangerous surroundings. Clearly these were all factors in the painstaking, dangerous, and heartbreaking job of the rescue and recovery workers in response to the Oklahoma City bombing. These stress factors are often associated with a large-scale terrorist attack or mass casualty event.

It would be impossible to put an exact number on the people that assisted with the recovery effort over the 17 days. However, records indicate that, excluding federal agencies, 115 law enforcement agencies (74 police departments, 33 sheriff's offices and 8 state agencies) sent 2,305 officers. Fifty-seven fire departments sent 1,894 personnel, and 75 ambulance services sent 112 units, 5 helicopters/planes, and 552 medics. In addition, seven EMS services on standby were not utilized. Eleven Urban Search and Rescue teams responded with 616 personnel. It is apparent from these numbers that the Oklahoma City bombing evoked a large-scale response involving multiple agencies from the local, state, and federal levels.

Within an hour of the bombing, the Critical Incident Stress Management Network of Oklahoma (CISMNO) was at the site. CISMNO is a coalition of emergency services and mental health professionals throughout Oklahoma trained in critical incident stress management (CISM). In the greater Oklahoma City area, CISMNO is made up of members from Oklahoma City Police Department, Oklahoma City Fire Department, Mercy EMS, Norman Police Department, Oklahoma County American Red Cross, as well as local CISM-trained mental health professionals. Although the initial operations were informal, by midnight of the first day a formalized response was in place that included access, cooperation, and endorsement from Incident Command. An office building three blocks from the federal building, and with easy access to both "ground zero" and the Command Post, became home to the CISMNO. The Incident Commander from the Oklahoma City Fire Chief mandated that all personnel report to CISMNO following each shift. On the second day, CISM services became a part of the Incident Command System, thus allowing CISMNO to function not only for the Oklahoma City Fire Department, but also for all personnel on site. The CISM center was open 24 hours a day for the entire 17 days of the rescue and recovery effort.

In less than 24 hours, CISMNO teams from Tulsa Fire Department and the

Cherokee Nation EMS (Talequah, Oklahoma) responded. Some came to the site before the formal invitation could be extended. By noon the next day, CISM-trained personnel from Louisiana came to Oklahoma City by the Oklahoma City Fire Department invitation to assist CISMNO. On the third day, CISM teams from Iowa arrived in Oklahoma City to assist.

CISM services included briefings for recovery personnel prior to their shifts and defusings or demobilizations after their shifts. The briefings covered safety and health issues, identification changes, and what to expect during that shift. Pre-briefing information was adjusted depending on previous exit defusings. Defusings were utilized for groups involved in recovering bodies, and demobilizations were conducted with groups moving rubble. Massage therapists, chiropractors, food, drinks, dry clothing, and a phone bank for rescue workers to call anywhere free of charge were available. At the close of the federal building site, a memorial service was organized to recognize the efforts of rescue workers and agencies involved in the rescue and recovery effort. The CISM command personnel met several times each day to evaluate operations, assess needs, and make necessary adjustments in the overall CISM response.

On April 28, 1995, the U.S. Public Health Service granted a sole-service contract to the Department of Pediatrics, University of Oklahoma Health Sciences Center (CISMNO was not an incorporated agency at that time) to provide debriefing and follow-up services for rescue and recovery personnel from Oklahoma. The funding was used to reimburse travel, lodging, and per diem expenses of the mutual-aid CISM teams brought to Oklahoma after the site was closed. In addition, office equipment, rental vans, and salaries for two full-time administrative positions were funded. It was the first time the federal government funded a nongovernmental agency to provide CISM services following a disaster.

Reports indicate CISMNO defused over 6500 individuals at the CISM Center. CISMNO coordinated approximately 250 debriefings for over 2800 personnel between May 6, 1995, and September 15, 1995. CISMNO recruited 170 debriefers from 10 different states. All out-of-state CISM teams were screened before being deployed in Oklahoma. No debriefing team stayed longer than 1 week and most spent 2 to 4 days in Oklahoma. Several CISM teams involved in the active recovery phase returned to Oklahoma to assist with the debriefing efforts.

The Oklahoma City Fire Department and Oklahoma City Police Department required post-incident debriefing for all their personnel. Other Oklahoma agencies assisting with the rescue and recovery efforts were also invited to debriefing services; however, not all agencies accepted. In terms of the stress management services provided to police personnel, Cops Helping Alleviate Police Problems (CHAPPs) worked with CISMNO to bring in CISM trained teams from outside Oklahoma City to

debrief their employees. Using nine teams, they conducted 97 debriefing sessions, debriefing 1159 employees (87%) from May 15 to July 7, 1995. Additional arrangements were made for short-term counseling, crisis counseling, and crisis screening at either no cost or very low cost to the employee. CHAPPs has determined that it cost the City of Oklahoma approximately \$45 for each police employee debriefing. An increase in divorce and alcohol consumption is suggested in the CHAPPs report, although the extent of these problems has not been formally documented to date.

Overall, the extent and scope of the mental health/stress management services provided by CISMNO and supported by ARC Disaster Mental Health Services function were quite extensive and impressive. Vast resources of personnel, supplies, support, and financial assistance were made available, resulting in one of the most exemplary critical-incident, stress-management response to first responders and emergency personnel to date. However, the long-term impact of such events on first response and rescue and recovery teams is yet unknown, and the success of CISM techniques in ameliorating those effects also requires more scrutiny.

Recommendations

1. Mandatory CISM/mental health services for first response teams.

CISM/Mental Health Services for First Response Teams need to be mandatory in all terrorist and mass casualty incidents. Although this recommendation may seem obvious, implementing a response of this magnitude requires a well-organized, coordinated, and formalized plan with endorsement and commitment from the highest levels of authority of each of the first response teams (e.g., fire, law enforcement, EMS) and rescue and recovery teams involved; it will also require financial assistance. To respond effectively, state CISM teams need to be organized and established before an incident occurs.

2. Inclusion of mental health and CISM in incident command protocols. Mental health and CISM services should be clearly identified in Incident Command protocols. This will ensure that mental health personnel are notified and available as soon as the Incident Command System (ICS) is activated and that logistics will be available to facilitate tasks. It will also provide a central location for command decisions regarding mental health. Isaac (1996) has developed a model to activate mental health services in a disaster using a law enforcement perspective; it may be helpful in establishing such relationships. However, it is recommended that whatever model is used for providing mental health care for first response, search, rescue, and recovery teams, local emergency management should include mental health and CISM in its Incident Command System protocols. Mental health and CISM need to be involved in disaster training exercises themselves, and need to provide training in psychological responses to disasters for first response, search, rescue, and recovery teams in the community.

It is important to have a comprehensive mental health approach to stress management of emergency personnel. Mental health professionals should be used by ICS to provide ongoing consultation to agencies involved, monitor stress in personnel, and provide other types of stress management in addition to debriefings.

3. *Need for more CISM-trained mental health professionals.* It is particularly important to have a sufficient number of local mental health professionals trained in CISM and familiar with their first response teams. The response to the Oklahoma City bombing lacked enough mental health professionals trained in CISM. Many of the mental health professionals with this specialized training were needed to address the mental health needs of survivors and families of victims. Having the same providers designated for two separate functions does not work. Local emergency personnel agencies, such as fire and police, are often reluctant to use outside mental health professionals due to lack of familiarity with and trust of them. This situation makes it difficult for outside mental health professionals to gain access and acceptance (although it can be done, and when there are inadequate local resources, it needs to be done). The optimum situation recommended is for each community to develop a large cadre of volunteer mental health professionals, trained in both disaster mental health and CISM, to meet the large needs in mass casualty and large-scale terrorist events.

4. *Disaster mental health services/CISM for spouses and families of first response and rescue and recovery teams.* It is recommended that mental health services be provided to spouses and families of first response teams. These people are often neglected in critical incidents of this magnitude, when all resources are devoted to survivors, families of victims, and responders. However, family members will often have their own problems dealing with the incident and concerns about how to help the responder, what to expect in the weeks and months following the incident, and when and how to access outside resources if problems develop. Given the strong difference between serving peers and serving spouses and children, these CISM services would best be provided by mental health professionals with training and experience in family therapy.

5. *Need for better information regarding federal funds to assist with disaster mental health and CISM.* It is recommended that local and state agencies become educated and informed about the existence of federal funds (e.g. FEMA, ESF 8, part of the federal disaster response plan) and other possible mechanisms that may provide financial assistance for CISM services following a large-scale terrorist event or mass casualty incident. Along these lines, it would be helpful for a federal response plan to delineate the possibilities for monetary assistance for CISM immediate and long-term needs. It would also be useful to provide guidelines and application forms for applying for assistance. The Center for Mental Health Services might be a possible vehicle for providing this service and as a point of contact for local and state

agencies.

6. *Interstate mutual aid agreements for CISM.* It is important for states to have mutual aid agreements with state CISM teams outside the state. Many states have organized their CISM teams under a single umbrella with mutual-aid agreements between teams, but there is not always this same type of arrangement between states. The International Critical Incident Stress Foundation has such a network. The Department of Veterans Affairs National Centers for PTSD are also considering a similar network utilizing specially trained Department of Veterans Affairs mental health professionals. However, out-of-state CISM teams need to be carefully screened as to motivation as well as certification before being brought to the state.

Outside CISM teams are more likely to be needed to provide postincident debriefing services in mass casualty incidents; local CISM personnel are often too deeply involved in the incident to debrief co-workers involved in the same incident effectively. In addition, local teams may not be able to handle the volume of sessions necessary to debrief all responders to an incident of this magnitude.

7. *Debriefing for first response and rescue and recovery team supervisory and administrative personnel.* It is important that the supervisory and administrative personnel of the first response and rescue and recovery teams also participate in debriefings.

8. *Assignment of personnel to centers where death notification occurs.* Careful consideration should be given before assigning personnel to centers where death notification occurs if they participated in any capacity in the initial rescue and recovery efforts at the site of the incident.

9. *State worker's compensation laws.* It is important for states to recognize that physical injury is not the only source of debilitating injury in traumatic events. Worker compensation laws need to provide for coverage for psychological assistance in addition to providing for medical assistance.

10. *Efficacy and adequacy of CISM.* CISM has become a popular and nearly ubiquitous intervention for first responders in the United States. But there is little evidence for supporting its merit as compared with other strategies or for endorsing one school of CISM over another. Continued research is necessary to ensure that the most effective techniques possible are being used to support the men and women who risk their lives to protect the people of the United States.

It seems clear that, in the intensity of mass casualty events it is appropriate that one member of the debriefing team always be a mental health professional who can make referrals as needed for additional mental health services.

V. THE MENTAL HEALTH AND CLERGY RESPONSE

The volunteer mental health response came from Oklahoma City, surrounding towns, and from around the nation. Psychologists, psychiatrists, social workers, psychiatric nurses, and counselors dropped their usual routines and reported immediately, drawn by a need to alleviate some of the fear, anxiety, and grief they no doubt were experiencing themselves. The area clergy, similarly drawn in out of compassion and a strong desire to ease the suffering, were found working shoulder to shoulder with their mental health cohorts.

Mental Health Professionals

Within an hour of the bombing the DRN state chair activated the network, and many members responded. Additionally, the Oklahoma Veterans Affairs Medical Center, at the request of the DRN state chair, made its mental health staff of 33 professionals (21 psychologists) available on site within an hour of the blast. Through its Disaster Services Human Resources (DSHR), the ARC disaster mental health services function, also recruited 15-20 mental health professionals, experienced in disaster mental health, response to mass casualty events, and CISM - to augment the efforts of the local mental health community. However, most of the local mental health professionals who responded simply showed up on site. Overall, it has been estimated that 300-400 local mental health professionals participated in the immediate emergency mental health response.

The overwhelming majority of the mental health professionals who responded had no prior training in disaster mental health; approximately 60 had some previous training or familiarity with disaster work. Of these 60 professionals, 25 to 30 had been through the ARC 2-day disaster mental health training; 3 to 5 were trained in Mitchell's CISM techniques; and 30 received 4-hour training on site by the National Organization for Victims Assistance (NOVA) in community crisis response. Only about six local mental health professionals from Oklahoma City had previous training in disaster mental health, familiarity with ARC procedures, and prior experience in disaster response, and only three of these had CISM training. These were all psychologists and current or former state DRN chairs.

The importance of these key psychologists in gaining access to the rest of the immediate mental health response cannot be emphasized enough. These individuals had preexisting relationships and experience with other local emergency response and law enforcement agencies, the ARC chapter disaster mental health team, and the CISMNO. Most important, they had credibility with and acceptance from the other emergency response agencies or "key players." Without these preexisting relationships, it is likely that there would have been difficulties obtaining access to the site; this was a federal crime scene and delays in immediate service delivery to

victims would have occurred. This small group of psychologists became key coordinators throughout the duration of the immediate volunteer mental health response.

As previously stated, the majority of mental health professionals who responded were untrained in disaster mental health. Screening of volunteers who showed up on site was essential. This process took place at the Compassion Center and created multiple logistical problems (see Services to Adult Survivors and Victims' Families section of this report). All mental health providers were asked to show proof of licensure and a driver's license before being given identification permitting access to sites. Preference was given to recruiting and using local mental health volunteers.

The Clergy

The clergy response team was composed primarily of men and women from Christian religions. Many denominations were represented. As was the case with mental health professionals, most clergy had no previous training for or experience in a disaster response. The few exceptions were law enforcement clergy and military chaplains; they also had prior security clearance, allowing them access to the crime scene or bombing site. Most of the clergy were unprepared for the intensity of the situation. The Oklahoma area clergy also had not developed an organized response or formalized their role in either the local or state emergency response plan prior to the bombing. However, their involvement, particularly in incidents involving large loss of life, was important.

A clergy coordinator organized the clergy and provided screening and verification of the credentials of the clergy volunteers. Volunteers were denied access when the coordinators could not confirm that the volunteer was a minister or pastor of a verifiable, credible church or religious organization. For example, some were denied access because they represented "fringe" or "cultic" religious groups and organizations. Clergy were present from every denomination requested by the families, and families were encouraged to contact and invite their clergy to visit them at the Compassion Center if they wished.

Several problems emerged. The clergy response was initially hampered by the lack of a formalized response plan. There were also problems with screening and identifying qualified clergy personnel. For example, it was not clear what criteria should be used to permit admission to the clergy team. The clergy coordinators also found it difficult to identify the level of spiritual care appropriate for the response and how to communicate boundaries to the clergy volunteers.

Both mental health professionals and members of the clergy, frequently working in tandem, provided emotional and spiritual support to survivors and victim families,

participated on death notification teams, and provided stress management to rescue workers. Mental health professionals and clergy were matched, according to their level of training and clinical experience, with victims or emergency personnel. Whenever possible, matching was made according to demographic, ethnic, and language factors.

Recommendations

1. *Need for more disaster mental health training for psychologists.* The response to a mass casualty or large-scale terrorist attack requires large numbers of mental health professionals trained in both disaster mental health and CISM, and ready to respond. This suggestion has been made repeatedly following disasters, but clearly there needs to be a continued commitment to preparing and training mental health professionals. The DRN can take a leadership role in this training effort. It is recommended that mental health professionals complete the ARC Disaster Mental Health Services-1 (DMHS-1) course. The ARC has recently received a major grant to increase formal ARC disaster mental health training nationally. The ARC training is designed to help mental health professionals apply their professional knowledge and skills in an ARC disaster operation. The ARC has always maintained that mental health professionals need to take additional training on their own. This training could include CISM, the grief and bereavement training developed by Mothers Against Drunk Driving (MADD), as well as training on topics such as crisis intervention, death and dying, traumatic stress, and community outreach techniques.

2. *Importance of including local mental health professionals in leadership positions/importance of involvement of DRN chair in planning and preparation.* It is important to use local mental health volunteers and to place them in key leadership positions. The DRN state chair can be a critical link in recruiting and identifying volunteer mental health professionals, particularly those with the skills to serve in these key positions. During disaster planning and preparation, the DRN state chair needs to develop relationships with other "key players" in emergency response. It is most critical for the DRN chair to work with the ARC state lead chapter for disaster. This collaboration, in turn, will enable the DRN chair to facilitate the coordination of mental health services at all sites in cooperation with other agency efforts.

3. *Importance of off-site mental health staffing.* It is recommended that registration, credentialing, and staffing of mental health professionals occur at a site away from the Compassion Center to reduce the amount of chaos at the site. If there is sufficient space, the ARC disaster response headquarters might be used or another site designated within the community. The media could be used to inform local mental health professionals of this centralized staging area.

4. *Importance of orientation to the job and daily pre-shift briefings.* An

orientation for all mental health responders should be provided before they are deployed to a site. The orientation should provide a description of different assignments, information about the ARC and the role of mental health professionals as volunteers with the ARC, the chain of command, types of expected reactions, appropriate interventions, referral procedures, and required documentation. A 1 to 3 hour orientation to the job prior to assignment would increase the effectiveness of volunteers once they are on site. Again, it would be helpful if this orientation occurred at a site other than at the Compassion Center. The staging site used for registration and credentialing is a possible location.

Mass casualty responses often change very rapidly. Therefore, it is also beneficial to have a daily briefing to bring workers up to date on status of recovery and changes in policy, procedures, and scheduling before setting off on their shifts. It can be required before the workers receive their daily authorization identification. (At a number of mass casualty incidents, workers have been required to get a new day-specific identification each day before starting their shift. This strategy helped control day by day, the number of workers who could gain access to sites.)

5. *Use of VAMC mental health professionals.* It is recommended that the DRN state chair make use of the well-trained resources at the nearest local Veterans Affairs medical center. It might be helpful to establish a formalized relationship, with protocols, on how to activate these professionals. It is important to know that, in these incidents, DRN members will typically respond as ARC disaster mental health services personnel.

6. *Development of clergy organization, training, and disaster plan.* Clergy should develop an organized response team with guidelines for membership, screening, mobilization, training, and parameters for the delivery of appropriate ministry services in times of disaster. The local clergy disaster plan should try to align itself with the emergency management response plans of the federal, state, and local governments and other responding agencies.

7. *Development of mental health and clergy staffing form.* It would be helpful to develop a staffing form for both mental health and clergy to use when credentialing and screening the large numbers of volunteers that simply show up. Such a form should include basic demographic information such as name, address, phone and pager numbers, sex, languages spoken, and ethnicity. Additional information would be the highest degree in the field of practice, licensure state and number, employment and address of employer, areas of trauma-related and clinical experience; previous disaster or related training experience, and the local disaster mental health or clergy response network, if any, they belong to. This task is probably best taken on by the ARC.

VI. TRANSITION FROM IMMEDIATE TO LONG-TERM DISASTER MENTAL HEALTH SERVICES

The transition from immediate disaster mental health services to long-term care during large-scale disasters is a complex and political process, usually involving different groups of providers with differing levels of expertise, training, and preparedness. To help the reader better understand the transition process that occurred following the Oklahoma City bombing, the following background is provided.

Background Information

Helping survivors is best understood in the context of when, where, and with whom interventions take place. The temporal dimensions may be broken down into the emergency phase, the post-impact phase, and the recovery phase. The mental health providers usually involve different groups or agencies during different phases. For example, the American Red Cross (ARC) frequently deploys its Disaster Mental Health Services (DMHS) to address the mental health needs of survivors, victims' families, and rescue workers during the emergency phase and the early post-impact phase; in such cases, ARC often works with local and state mental health agencies, as well as those who usually provide support for first response teams (often critical incident stress debriefing [CISD]). The mental health needs during the post-impact and recovery phase are usually served almost exclusively by the community or state mental health departments of the affected community, private agencies, and independent practitioners. Thus, in most disasters there is a transition period in which the delivery of mental health services transfers from one provider to another.

Additionally, in a large disaster, the ARC DMHS and CISD responses are often immediate, organized, and can bring many volunteers and expert resources to bear on the situation. However, in many states it takes some time for the local/state mental health authorities to implement (and in some cases develop) their plans. This is because few states are prepared or have the resources in place to immediately deploy mental health personnel in the wake of a disaster. This situation is particularly true in the aftermath of a mass casualty or terrorist event of the magnitude of the Oklahoma City bombing.

To the Task Force's knowledge, while states generally have a staff member designated as a disaster mental health coordinator, few states have invested significant resources for disaster mental health preparedness within their state mental health departments. California is one state with an extensive and well-developed disaster mental health preparedness and response program at both the state and local community mental health levels, and others are working on such development. Thus, few state mental health departments are in a position to respond immediately to the mental health needs of victims, families, survivors, rescue workers, and the community

at large during a mass-casualty event or terrorist incident. Additionally, most state community mental health systems almost exclusively serve individuals with serious and persistent mental illness as their everyday mission. Following a disaster, these agencies must shift their services to assist a much broader range of people responding normally to an abnormal situation, while still caring for regular clientele. Additional staff and specialized disaster mental health training are often needed to assist agencies in managing these crisis counseling services.

The Stafford Act provides the authority for the federal government to provide funding that includes individual assistance for mental health services following a presidential declaration of disaster. This program was developed in cooperation with the Federal Emergency Management Agency (FEMA) and the Center for Mental Health Services (CMHS) within the Substance Abuse and Mental Health Services Administration (SAMHSA). This law was enacted and the program developed in recognition of the variety of psychological problems that disasters cause, that, if untreated, may become long term and debilitating. FEMA/CMHS is authorized to award grants to states to provide training of disaster workers and provide professional counseling services to victims of a presidentially declared major disaster. Generally, this funding goes to state departments of mental health or to an agency or organization that the state designates. There are basically two types of support for crisis counseling services to disaster victims funded by FEMA/CMHS: Immediate Services Grants and Regular Services Grants. The Immediate Services Grant provides support for mental health services for up to 60 days after the date of the disaster declaration; the Regular Services Grant provides for funding after the first 60 days and for up to 9 additional months. The Regular Services Grant may be extended, depending upon extenuating circumstances. Crisis counseling programs often take weeks to develop and funds to be granted, again underscoring the importance of the emergency services phase and the transition period.

The Oklahoma City Bombing

In the emergency phase of the Oklahoma City disaster, mental health services to survivors and families of the victims were provided primarily through the DMHS function of the ARC. These services were implemented swiftly through a coordinated effort of the ARC DMHS and the Oklahoma Psychological Association's Disaster Response Network (DRN) using mental health volunteers from the private sector, the Department of Veterans Affairs, and local/state mental health agencies. These services are outlined in the first two sections of this report: "Services to Adult Survivors and Victims' Families" and "Services to Children."

Immediate attention was directed to working on a transition plan for transferring the delivery of disaster mental health services from the ARC to Oklahoma's state mental health department. Beginning the day after the bombing, the ARC DMHS

maintained daily contact with ODMHSAS to advise staff of changes in ARC activities with survivors, families of victims, and rescue workers, and to assist them with planning for their needs in the FEMA/CMHS grant proposal. Representatives from other involved mental health agencies, such as the Oklahoma Psychological Association (OPA), Department of Veterans Affairs Medical Center, and CMHS, were invited to meet with the ARC DMHS and ODMHSAS representatives so they could begin to interact and coordinate services. Additionally, ARC brought in a DMHS worker with extensive experience in writing and managing several large FEMA/CMHS crisis counseling grant programs in California to help ODMHSAS plan and write the Immediate Services Grant Proposal. This disaster mental health specialist also assisted the coordinator of the mental health services at the Compassion Center in facilitating the transition of ARC disaster mental health services to the state mental health department. The Public Health Service formed an ad hoc task force to assess community mental health needs. This task force included representatives from the National Center for Post-Traumatic Stress Disorder, the Department of Veterans Affairs, and the Emergency Management Preparedness Office (EMPO).

In the first week after the bombing, a plan was developed during meetings with the ODMHSAS to bring in Department of Veterans Affairs teams of licensed mental health professionals with expertise in disaster mental health and posttraumatic stress. These teams were to be brought in under Emergency Services Function (Medical) (ESF 8) of the federal response plan. The teams were requested to help staff mental health sites, particularly the Compassion Center, during the transition period. They were also intended to provide interim support while ODMHSAS completed its immediate services grant application, began hiring and training staff, and taking care of logistical aspects of their program. This unique plan was well-received and supported by both ARC DMHS and ODMHSAS. Unfortunately, the plan was not implemented.

Representatives of ODMHSAS officially met with mental health coordinators at the Compassion Center and other service delivery sites 7 days after the bombing to become familiar with the nature and extent of the disaster mental health services being provided under ARC auspices. They also met with key mental health staff who provided information about staffing, service delivery, and logistics. ODMHSAS staff were subsequently placed at the Compassion Center, where they worked closely with ARC disaster mental health staff, and began providing both clinical and administrative services. ODMHSAS staff were also invited to join meetings of Compassion Center agency representatives, which were held at least four times a day. ODMHSAS was encouraged to place staff at the center as quickly as possible to help survivors and families of victims get to know the ODMHSAS staff before the Compassion Center closed.

ODMHSAS named its program "Project Heartland," and agency personnel

began working closely with the ARC DMHS and coordinators at the Compassion Center. Project Heartland banners were displayed in key areas in the center. The ARC shared with ODMHSAS a database that included information about the mental health professional volunteers and types of contacts made at the Compassion Center. The ARC DMHS officer also offered to have highly experienced ARC DMHS staff provide general disaster mental health training and consultation to ODMHSAS staff. The transfer of responsibility for disaster mental health services at the Compassion Center from ARC to ODMHSAS occurred on April 27, 1995. ARC, however, continued to provide logistical support and mass care at the Compassion Center, which was officially closed on May 15, 1995.

ODMHSAS: Project Heartland

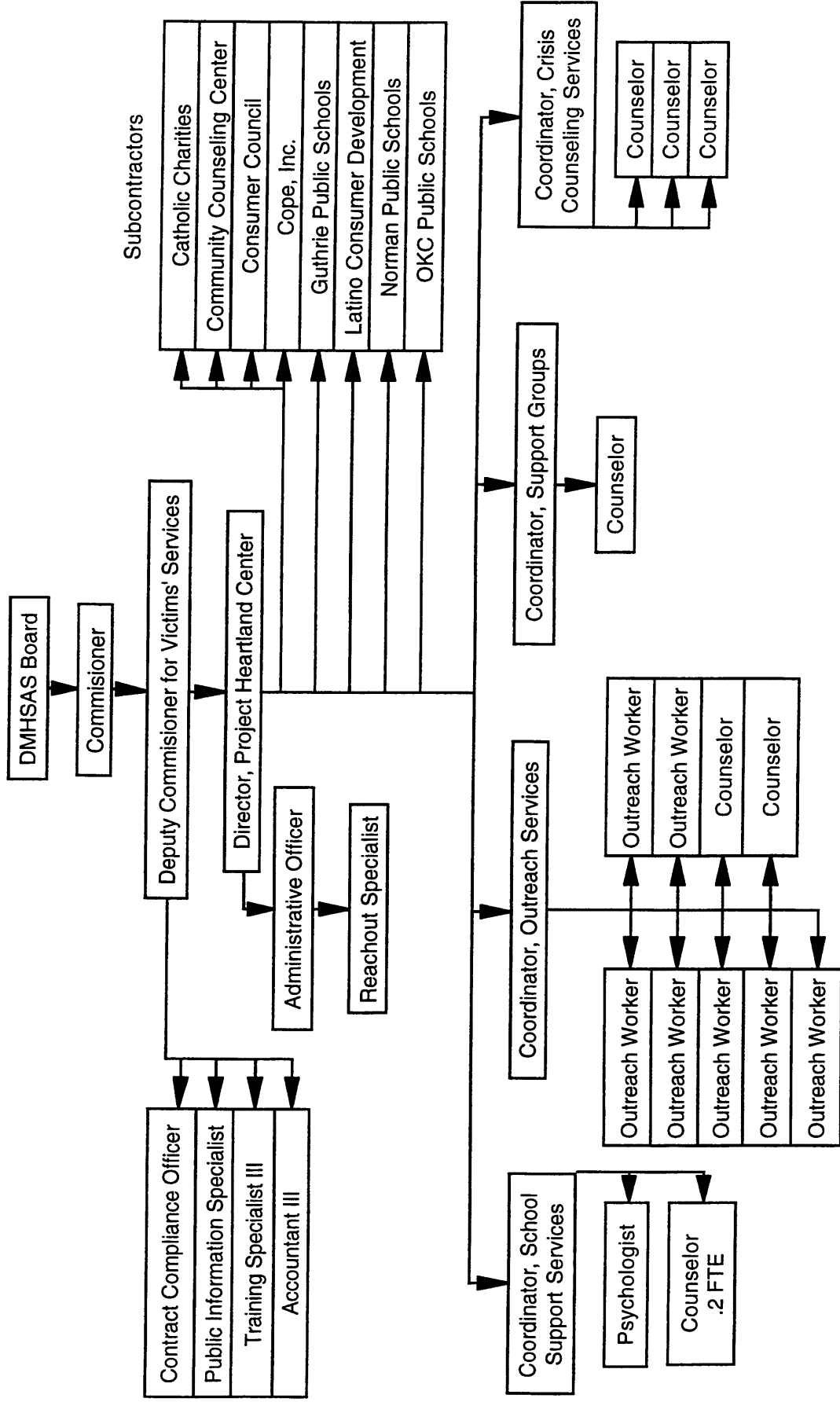
On May 8, 1995, ODMHSAS was awarded an Immediate Services Grant by FEMA/CMHS to provide crisis counseling, support groups, outreach, and training/consultation to individuals affected by emotional or physical proximity to the bombing of the Murrah Federal Building. Funding under the Stafford Act does not permit long-term services or therapy. Individuals requiring such services need to be referred to more traditional providers in the community. Project Heartland was the first community mental health program funded by FEMA/CMHS that was designed to intervene with the survivors of a major terrorist event in the United States. ODMHSAS was awarded the Immediate Crisis Counseling Services Grant through October 31, 1995. The Regular Crisis Counseling Services Grant was initiated on November 1, 1995, and had been extended up to the point of this writing. Below is a description of Project Heartland.

Project Heartland encompasses both a central office called the Project Heartland Center, located in central Oklahoma City, and eight subcontract partners. At the time of this writing (Fall, 1996), Project Heartland has 16 staff members, including a director, 13 clinical staff, and 2 support staff (see figure 2). Of the 14 clinical and administrative staff, 6 are licensed mental health professionals. Eight are master's level professionals, including the director. Two have licenses in clinical social work, and two are licensed professional counselors. Two staff members are doctoral-level mental health professionals; one a licensed psychologist, and one a licensed marriage and family therapist. Five staff members have master's level training but are not licensed in their respective fields. The three remaining professional staff have undergraduate degrees.

A service coordinator oversees each of the following four service areas: (1) school support services; (2) outreach services; (3) crisis counseling services; and (4) support groups. According to the organizational chart, the professional staff all report to the program director. These coordinators have supervisory responsibility for the staff who function in those service areas.

Figure 2

Project Heartland Organizational Chart



Note. Adapted from Project Heartland: Quarterly report: FEMA regular crisis counseling services grant, Oklahoma Department of Mental Health and Substance Abuse Services, October 31, 1996, p. 17.

Project Heartland staff received 103 hours of specialized education and training. The staff meet weekly with the director for an informational staff meeting. The staff also meet weekly as a mutual support group, facilitated by a local psychologist. Supervisory staff are not present at the support group meeting. In addition, 1 hour a week of case consultation is provided to the staff by a psychologist from the Oklahoma City community.

Mental health services are provided free of charge by Project Heartland. They include (1) individual crisis counseling and a 24-hour crisis hot line; (2) outreach and public information; (3) support groups; and (4) training and consultation. These services are briefly discussed below. The greatest number of service hours have been spent for support groups, followed by crisis intervention, outreach, consultation/education, and individual counseling.

Crisis counseling. The primary foci of crisis counseling have been (1) prevention of suicide or family violence; and (2) alleviation of stress created as a result of trigger events such as holidays, trial procedures, birthdays of victims, loss of employment, and relationship difficulties. Much of the crisis intervention is provided in the client's home, workplace, or via the telephone hotline. These services are intended to be short-term; clients are seen fewer than ten times, and long-term needs are referred to community providers. Increases in the use of crisis counseling services during events such as victims' birthdays, important family anniversaries, holidays, and the one-year anniversary of the bombing are noted elsewhere in this report. Data were not available on the hotline, its use, or the nature of the calls.

Outreach and public information. Outreach activities included in-home visits with victims' families, survivors, and rescuers; staff support during the change of venue hearing in the *U.S. vs. Timothy James McVeigh, et. al.*, trial; door-to-door visits with downtown businesses and residences within a one mile radius of the blast; staff meetings with the Murrah Building survivors groups and other survivors groups; letters to victims' families and survivors regarding holidays, new programs, and events; participation in community cultural events (e.g., African American religious services, Hispanic festivals); and visits to Senior Nutrition Centers. Staff were also placed at the FEMA Disaster Application Center until it closed several months following the blast.

Informational material on traumatic bereavement has been mailed to victims' families and injured survivors. Seven different information brochures were developed describing Project Heartland's services; the special needs of children, adolescents, parents, teachers, and the elderly; posttraumatic stress disorder and traumatic grief; and information for primary care physicians. Project Heartland also produced and broadcast two 30-second television spots and five 30-second radio spots to educate the public, primarily the Oklahoma City community, about the types of services it provides. Radio spots have covered topics such as work-related problems, anger,

family problems, and children and teen issues.

Support groups. A wide range of support groups have included support groups for parents who lost children, parents of children from the YMCA, adult siblings of victims, individuals who lost spouses, downtown workers and residents, state employees, rescuers and responders, school personnel, and school counselors. These groups are conducted by the Project Heartland Center staff either at the center or off-site at the workplace, client's home, or school. Most support groups meet weekly and are led by two staff; one is always a licensed mental health professional. Twenty-one different groups were supported early in the operation, and at the time of this report nine support groups continue.

Training and consultation. Project Heartland and ODMHSAS have sponsored at least a dozen different training sessions providing disaster-related education and training to more than 10,500 people. Topics included helping children cope with disaster; the role of the media in healing the community; critical incident stress debriefing; traumatic bereavement; Post-Traumatic Stress Disorder (PTSD) and substance abuse; and planning school-based services. Project Heartland also consults on an informal basis with business, government, and organization administrators on how to support staff who were affected by the blast. Project Heartland staff are contacted by different organizations and have provided consultation on memorial services, the planning of anniversary events, and holiday activities. The Center staff also meet regularly with representatives from the office of the U.S. Attorney to discuss trial-related issues.

From June 1, 1995, through February 28, 1997, an unduplicated count of 8,735 individuals received services from the Project Heartland Center, and services (e.g., educational materials) were provided to 170,259 "other recipients." The number of clients served each month rose gradually in the year following the bombing, rose sharply in the months preceding the one-year anniversary, and then fell dramatically after that. Table 1 presents demographic data on clients receiving services through October 31, 1996.

Project Heartland also had eight subcontract partners, whose subcontracts ended December 31, 1996. These subcontract partners focused primarily on providing outreach, crisis counseling, support groups, and referral services to special populations as follows; (1) Cope, Inc., targeted African-American citizens; (2) the Latino Community Development Agency targeted Hispanic-Americans; (3) the Associated Catholic Charities targeted Asian-Americans; (4) the Oklahoma Mental Health Consumer Council targeted persons with preexisting psychological disorders; (5) the Community Counseling Center targeted the elderly; and three school districts targeted their children and youth, (6) the Oklahoma City public schools; (7) Norman public schools, and (8) the Guthrie public schools. The staff of Project Heartland's

eight subcontractors worked under the auspices of Project Heartland, that is, each subcontractor coordinated all activities with the Project Heartland director, but was also functionally independent of Project Heartland in that they developed and implemented their individual programs and supervised their own staff. The subcontractors were operational by November 1995. The Oklahoma City public school system was the largest subcontractor and had 34 full time employees. Services provided in the schools are more fully described in the section in this report on "Services to Children." Information on services provided by the Project Heartland subcontractors had not been assembled at the time of this report. The reader is referred to the Final Report for the Regular Services Grant for Project Heartland, which will be a public document available through either ODMHSAS, FEMA or CMHS.

Table 1 Project Heartland Client Demographics	
Race	Clients Served
White	4,565
Black	2,517
American Indian	204
Asian	936
Hispanic origin *	1,041
Gender	
Female	4401
Male	3830
Age Group	
Under 18	4450
18 to 64	3614
Over 64	176
Severely Mentally Ill +	244

* These clients may also be included in other "race" categories.
+ If ever identified as Severely Mentally Ill from 7/1/93 to 6/30/96.

Note. From Project Heartland: Quarterly Report: FEMA Regular Crisis Counseling Services Grant, Oklahoma Department of Mental Health and Substance Abuse Services, August 1, 1996 - October 31, 1996.

The eight subcontractors were not required to participate in Project Heartland-sponsored training, and a number of the subcontractors did not provide to Project Heartland requested data on the services delivered or clients served. This situation made an evaluation of the success of the overall Project Heartland operation difficult.

Innovative services. Project Heartland reports providing innovative services not included in prior crisis counseling grants. Innovation in service delivery teams involved the coordination of services with the U.S. Justice Department and the U.S. Attorney's Office regarding the *U.S. vs Timothy James McVeigh, et al*, trial. For example, the U.S. Attorney's Office requested crisis counseling for the closed-circuit broadcast of the trial in Oklahoma City. The closed-circuit hearings were being held in an auditorium at the Federal Aviation Administration (FAA) Mike Monroney Aeronautical Center near Oklahoma City holding 300 individuals. At the U.S. Attorney's Office request, a "safe haven" was set up at this site. It was envisioned as a place where families could take a break from the closed-circuit hearings and speak with counselors and clergy. Volunteer disaster response organizations coordinated these efforts and requested that Project Heartland provide training for them. Additionally, school personnel were trained regarding trial procedures so that they can educate students about the legal process.

The U.S. Attorney's Office and the Justice Department also requested the availability of crisis counseling services in the safe haven developed in Denver, Colorado, where the trial was held in mid-1997. Project Heartland reports that sending a team to Denver to prepare mental health professionals is a significant departure from traditional disaster projects in crisis counseling programs. The team involved four Project Heartland staff members, an FBI chaplain, and a representative from the U.S. Attorney's office. Two training sessions were held in October and November 1996. More than 300 licensed mental health professionals from various agencies and professional organizations in Denver attended the training sessions.

Other Programs Providing Long-Term Mental Health Services

ARC/Sunbridge disaster counseling program. In the aftermath of the Murrah Federal Building bombing in Oklahoma City, the local ARC chapter wanted to select an agency that had a large group of highly trained mental health professionals who would provide ongoing, long-term treatment to anyone affected by the bombing, whether directly or indirectly.

The Mental Health Association in Oklahoma County had in place a low-cost counseling program, known as Sunbridge, with 43 licensed therapists, most holding doctoral degrees in psychology or master's degrees in social work. All had previously been screened by an advisory board of professionals who had studied their credentials carefully and checked their references. The ARC/Sunbridge Disaster Counseling

Program was formed in August 1995. A small group from the advisory board formed a committee to monitor and review client progress anonymously, and consult with their respective therapists if problems arose. The Sunbridge therapists also agreed that, if their clients signed a release form, they would work with ARC case managers to provide information that would help ARC meet client needs in other areas (e.g., financial, medical).

Although the Sunbridge professionals offered their services pro bono, the Red Cross allocated a portion of the money for counseling services that it had designated for disaster recovery. Each therapist was reimbursed by the Red Cross at \$60 a session (approximately half their normal client fee). After a year, this reimbursement was increased to \$70 a session. A total of 112 clients received services through the disaster counseling program and 50 are continuing to receive services at the time of this report. As of January 1997, the ARC/Sunbridge program had received a total of \$86,115.

The Red Cross made a commitment to continue the disaster counseling program as long as the community required these services. The long-term nature of these interventions, the more traditional nature of the therapy, and the breadth of clients to whom the services are offered distinguish the services provided by the ARC/Sunbridge program from those offered by Project Heartland.

Other agencies. Other agencies have also been actively involved in providing mental health care to individuals with bombing-related emotional difficulties. Furthermore, specific populations have sought their own solutions for mental health care; they include the police, fire and rescue personnel, local ARC chapter staff and volunteers, and members of racial/ethnic minorities. For example, Lutheran Social Service recruited and supported African American counselors to provide outreach to the African American community of survivors, family members, and relief volunteers. Oklahoma City contracted with a local mental health consortium and independent providers for services to its police and fire personnel during the first year after the bombing. Some mental health services were also paid for by an Unmet Needs Committee Fund established from contributions.

The continuing long-term mental health needs of people affected by the bombing is uncertain. There is concern about what will happen when charitable funds are depleted and grants expire.

Recommendations

1. *Recognition of the magnitude and severity of psychological difficulties following such incidents.* Compared to natural disasters, it is clear that the magnitude and severity of psychological difficulties are far greater in response to traumatic

incidents such as the Oklahoma City bombing in which (1) there are large numbers of fatalities, especially when the incident includes the deaths of children; (2) the incident is the result of a deliberate act of violence; and (3) there is a protracted rescue effort. It appears that these psychological difficulties present earlier, are more intense, and are more likely to reach proportions of diagnosable psychological disorders.

Consequently, the reactions are more likely to be long-term and require specialized treatment. In fact, one could expect 30% or more of the survivors of the bombing and family members to have a psychological disorder that is best treated by psychological intervention. The literature suggests that 10% of those exposed to traumatic stress may have need for psychological intervention, but anecdotal reports suggest that the figures are closer to 30% for victims of crime and mass casualty incidents. Although the research data have not yet been released on the various victim groups involved in the Oklahoma City bombing, preliminary reports shared with the Task Force by professionals and researchers working with survivors, families of victims, and rescue workers confirm these anecdotal projections. Thus, it is important to develop plans that can respond effectively to psychological difficulties in a significant portion of the affected population.

2. Importance of training. FEMA/CMHS funded crisis intervention programs often involve assembling new teams of providers that usually include a significant proportion of paraprofessionals. Moreover, many of the licensed providers are unlikely to have training in disaster mental health and/or traumatic stress. Finally, comparatively few mental health professionals are trained in community outreach.

Given that the staff of the crisis counseling programs are involved in active outreach and are thus in the position of first contact with affected individuals, they need to be well-trained to do triage, determine individuals at risk, and make effective and early referrals for treatment. Individuals at risk should be referred right from the start to well-trained mental health professionals with expertise in treating trauma-related disorders and traumatic loss, rather than to crisis counseling programs.

The importance of quality training and consultation for mental health administrators and service providers to a community recovering from a mass casualty and/or terrorist act can not be emphasized too strongly. The training needs to be (1) systematic and integrated into the project operation; (2) provided by recognized authorities in disaster and trauma; (3) ongoing, incremental, and sensitive to the unique needs of the community involved and the specific phase of recovery; and (4) routinely reviewed to ensure the consistent and effective direction of the training and its appropriateness to the changing needs of the providers and clients.

3. Importance of supervision. There needs to be a clear and precise line of supervision for inexperienced licensed providers, unlicensed mental health providers,

and paraprofessionals. The supervision needs to meet the standards of state laws for the state in which the services are provided. In many cases, it will require weekly individual supervision sessions with more experienced licensed providers. It should be noted that many experienced disaster mental health professionals also value ongoing consultation for their own work to ensure the efficient delivery of the highest quality services.

Beyond what is needed at a legal and ethical minimum, it is highly likely that management, supervision, and consultation by well-trained and experienced disaster mental health professionals is more likely to ensure quality disaster mental health services for those impacted by the incident. It is important in these types of incidents to have greater involvement of licensed doctoral mental health professionals in the crisis counseling program, and to have more licensed and experienced mental health professionals on staff, with less reliance on paraprofessionals. Although intensive short-term training and ongoing supervision are important components of any disaster mental health response plan, they are not a substitute for years of formal graduate training and clinical experience.

4. Preparation by state departments of mental health. State departments of mental health need to become proactive participants with the state departments of emergency management in the preparation of emergency and disaster response plans. Similar working relationships are important at the local level. It would also be good to involve the ARC state lead chapter for disaster and the APA DRN state coordinator whose role and unique capabilities will be useful.

It is unlikely that state departments of mental health will ever be able to provide all of the disaster mental health services to a community affected by a large-scale disaster, especially a tragedy of the scope of the Oklahoma City bombing. It is, therefore, critical that state departments of mental health form alliances/partnerships and mutual aid agreements in advance with the volunteer mental health response groups within their state and community.

5. State and federal funding for long-term mental health care. The conditions under which FEMA/CMHS funds can be released for crisis intervention grants are rather narrow, and would seldom apply to focused mass casualty and terrorist incidents. Moreover, the intervention model supported by the Stafford Act depends on brief crisis intervention models, and largely on paraprofessionals and mental health professionals with little training in disaster or trauma. It appears that, with proper experienced management, training, and consultation, this model can work well for most mental health needs arising from natural disasters. It seems likely, however, that a different model is needed to serve the long-term psychological needs that will arise in most mass-casualty or terrorist acts that are of the magnitude of the Oklahoma City bombing. The rates of posttraumatic stress disorder and other long-term emotional

difficulties for victims of violent crimes are greater than for natural disasters. FEMA/CMHS funded crisis counseling grants do not currently provide for this care, and other resources must be aggressively pursued.

Both federal and state authorities need to address, as soon as possible, the role of crisis counseling vs. the role of more long-term mental health services, who is going to provide those services, and how those services will be funded.

6. *Program evaluation.* The very nature of FEMA/CMHS funded crisis counseling programs, including their use of paraprofessionals and unlicensed providers and the outreach services provided, demands systematic program evaluation. These programs need to be systematically examined, preferably by an independent team. Not only will this ensure the quality of services delivered in that specific incident, but it will also aid in the development of more clinically effective and more cost-effective interventions.

It is important that adequate data be collected by service delivery agencies to evaluate the effectiveness of their outreach efforts. These data would include basic demographics (including age, gender, marital status, and ethnicity), whether the experience of the disaster was primary or secondary, psychological difficulties being experienced, services offered (including educational materials, interventions, and referrals), and an indication, at the very least, of the town or urban neighborhood in which the recipients lived.

7. *Importance of consultation.* It is important for crisis counseling programs that deal with a disaster of this magnitude, particularly with its unique challenges and problems, to employ people who can provide thoughtful consultation and support both during the initial stages and throughout the course of the program. Most effective is the use of established consultants with expertise in the areas of disaster mental health, mass-casualty incidents, traumatic loss, victims of violent crime, and traumatic disorders of children. Although it is both helpful and essential to include local expertise in program planning, it is also important to draw on outside experts who can be objective and have not been part of the "traumatized community." This expertise can help guide crisis counseling program staff with systematic program planning, goals and objectives and development of program materials. Some of these viewpoints are provided by CMHS staff, but it is not realistic to expect them to provide all the external consultation needed for such program.

8. *Importance of staff support.* Most of the staff of a crisis counseling program will also be members of the impacted community and thus are likely to themselves be impacted by the events. Moreover, they are constantly exposed to the painful stories and experiences of the victim groups with whom they work and are at significant risk

for experiencing vicarious traumatization and becoming secondary victims. While this is largely true for any crisis intervention program, staff support is particularly critical throughout the course of the program in a disaster of Oklahoma City's scope and horror. Mental health personnel working in the long-term crisis counseling or recovery program need to be supported in a number of ways to help mitigate the stressful effects of working with trauma victims and their families.

Provision of regular in-service training gives workers the requisite knowledge and skills to do their jobs. As a general benefit, workers feel less stressed when they feel better prepared to perform their duties. This training can prepare them for the changing nature of the response and improve the quality of service. At the same time, this training builds a sense of camaraderie.

It is also important to schedule regular sessions where staff can discuss the psychological and emotional impact of the work. These sessions can be helpful in identifying and mitigating work-related stress and providing peer support. These meetings need to be separate from supervisory, administrative, or informational team meetings. They can be run in a peer-support group format or, preferably, facilitated by an outside consultant experienced in the field. Some staff may need additional individual counseling or therapy at times during the response. Supervisors and administrators should not be a part of these support sessions, but are likely to require parallel support systems. It may be worthwhile for these supervisory staff to have individual sessions with experienced trauma counselors and therapists.

VII. ROLE OF GOVERNMENT AGENCIES

Mass casualty and large-scale terrorist attacks are complex, bureaucratic, and political events. Because terrorism is a federal crime, the number of responding groups, agencies, and jurisdictions increase monumentally compared to more common disasters, resulting in an increased need for coordination. Understanding the roles, responsibilities, players, and interrelationships of key governmental and private organizations is essential if mental health providers are to function in an efficient, coordinated, and effective manner. In other words, it is essential to understand who the players are and "who does what" in these events.

In a presidentially declared disaster or a mass casualty terrorist attack, the federal response plan may be activated. This plan, under the Stafford Disaster Relief and Emergency Assistance Act, provides the authority for the federal government to provide assistance to save lives and to protect public health, safety, and property as a result of natural disasters and other incidents. The Stafford Act also provides for assistance with crisis counseling to affected communities if there is a presidential declaration for individual assistance.

Numerous local, state, and federal government mental health agencies responded to the Oklahoma City bombing. These included the U.S. Department of Health and Human Services; U.S. Public Health Service; Substance Abuse and Mental Health Services Administration (under HHS); the Center for Mental Health Services (under HHS); the Department of Veterans Affairs Emergency Medical Preparedness Office (EMPO) and its National Center for PTSD; the Oklahoma Veterans Affairs Medical Center; the Oklahoma State Department of Health (Child Guidance Clinics); the Oklahoma Department of Mental Health and Substance Abuse; and the U.S. Federal Emergency Management Agency.

Although there was an ongoing effort for all of these responding agencies to coordinate their work, some difficulties were encountered. It became increasingly evident that the federal response plan, as applied in a terrorist mass casualty incident, does not have an integrated, national disaster mental health plan and that ambiguity exists regarding the following: (1) who is in charge of mental health; (2) what federal assistance and monies are available for mental health services; (3) protocols for how funds are allocated; (4) interagency coordination; and (5) clear delineation of the roles and responsibilities of participating agencies at all levels.

Such ambiguity makes it difficult for local mental health officials to understand their role and responsibilities, particularly at a time of intense national attention and pressure to respond. In Oklahoma City, there was conflict concerning whether ESF 8 (medical) or ESF 6 (mass care) funding should be authorized and how these funds could be accessed to augment the local and state immediate mental health efforts.

Recommendations

1. *Need for clearer federal response plan regarding mental health services in mass casualty and terrorist incidents.* It is essential for the federal plan to have an integrated, national mental health disaster plan to coordinate the mental health emergency response efforts with other emergency response organizations in time of disaster. This plan will ensure an efficient, coordinated, effective response to the mental health needs of the affected population.

2. *Need for state disaster mental health plans.* At the state and local level, it is strongly recommended that each state department of mental health have a mental health disaster plan that is a component of the state emergency management plan. As part of this plan, the state department of mental health should identify the point of contact, (the individual, by position) and the chain of succession, train mental health employees in disaster mental health, and develop procedures and protocols for activation and deployment of trained mental health staff. Similarly, each department of mental health, whether county or regional, should have a disaster mental health plan that works in concert with that of the state department of mental health. The plan should be a well-integrated component of the comprehensive emergency management plan of the jurisdiction. The mental health plan must also specify roles, responsibilities, and relationships within the mental health agency.

3. *Development of collaborative state disaster mental health planning.* In most states, the private sector has far greater human resources than the state department of mental health. These resources are likely to be needed in the aftermath of a mass casualty/terrorist incident. To facilitate a close working relationship between government and nongovernment agencies and organizations, it is recommended that an emergency response committee be formed with representatives of each of the key organizations (e.g., state office of emergency management, ARC, DRN) to develop collaboration in planning and training. This would result in more efficient delivery of immediate, short- and long-term services.

Immediate mental health services to survivors are often provided at sites operated by the ARC and are coordinated and provided by the ARC Disaster Mental Health Services function, usually with the assistance of the DRN. Many of the earliest services may be provided by nongovernmental agencies such as the ARC. It is, therefore, essential for state departments of mental health to work closely with these nongovernmental agencies to coordinate the early response efforts and to make the transition to state and federally funded services more seamless and effective.

4. *Coordination of elements of the state disaster plan.* Immediate mental health services might also be provided at hospitals, first-aid sites, a temporary morgue, and the medical examiner's or coroner's office. Consequently, the mental

health plan requires coordination and integration with the emergency medical plan, the public health plan, and the medical examiner's or coroner's plan.

5. *Knowledge of plans and resources.* Federal and state authorities responsible for overseeing the governmental aspects of disaster mental health plans need to be familiar with ARC resources, policies, and procedures. In turn, local ARC mental health professionals and DRN chairs need to be familiar with the federal response plan and state disaster mental health plans.

6. *Training for state DRN chairs.* The DRN should develop training for DRN state coordinators in the organizational aspects involved in disaster management.

VIII. SERVICES TO MINORITIES AND UNDERSERVED POPULATIONS

The Choctaw translation of "Oklahoma" is "Red Man." Although considered by many to be populated mostly by Caucasian Christians, Oklahoma boasts the largest Native American population in the United States. Oklahoma is blessed with a diverse population representing most cultures, races, and religions. Oklahoma City has been home to Spanish-speaking residents even before statehood. A large Asian population settled in Oklahoma following the fall of the Republic of Vietnam. Asian Pacific African Americans represent a significant percentage of the Oklahoma City population. Oklahoma, and especially Oklahoma City, includes Armed Services, veteran, gay, lesbian, and homeless citizens. The housing most affected by the downtown blast included low-income and elderly citizens.

Oklahoma State Department of Health Injury Surveillance Data recorded age and racial variables for many of the casualties and survivors of the Oklahoma City bombing. Age was recorded for all the fatalities and all but 3 percent of the survivors, race was determined for only 58 percent of the casualties and survivors.

Table 2

Race of People Killed or Injured, 1995

Age (yrs)	Asian	Black	Indian	Other	Pacific	Unknown	White	Total
0-14	2	19	0	0	0	15	27	63
15-24	0	17	0	0	0	19	24	60
25-34	3	22	0	0	0	89	83	197
35-44	1	31	3	1	0	93	86	215
45-54	0	13	0	1	0	71	94	179
55-64	0	7	3	0	1	32	34	77
65 +	0	4	0	0	0	18	9	31
Unknown	0	0	0	0	0	18	2	20
Total	6	113	6	2	1	355	359	842

Note: Oklahoma State Department of Health classifications.

The bombing of the Murrah Federal Building in downtown Oklahoma City left no citizen untouched, no culture unaware. The employees and activities of the programs offered in the building and the surrounding downtown area created a mix of socioeconomic and sociocultural victims and family members. The confluence of cultures and the psychological trauma was most apparent at the Compassion Center.

The presence of mental health professionals at the center was extensive and

comprehensive. However, the mental health community responding to the disaster lacked a diversity of color and culture. Ethnically and racially representative clergy were recruited on the spot to help mental health professionals with language and cultural translation. Native American "healers" were requested to "bring peace to the Compassion Center" and were graciously accepted by all family members and providers at the Compassion Center.

Following the bombing, the Senior Peer Counseling Program, a nonprofit organization that trains and assigns lay elderly counselors, provided education to the Senior Citizen Centers in the Oklahoma City community to assist the elderly in the aftermath of the bombing. The program also attempted outreach services to elderly citizens displaced by the bombing or impacted by injury or death in the family.

Recommendations

1. *Appropriate service to cultural/ethnic and special needs of service population.* Disaster mental health response plans should define the demographics of their response area and have specific mechanisms for providing immediate mental health assistance in a culturally appropriate manner. This plan would include educational material that is culture specific, in the languages of the people in the community served, developmentally appropriate (e.g., adapted for both children and the elderly), and accessible to clients with disabilities (e.g., use of voice/TTY devices by hotlines). Involvement of representatives of these groups in the planning is the optimal way to develop plans that truly meet the needs of the community.

2. *Recruitment of mental health professionals of color and multilingual mental health professionals.* Significant efforts need to be made to increase the number of mental health professionals of color and multilingual mental health professionals who are trained in disaster mental health and prepared to respond in time of need. This kind of staffing should be a priority for the Disaster Response Network (DRN). Furthermore, states that experience significant disasters before they can develop a representative team of disaster mental health providers, need to be willing to request assistance from other states (e.g., through the American Red Cross Disaster Services Human Resources system).

3. *Use of other cultural human resources.* Local spiritual leaders and healers, senior peer counselors, small business organizations, community centers, universities, and unions are some examples of sources of community, cultural, and language consultants. Having such consultants on the mental health team can assist in the effective delivery of services to all segments of the affected community, particularly in communities where the mental health team is not representative of the cultural diversity of the community.

IX. MENTAL HEALTH RESEARCH FOLLOWING THE BOMBING

The news of the Murrah Federal Building bombing was almost immediately followed by researchers expressing interest in conducting studies. Many of these investigators had previous research experience in the mental health sequelae of natural disasters, civil unrest, and war. Within the first week after the explosion, the University of Oklahoma Health Sciences Center (OUHSC) Department of Emergency Medicine and the Oklahoma State Department of Health created the Disaster Health Studies Group to coordinate investigation of the medical response to the bombing and decipher the epidemiology of the deaths and injuries related to the blast. The Department of Psychiatry and Behavioral Sciences became an active member of this group.

The Disaster Health Studies Group worked to develop a system of collaboration to ensure a comprehensive and potentially definitive database and also to avoid serial interviewing of the victims and rescue workers. Because of the concern for the re-traumatization of the Oklahoma City community by overzealous mental health researchers, the Department of Psychiatry and Behavioral Sciences petitioned the Governor's office to designate the department and the OUHSC Institutional Review Board (IRB) as the clearinghouse for all mental health research related to the bombing.

With the Governor's mandate secured, the Department of Psychiatry and Behavioral Sciences identified some general research objectives: (1) identifying factors that would protect victims from revictimization; (2) integrating existing resources to reduce duplication of effort and potential revictimization; and (3) insuring the validity, integrity, and quality of the data collected. The goal was to identify the mental health status of the studied populations and to assess psychological needs for prevention, intervention, and treatment.

The IRB-approved protocols now being investigated include: (1) the assessment of elementary and secondary school children teachers and staff; (2) a telephone survey of the Oklahoma City community with a comparison community in Indiana; (3) an assessment of the Oklahoma City mental health patient sample; (4) an assessment of the Murrah Federal Building and other downtown Oklahoma City survivors; and (5) a survey and assessment of the Oklahoma City Fire Fighters.

The centralized coordination of research efforts has limited intrusion on sensitive populations in the community, minimized overlap of projects, facilitated communication between state agencies, fostered a broader understanding of research strategies, and nurtured integration with the service delivery systems.

Recommendations

1) *Designation of a coordinating university for research.* The appropriate branch of state government should appoint a specific research university department or committee to be the coordinator of the mental health research for an incident. Ideally, it would be designated in the state disaster plan. In the absence of such a component in the state plan, the Disaster Response Network (DRN) could play a valuable role in facilitating such a declaration.

2) *Use of common research protocols.* Disaster researchers, including those who study mass casualties incidents, terrorist activities, civil unrest, and war, should begin to collaborate on a methodology that allows easy comparison of the findings of research following various disasters. This task could best be done by a committee or task force appointed by the Federal Emergency Management Agency (FEMA), National Institute for Mental Health (NIMH), or a collaboration of professional associations such as the American Psychological Association (APA) and the American Psychiatric Association. A "standardized" protocol would also allow more rapid IRB approval and investigation of the immediate psychological impact on a community. The use of a common core protocol to develop a common pool of data would not preclude individual teams from proposing special research foci to the coordinating university. However, it would reduce the potential for repeatedly collecting identical data from people impacted by a disaster. In the long run, it will increase the willingness of individuals to participate and, thus, improve the quality of the data, and thereby, the research itself. The use of a task force would also permit the standard protocol to be refined with advances in methodology and an understanding of the sequelae of traumatic stress.

3. *Study of long-term consequences.* It is important that the research protocols include an examination of the long-term consequences of traumatic stress.

4. *Comparison of treatment efficacy.* It is important that the research protocols include a comparison of treatment interventions, so that the most effective interventions possible can be determined.

5) *Funding of research as part of FEMA/CMHS crisis intervention grants.* Ideally, the Stafford Act, the federal law that authorizes the FEMA/Center for Mental Health Services (CMHS)-funded crisis intervention grants, would be modified to fund the critical work of the researchers, allowing science and practice to be conducted as a refined team, and maximizing the value obtained for the funds expended in these efforts.

X. MENTAL HEALTH AND THE MEDIA

Although all of central Oklahoma was rocked by the blast of the bomb at the downtown Murrah Federal Building, much of the rest of the world knew about the tragedy through television. Local affiliates carried live, unedited, continuous coverage of the bomb site from seconds after the blast until 5:30 that afternoon. During the first 3 weeks of the recovery and relief effort, the American Red Cross (ARC) logged over 200 media inquiries each day. ARC public affairs officers estimate that over 85% of the media inquiries were for mental health interviews or information. Media attention eased only slightly after the first 3 weeks. In April 1996, the broadcast coverage of the anniversary in April 1996 was estimated to exceed the audience of the preceding NFL/AFL Superbowl.

Specific issues emerged during the Oklahoma City Bombing recovery regarding the mental health services and the media: (1) recruitment of spokespersons; (2) protection of survivors and family members; and (3) debriefing services for the media. Another issue, the potentially traumatizing effect of explicit televised coverage, was considered to be beyond the influence of this Task Force. Nevertheless, as noted earlier, children across the country seemed to be strongly impacted by viewing the live coverage of the bomb's immediate aftermath and subsequent coverage of the recovery of children's bodies.

The mental health "angle" of the Oklahoma City bombing was recognized immediately by local, national, and international print, radio, and television reporters. The demand for interviews was persistent across the first month of the recovery efforts. Initially, spokespersons were recruited from community mental health care providers not actively involved in direct care. As organization emerged and rotating schedules were implemented, more experienced, prepared mental health spokespersons were available for interviews.

The ARC Public Affairs function provided on-site operational briefings to mental health providers before each interview. These briefings discussed answers to anticipated or frequently asked questions. An ARC "Fact Sheet" with the statistics of the relief operation to date was also available to distribute to the reporters. The American Psychological Association (APA) Disaster Response Network (DRN) provided updates and fact sheets to recognized spokespersons. The DRN also secured interviews and instructed the media on important mental health issues related to the bombing and the recovery efforts.

The print and broadcast media were also very interested in talking with survivors, rescue workers, and family members of the deceased. Mental health providers in leadership positions, almost exclusively psychologists, put in place policies to limit the intrusion of the media while allowing survivors and family members that

wanted access to have it available to them. Mental Health and ARC Public Affairs specialists at the Compassion Center would brief each family member before their interview, escort them during the interview, and debrief them afterwards.

The media representatives were also "secondary victims" of this disaster. Their hours were long, the competition for the exclusive story was high, and the intensity of their exposure was great. Some local affiliate reporters first on the scene abandoned their equipment to assist with the rescue efforts. Like the rest of the Oklahoma City community, the local affiliates felt the blast, knew the victims and families, and experienced the transformation of their city. The ARC and the Oklahoma Critical Incident Stress Management Network were deployed to debrief many of the local affiliates on a group and individual basis.

Recommendations

1. *Selection of mental health spokespersons.* The DRN state coordinator should enlist a cadre of spokespersons. Psychologists who are comfortable with the media and who have expertise in child psychology, human development, post-traumatic stress disorder, and grief and bereavement would be optimal in mass casualty and terrorist events. These identified spokespersons should be trained in media relations and identified to the ARC Public Affairs and the APA DRN for local and national media referrals. It is politically useful, and indeed appropriate, that spokespersons include representatives of various agencies represented among the responders.

2. *Need for security at compassion centers and other sites.* Disaster plans need to include provisions for appropriate law enforcement to maintain a membrane of security against media intrusion into sensitive areas where recovering victims, grieving family members, and demobilizing rescue and relief workers congregate. Unarmed, non-law enforcement "gatekeepers" are not adequate to deter the aggressive and persistent efforts of the national media presence typical in such mass casualty events. It needs to be noted, however, that many national media representatives conduct themselves in a professional and respectful manner. This recommendation is not intended to impugn the professionalism of all media personnel.

3. *Assistance for families in dealing with media.* Survivors and family members should be offered a briefing before they talk with the media. A prepared handout with suggestions for dealing with the media would be helpful. Mental health providers should be available after the interview for debriefing and possible crisis intervention.

4. *Media personnel as secondary victims.* The broadcast and print media personnel should be viewed as potential secondary victims. Mental health providers may wish to include the local print and broadcast affiliates for separate

demobilization/defusing/debriefing in their disaster plan outreach. Since these are generally personnel on paid duty for for-profit corporations, however, media corporations should be encouraged to provide appropriate support for their employees. This may be accomplished through appropriate employee assistance program (EAP) contracts or independent contracts with disaster mental health providers.

XI. CONCLUSIONS

In the heartland of the United States, known for rodeos and tornadoes, a terrorist bombing of the Federal Building in downtown Oklahoma City created a mass casualty tragedy unheard of in the United States. The local mental health community responded immediately, gaining access and implementing services, based on long-standing relationships with the local American Red Cross (ARC) chapter and municipal and state emergency services agencies. National ARC mental health personnel provided the local mental health responders with mass casualty experience and organizational skills.

Although the human and material resources were plentiful, the execution of the mental health disaster response plan was not without problems. Some of the problems were unique to the culture of Oklahoma City but others could be problems encountered by other mental health professionals confronting a mass casualty incident or large-scale terrorist event in any community. The recommendations offered in this report have been distilled not only from the Task Force's collective experience in Oklahoma City and other mass casualty responses, but also from many other agencies and individuals instrumental in the mental health response following the federal building bombing.

The Task Force strongly encourages all governmental and private agencies concerned with disaster mental health to examine the recommendations in each section of this report. Several recommendations cut across a number of study groups; the Task Force re-states them in this conclusion to emphasize them further.

1. Mass Casualty Incidents Are Different from Other Disasters. Federal, state, and local authorities, ARC chapters, and mental health professionals need to understand that mass casualty incidents are different from other disasters. The psychological impact of these incidents appears to be more extreme than from other disasters. This severity also seems to lead to more immediate and long-term traumatic stress reactions. Broad community reaction is also common, and will be particularly likely in the aftermath of a terrorist incident. Federal, state, local, and ARC disaster plans need to provide for these consequences.

2. Immediate Response. Federal Emergency Management Agency (FEMA)/Center for Mental Health Services (CMHS) funded crisis intervention programs often involve assembling new teams of providers, that frequently include a significant proportion of paraprofessionals and unlicensed mental health professionals. Moreover, many of the licensed providers are unlikely to have training in disaster mental health and/or traumatic stress. In addition, few mental health professionals are trained in community outreach.

Therefore, the importance of quality training and consultation for mental health administrators and service providers to a community recovering from a mass casualty and/or terrorist act can not be too strongly emphasized. The training needs to be: (1) systematic and integrated into the project operation; (2) provided by recognized authorities in disaster and trauma; (3) ongoing, incremental, and sensitive to the unique needs of the community involved; and (4) routinely reviewed to ensure the consistent and effective direction of the training and its appropriateness to the changing nature of the needs of the providers and clients.

Similarly, there needs to be a clear and precise line of supervision for inexperienced licensed providers, unlicensed mental health providers, and paraprofessionals. This supervision needs to meet the standards of state laws for the state in which the services are provided. In many cases, this will require weekly supervision sessions.

3. Long-Term Response. The FEMA/CMHS-funded crisis intervention grants are authorized by the Robert T. Stafford Disaster Relief and Emergency Act. This legislation limits the activities of the grants it funds to short-term crisis intervention services. No provision is made for the long-term needs of those impacted by the disaster. Federal, state, and local authorities need to explore the means for funding and providing long term disaster mental health services.

4. Research. The scientist/practitioner model that lies at the heart of much of psychology recognizes the need for linkage between research and the provision of services. Needs assessment studies provide information regarding the numbers and locations of those needing services, and the nature of the services they may require. Program evaluation provides information regarding the quality of services provided. Treatment research has the capacity to evaluate the relative merits of different techniques for the provision of services. These types of research are critical for the service provider so they can ensure that people in need receive the most effective treatment possible as efficiently as possible.

The FEMA/CMHS-funded crisis intervention programs need to communicate actively with researchers studying the aftermath of the disasters that necessitated the crisis intervention program, learning from researchers in the immediacy of the moment, rather than relying solely on studies of previous incidents. Ideally, the Stafford Act would be modified to fund the critical work of the researchers, allowing science and practice to work together as a refined team, maximizing the value obtained for the funds expended in these efforts.

The Task Force considers its recommendations to be working hypotheses. Effective mental health responses following terrorist and/or mass casualty events should not be guided merely by convenience or tradition. Only rigorous investigation

of the outcome of past interventions will lead to improvement in our professional response. The psychological literature in disaster response and recovery must reach a point of maturation where such hypothesis testing is routine. Models, based on science, should be developed and elaborated or discarded for a more effective alternative. To our Task Force, this represents more than a scholastic interest. It is the way our profession can solemnly honor those who died, the survivors, and those that loved them.

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ABBREVIATIONS

APA	American Psychological Association
ARC	American Red Cross
CHAPPs	Cops Helping Alleviate Police Problems
CHF	Children's Hospital Foundation
CISD	Critical Incident Stress Debriefing
CISM	Critical Incident Stress Management
CISMNO	Critical Incident Stress Management Network of Oklahoma
CMHS	Center for Mental Health Services
DMHS	Disaster Mental Health Services function, American Red Cross
DMHS-1	Disaster Mental Health Services-1 (ARC training course)
DRN	Disaster Response Network, American Psychological Association
DSHR	Disaster Services Human Resources, ARC (national disaster team)
EAP	Employee Assistance Program
EMPO	Emergency Management Preparedness Office
EMS	Emergency Medical Services
ESF 6	Emergency Services Function (mass care) (in Federal Response Plan)
ESF 8	Emergency Services Function (medical) (in Federal Response Plan)
FEMA	Federal Emergency Management Agency
ICS	Incident Command System
IRB	Institutional Review Board
MADD	Mothers Against Drunk Driving
NIMH	National Institute for Mental Health
NOVA	National Organization for Victims Assistance
ODMHSAS	Oklahoma Department of Mental Health and Substance Abuse Services
OPA	Oklahoma Psychological Association
OUHSC	Oklahoma University Health Sciences Center
PTSD	Post-traumatic Stress Disorder
SAMHSA	Substance Abuse and Mental Health Services Administration

Brief Biographies, Task Force Members

John R. Tasse, PhD, chair of the Task Force, is a licensed clinical psychologist and the director of the Health Psychology Clinic at the Oklahoma City Veterans Affairs Medical Center. He is an assistant professor in the Department of Psychiatry and Behavior Sciences at the University of Oklahoma Health Sciences Center. Dr. Tasse is an American Red Cross volunteer and chair of the Disaster Mental Health function for the Oklahoma County chapter. He is also the APA's Disaster Response Network Oklahoma coordinator. Dr. Tasse served as the vice chair and clinical coordinator for the Critical Incident Stress Management network of Oklahoma from 1994 until 1996.

Elizabeth K. Carll, PhD, is a member of APA's national DRN advisory committee and founder and coordinator of the Disaster/Crisis Response Network of the New York State Psychological Association (NYSPA). She is also the founder and co-chair of the Task Force on Violence of NYSPA, and a volunteer for the ARC DSHR. Dr. Carll has intervened in the aftermath of traumatic incidents of all types and magnitudes. Dr. Carll is a licensed psychologist in private practice based on Long Island, New York and also consults to organizations for stress, crisis management, and workplace violence.

Gerard A. (Jerry) Jacobs, PhD, is a licensed clinical psychologist, the director of the Disaster Mental Health Institute, and a professor of psychology at the University of South Dakota. He is a member of APA's national DRN advisory committee. He is one of two American Red Cross National Consultants for Disaster Mental Health and serves on the ARC Aviation Disaster Task Force. His disaster responses as an ARC volunteer include four mass-casualty incidents.

Elinor Lottinville, PhD, is a licensed counseling psychologist in private practice in Oklahoma City focusing on critical-incident stress and disaster. In 1995, Dr. Lottinville received an award from the American Red Cross for Outstanding Services for the Community in Disaster Mental Health, and from the Oklahoma Psychological Association for Distinguished Contribution by a Psychologist for her work in the aftermath of the bombing of the A.P. Murrah Federal Building.

Jan Peterson is the director of public relations and special projects for APA's Practice Directorate and, in that capacity, manages the APA's Disaster Response Network. Ms. Peterson has worked in the field of communications for several nonprofit organizations in Washington, D.C., over the last 13 years and is also an adjunct faculty member at American University's School of Communication.

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References

Alexander, C. (1996, April). Statistical report of the critical incident stress management network of Oklahoma. Paper presented at the meeting of the APA Task Force on the Mental Health Response to the Oklahoma City Bombing, Oklahoma City.

American Red Cross. (1995, June). Disaster mental health services during the Oklahoma City bombing report.

Baker, V. (1995, July). Post-debriefing report. C.H.A.P.P.s (Cops Helping Alleviate Police Officer's Problems) Critical Incident Response and Support Team.

Baker, V. (1995, July). After action report following the Alfred P. Murrah federal building bombing of April 19, 1995. C.H.A.P.P.s (Cops Helping Alleviate Police Officer's Problems) Critical Incident Response and Support Team.

Injury Prevention Service. (1996, April). Injury update: Investigation of physical injuries directly associated with the Oklahoma City bombing. A Report to Oklahoma Injury Surveillance participants. Oklahoma City, Oklahoma: Oklahoma State Department of Health.

Isaac, M.S. (1996, April). A model to activate mental health services in a disaster: A law enforcement perspective. Criminal Investigative Division, Norman Oklahoma Police Department. Paper presented at the meeting of the APA Task Force on the Mental Health response to the Oklahoma City Bombing, Oklahoma City.

Krug, R.S., Pfefferbaum, B., Gurwitsch, R., Nixon, S., Foy, D., & Pynoos, R. (1995, November). The Oklahoma City bombing: A public mental health response. Paper presented at the annual meeting of the International Society for Traumatic Stress Studies, Boston.

Mental Health Hotwash Report. (1995, September). Mental health/stress management: Lessons learned, Oklahoma City, Oklahoma, April 19, 1995. Conducted by U.S. Public Health Services, Oklahoma City.

Project Heartland: Quarterly Report: FEMA Regular Crisis Counseling Services Grant. Oklahoma Department of Mental Health and Substance Abuse Services, August 1, 1996 - October 31, 1996.

Project Heartland: Quarterly Report: FEMA Regular Crisis Counseling Services Grant. Oklahoma Department of Mental Health and Substance Abuse Services, October 31, 1996.

Sitterle, K.A. (1995). Mental health services at the compassion center: The Oklahoma City bombing. National Center for PTSD Clinical Quarterly, 5 (4), 20-23.

Sitterle, K.A. & Gurwitch, R.U. (in press). The terrorist bombing in Oklahoma City. In E.S. Zinner & M.B. Williams (Eds.), When a community weeps: Case studies in group survivorship. Taylor-Francis.

Tassey, J. (1995). Personal impressions of the federal building bombing in Oklahoma City. National Center for PTSD Clinical Quarterly, 5 (4), 24-25.

Resources

American Psychological Association. (1996). Managing traumatic stress: Tips for recovering from disasters and other traumatic events [brochure]. Washington, DC: Author.

American Red Cross. Coping with disaster: Emotional health issues for disaster workers on assignment [brochure]. Washington, DC: Author.

American Red Cross. Coping with disaster: Emotional health issues for families of disaster workers [brochure]. Washington, DC: Author.

American Red Cross. Coping with disaster: Emotional health issues for victims [brochure]. Washington, DC: Author.

American Red Cross. Coping with disaster: Returning home from a disaster assignment [brochure]. Washington, DC: Author.

American Red Cross. (1991, April). Disaster mental health provider's course (ARC 3076A). Washington, DC: Author.

California Department of Mental Health, National Institute of Mental Health, & Federal Emergency Management Agency. (1991). Children and trauma: the school's response [Videotape]. (Available from Center for Mental Health Services, 5600 Fishers Lane, Room 16C-26, Rockville, MD 20857)

City of Berkeley Mental Health Division, California Department of Mental Health, National Institute of Mental Health & Federal Emergency Management Agency. (1992). Beyond the ashes [Videotape].

Farberow, N.L. & Frederick, C.J. (1978). Training manual for human service workers in major disasters (DHHS Publication No. ADM 86-538). Rockville, MD: National Institute of Mental Health.

Federal Emergency Management Agency. (1991). How to help children after a disaster: A guidebook for teachers (FEMA Publication No. 219). Washington, DC: Author. (Available from Federal Emergency Management Agency, 500 C Street, S.W., Room 265, Washington, DC 20472)

Federal Emergency Management Agency, Project COPE. (1991). School intervention following a critical incident (FEMA Publication No. 220). Washington, DC: Author. (Available from Federal Emergency Management Agency, 500 C Street, S.W.,

Room 265, Washington, DC 20472)

Flood Support Services, Washington State Mental Health Division. (1990). My flood book: Activities for children. WA: Author.

Hartsough, D.M. and Myers, D.G. (1985). Disaster work and mental health: Prevention and control of stress among workers (DHHS Publication No. ADM 87-1422). Rockville, MD: National Institute of Mental Health.

Instructional Media Resources, University of Maryland Baltimore County. (1985). Disaster psychology: Victim response [Videotape]. Catonsville, MD: Distributor.

Kiwanis Club. (1984). Safety and survival: Earthquake. Coalinga, CA: Author.

LaGreca, A.M., Vernberg, E.M., Silverman, W.K., Vogel, A.L., & Prinstein, M.S. (1992). Helping children prepare for and cope with natural disasters: A manual for professionals working with elementary school children. Coral Gables, FL: University of Miami & Florida International University, Departments of Psychology.

Lystad, M. (Ed.). (1985). Innovation in mental health services to disaster victims. Rockville, MD: National Institute of Mental Health.

Myers, D. (1994, August). Disaster response and recovery: A handbook for mental health professionals (DHHS Publication No. SMA 94-3010). Menlo Park, CA: U.S. Department of Health & Human Services.

National Institute of Mental Health. (1978). Field manual for human service workers in major disasters (DHHS Publication No. ADM 87-537). Rockville, MD: Author.

National Institute of Mental Health. (1984). Human response to disaster: Training emergency service workers [Videotape]. Rockville, MD: Distributor.

Preventive Psychiatry Associates Medical Group, Inc. (1989). My earthquake story: A guided activity workbook for children, families and teachers. Kentfield, CA: Author.

Preventive Psychiatry Associates Medical Group, Inc. (1990). My fire story: A guided activity workbook for children, families and teachers. Kentfield, CA: Author.

Santa Barbara County Department of Mental Health, California Department of

Mental Health, National Institute of Mental Health, & Federal Emergency Management Agency. (1991). Faces in the fire: One year later [Videotape]. (Available from Center for Mental Health Services, 5600 Fishers Lane, Room 16C-26, Rockville, MD 20857)

South Carolina Department of Mental Health, National Institute of Mental Health, & Federal Emergency Management Agency. (1990). Hurricane blues [Videotape]. (Available from the Center for Mental Health Service, 5600 Fishers Lane, Room 16C-26, Rockville, MD 20857)

South Carolina Department of Mental Health, South Carolina Educational Television Commission, National Institute of Mental Health, Federal Emergency Management Agency. (1990). Windswept hearts [Videotape].

Recommended Reading

The following recommended titles are an excerpt, obtained with permission, from Young, B.H., Ford, J.D., Ruzek, J.I. Friedman, M.J., & Gusman, F.D. (in press). Disaster Mental Health Services: A guidebook for clinicians and administrators. Department of Veterans National Center for PTSD Education & Executive Division: Menlo Park, CA; White River Junction, VT.

Abueg, F.R., & Hiley-Young, B. (1990). National Center mounts three-prong attack on earthquake response. National Center for PTSD: A Clinical Newsletter, 1(1), 1-5.

Alexander, D.A. (1993). The piper alpha oil rig disaster. In J.P. Wilson & B. Raphael (Eds.), International handbook of traumatic stress response syndromes (p.469). New York: Plenum Press.

Alexander, D.A. (1990). Psychological intervention for victims and helpers after disasters. British Journal of General Practice, 40, 345-348.

Anantharaman, V. (1992). Burns mass disasters: Etiology, predisposing situations and initial management. Annals of the Academy of Medicine, Singapore, 21, 635-639.

Anderson, T. (1988). An airport director's perspective on disaster planning and mental health needs. American Psychologist, 43, 721-723.

Applegate, W.B., Runyan, J.W. Jr., Brasfield, L., Williams, M.L., Konigseer, G., & Fouche, C. (1981). Analysis of the 1980 heat wave in Memphis. Journal of the American Geriatrics Society, 29, 337-342.

Aptekar, L., & Boore, J.A. (1990). The emotional effects of disaster on children: A review of the literature. International Journal of Mental Health, 19, 77-90.

Arana, G.W., Huggins, E., & Currey, H. (1992). Management of a psychiatric inpatient service during and after Hurricane Hugo. In Austin, L.S., (Ed.), Responding to disaster: A guide for mental health professionals (pp.201-210). Washington, DC: American Psychiatric Press.

Armstrong, K.R., O'Callahan, W., & Marmar, C.R. (1991). Debriefing Red Cross disaster personnel: The multiple stressor debriefing model. Journal of Traumatic Stress, 4, 581-593.

Austin, L.S. (Ed.) (1992). Responding to disaster: A guide for mental health

professionals. Washington, DC: American Psychiatric Press.

Babins, L. (1987). Cognitive processes in the elderly: General factors to consider. Gerontology and Geriatric Education, 8, 9-22.

Bartone, P.T., & Wright, K.M. (1990). Grief and group recovery following a military air disaster. Journal of Traumatic Stress, 3, 523-539.

Bartone, P.T., Ursano, R.J., Wright, K.M., & Ingraham, L.H. (1989). The impact of a military air disaster on the health of assistance workers: A prospective study. Journal of Nervous and Mental Disease, 177, 317-328.

Baum, A., & Fleming, I. (1993). Implications of psychological research on stress and technological accidents. American Psychologist, 48, 665-67.

Baum, A., Cohen, L., & Hall, M. (1993). Control and intrusive memories as possible determinants of chronic stress. Psychosomatic Medicine, 55, 274-286.

Baum, A., Solomon, S.D., Ursano, R., Joseph, B., Leonard, B., Edward, B., Green, B.L., Keane, T.M., Laufer, R., Norris, F., Reid, J., Smith, E.M., & Steinglass, P. (1993). Emergency/disaster studies: Practical, conceptual, and methodological issues. In J.P. Wilson & B. Raphael, (Eds.) International handbook of traumatic stress syndromes (pp. 125-133). New York: Plenum Press.

Berezofsky, E.E. (1987). Post-traumatic stress disorder and the technological disaster. Rutgers Law Journal, 18, 623-661.

Berren, M.R., Santiago, J.M., Beigel, A., & Timmons, S.A. (1989). A classification scheme for disasters. In R. Gist, & B Lubin (Eds.), Psychosocial aspects of disaster (pp. 40-58). New York: Wiley.

Blake, D.D., Albano, A.M., & Keane, T.M. (1992). Twenty years of trauma: Psychological abstracts 1970 through 1989. Journal of Traumatic Stress, 5, 477-484.

Bland, S.H., O'Leary, E.S., Farinaro, E., Jossa, F., & Trevisan, M. (1996). Long-term psychological effects of natural disasters. Psychosomatic Medicine, 58, 18-24.

Bolin, R. (1989). Natural disasters. In R. Gist, & B. Lubin (Eds.), Psychosocial aspects of disaster (pp.61-85). New York: Wiley.

Bowler, R.M., Mergler, D., Huel, G.C. & James, E. (1994). Psychological, psychosocial, and psychophysiological sequelae in a community affected by a railroad

chemical disaster. Journal of Traumatic Stress, 7, 601-624.

Brady, K.T., Sonne, S.C., & Roberts, J.M. (1995). Sertraline treatment of comorbid post traumatic stress disorder and alcohol dependence. Journal of Clinical Psychiatry, 56, 502-505.

Bravo, M., Rubio-Stipec, M.C., & Glorisa, J. (1990). Methodological aspects of disaster mental health research. International Journal of Mental Health, 19, 37-50 .

Bravo, M., Rubio-Stipec, M., Canino, G.J., Woodbury, M.A., & Ribera, J.C. (1990). The psychological sequelae of disaster stress prospectively and retrospectively evaluated. American Journal of Community Psychology, 18, 661-680.

Breslau, N., Davis, G.C., & Andreski, P. (1991). Traumatic events and post-traumatic stress disorder in an urban population of young adults. Archives of General Psychiatry, 48, 216-222.

Brom, D., Kleber, R.J., & Defares, P.B. (1989). Brief psychotherapy for post-traumatic stress disorders. Journal of Consulting and Clinical Psychology, 57, 607-612.

Brooks, N., & McKinlay, W. (1992). Mental health consequences of the Lockerbie Disaster. Journal of Traumatic Stress, 5, 527-543.

Bumagin, V.E., & Hirn, K.F. (1990). Helping the aging family: A guide for professionals. New York: Springer.

Burger, J.M., & Palmer, M.L. (1992). Changes in and generalization of unrealistic optimism following experiences with stressful events: Reactions to the 1989 California earthquake. Personality and Social Psychology Bulletin, 18, 39-43.

Butcher, J.N., & Dunn, L.A. (1989). Human responses and treatment needs in airline disasters. In R. Gist, & B Lubin (Eds.), Psychosocial aspects of disaster (pp. 86-119). New York: Wiley.

Butcher, J.N., & Hatcher, C. (1988). The neglected entity in air disaster planning: Psychological services. American Psychologist, 43, 724-729.

Canino, G.J., Bravo, M., Rubio-Stipec, M., & Woodbury, M.A. (1990). The impact of disaster on mental health: Prospective and retrospective analyses. International Journal of Mental Health, 19, 51-69.

Cardena, E., & Spiegel, D. (1993). Dissociative reactions to the San Francisco

Bay Area earthquake of 1989. American Journal of Psychiatry, 150, 474-478.

Carter, G.L. (1995). Psychosocial sequelae of the 1989 Newcastle earthquake: Community disaster experiences and psychological morbidity 6 months post-disaster. Psychological Medicine, 25, 539-555.

Catherall, D.R. (1989). Differentiating intervention strategies for primary and secondary trauma in post-traumatic stress disorder: The example of Vietnam veterans. Journal of Traumatic Stress, 2, 289-304.

Chen, X.D., & Kejing, P.A. (1992). Disaster, tradition and change: Remarriage and family reconstruction in a post-earthquake community in the People's Republic of China. Journal of Comparative Family Studies, 23, 115-132 .

Cohen, R.E. (1988). Intervention programs for children. In M.Lystad (Ed.), Mental health response to mass emergencies: Theory and practice (pp. 262-283). New York: Brunner/Mazel.

Cohen, R.E. (1992). Training mental health professionals to work with families in diverse cultural contexts. In L.S. Austin (Ed.), Responding to disaster: A guide for mental health professionals (pp. 69-80). Washington, DC: American Psychiatric Press.

Cohen, R.E. (1987). The Armero tragedy: Lessons for mental health professionals. Hospitals and Community Psychiatry, 38, 1316-1321.

Cole, K.D., & McConnaha, D.L. (1986). Understanding and interacting with older patients. Journal of the American Optometric Association, 57, 920-925.

Collins, K. (1988). Hypothermia in the elderly. Health Visitor, 61, 50-51.

Comfort, L.K. (1990). Turning conflict into cooperation: Organizational designs for community response in disasters. International Journal of Mental Health, 19, 89-108.

Creamer, M., Buckingham, W.J., & Burgess, P.M. (1991). A community based mental health response to a multiple shooting. Australian Psychologist, 26, 99-102.

Creamer, M., Burgess, P.M., Buckingham, W.J., & Pattison, P. (1989). The psychological aftermath of the Queen Street shooting. Parkville, Victoria, Australia: Department of Psychology, University of Melbourne.

Creamer, M., Burgess, P.M., & Pattison, P. (1990). Cognitive processing in

post-trauma reactions: Some preliminary findings. Psychological Medicine, 20, 597-604.

Cunningham, W.R. (1987). Intellectual abilities and age. Annual Review of Gerontology and Geriatrics, 7, 117-134.

Davidson, J. R. T., & Fairbank, J.A. (1993). The epidemiology of posttraumatic stress disorder. In J.T.T. Davidson & E. Foa (Eds.), Posttraumatic stress disorder: DSM-IV and beyond (pp. 149-169). Washington, DC: American Psychiatric Press.

Davidson, L.M., & Baum, A. (1986). Chronic stress and post-traumatic stress disorders. Journal of Consulting and Clinical Psychology, 54, 303-308.

Dayal, H.H., Baranowski, T.L., & Yi-hwei, M.R. (1994). Hazardous chemicals: Psychological dimensions of the health sequelae of a community exposure in Texas. Journal of Epidemiology and Community Health, 48, 560-568.

De la Fuente, J.R. (1990). The mental health consequences of the 1985 earthquakes in Mexico. International Journal of Mental Health, 19, 21-29.

Dinneen, M.P., Pentzien, R.J., & Mateczun, J.M. (1994). Stress and coping with the trauma of war in the Persian Gulf: The hospital ship USNS Comfort. In R.J. Ursano, B.G. McCaughey, & C.S. Fullerton (Eds.), Individual and community responses to trauma and disaster: The structure of human chaos (pp. 306-329). Cambridge: Cambridge University Press.

Dixon, P., Rehling, G., & Shiwach, R. (1993). Peripheral victims of the Herald of Free Enterprise disaster. British Journal of Medical Psychology, 66, 193-202.

Dohrenwend, B.P., Dohrenwend, B.S., Warheit, G.J., Bartlett, G.S., Goldsteen, R.L., Goldsteen, K., & Martin, J.L. (1981). Stress in the community: A report to the President's Commission on the Accident at Three Mile Island. Annals of the New York Academy of Sciences, 365, 159-174 .

Dollinger, S.J., & Cramer, P. (1990). Children's defensive responses and emotional upset following a disaster: A projective assessment. Journal of Personality Assessment, 54, 116-127.

Drake, R.E., McHugo, G.J., Becker, D.R., Anthony, W.A., et al. (1996). The New Hampshire study of supported employment for people with severe mental illness. Journal of Consulting & Clinical Psychology, 64, 391-399.

Dubin, W.R., & Fink, P.J. (1992). Effects of stigma on psychiatric treatment.

In P. Fink & A. Tasman, (Eds.), Stigma and Mental Illness (pp.1-7). Washington, DC: American Psychiatric Press.

Duckworth, D.H. (1991). Information requirements for crisis intervention after disaster work. Stress Medicine, 7, 19-24.

Dufka, C.L. (1988). The Mexico City earthquake disaster. Social Casework, 69, 162-170.

Duggan, C., & Gunn, J. (1995). Medium-term course of disaster victims: A naturalistic follow-up. British Journal of Psychiatry, 167, 228-232.

Dunning, C. (1988). Intervention strategies for emergency workers. In M.Lystad (Ed.), Mental health response to mass emergencies: Theory and practice pp.284-307.

Dunning, C. (1990). Mental health sequelae in disaster workers: Prevention and intervention. International Journal of Mental Health, 19, 91-103.

Earls, F., Smith, E.M., Reich, W.J., & Kenneth, G. (1988). Investigating psychopathological consequences of a disaster in children: A pilot study incorporating a structured diagnostic interview. Journal of the American Academy of Child and Adolescent Psychiatry, 27, 90-95.

Engelbrektsson, O. (1992). The Boras hotel fire 1978: The event and physical personal injuries. Psychiatric Fennica, 23, 114-120.

Erikson, K.T. (1976). Loss of communality at Buffalo Creek. American Journal of Psychiatry, 133, 302-305.

Ersland, S., Weisaeth, L., Sund, A. (1989). The stress upon rescuers involved in an oil rig disaster: "Alexander, L.K." 1980. Acta Psychiatrica Scandinavica, 355, 38-49.

Escobar, J.I., Canino, G.J., Rubio-Stipec, M., & Bravo, M. (1992). Somatic symptoms after a natural disaster: A prospective study. American Journal of Psychiatry, 149, 965-967.

Eth, S. & Pynoos, R.S. (1985). Developmental perspective on psychic trauma in childhood. In C.R. Figley (Ed.), Trauma and its wake. New York: Brunner/Mazel.

Eth, S. & Pynoos, R.S. (1985). Post-traumatic stress disorder in children. Washington, DC: American Psychiatric Press.

Eth, S. (1992). Clinical response to traumatized children. In L.S. Austin (Ed.), Responding to disaster: A guide for mental health professionals (pp. 101-123). Washington, DC: American Psychiatric Press.

Evans, R.C., & Evans, R.J. (1992). Accident and emergency medicine - Postgraduate. Medical Journal, 68, 786-799.

Everly, G.D. & Mitchell, J.T. (1992). The prevention of work-related post-traumatic stress: The critical incident stress debriefing process. Paper presented at the Second APA/NIOSH Conference on Occupational Stress, Washington: November 1992.

FEMA (1994). Community Emergency Response Team: Participant Handbook. A publication of FEMA, Emergency Management Institute, and the National Fire Academy (p.VI-7). FEMA Workbook for developing an application for crisis counseling services for disaster victims.

Fifer, S.K., Mathias, S.D., Patrick, D.L., Mazonson, P.D., et al. (1994). Untreated anxiety among adult primary care patients in a health maintenance organization. Archives of General Psychiatry, 51, 740-750.

Fink, P.J., & Tasman, A. (1992). Stigma and mental illness. Washington, DC: American Psychiatric Press.

Flynn, B.W. (1994). Mental health services in large-scale disasters: An overview of the crisis counseling program. National Center for PTSD Clinical Quarterly, 4(2), 11-12.

Foa, E.B., Hearst-Ikeda, D.E., & Perry, K.J. (1995). Evaluation of a brief cognitive-behavioral program for the prevention of chronic PTSD in recent assault victims. Journal of Consulting and Clinical Psychology, 63, 48-955.

Foa, E.B., Molnar, C., & Cashman, L. (1995). Change in rape narratives during exposure therapy for post-traumatic stress disorder. Journal of Traumatic Stress, 8, 675-690.

Foa, E.B., Riggs, D.S., & Gershuny, B.S. (1995). Arousal, numbing, and intrusion: Symptom structure of PTSD following assault. American Journal of Psychiatry, 152, 116-120.

Foa, E.B., Riggs, D.S., Massie, E.D., & Yarczower, M. (1995). The impact of fear activation and anger on the efficacy of exposure treatment for post-traumatic stress disorder. Behavior Therapy, 26, 487-490.

Foa, E.B., Rothbaum, B.O., & Molnar, C. (1995). Cognitive-behavioral therapy of post-traumatic stress disorder. In M.J. Friedman, D.S. Charney, & A.Y. Deutch (Eds.), Neurobiological and clinical consequences of stress: From normal adaptation to post-traumatic stress disorder (pp. 483-494). Philadelphia, PA: Lippincott Raven.

Ford, J.D., Ruzek, J.I., & Niles, B.L. (1996). Identifying and treating patients in VA medical care with undetected sequelae of psychological trauma and PTSD. National Center for PTSD Clinical Quarterly, 6, 77-82.

Foreman, C. (1992). Disaster counseling. American Counselor, 1, 28-32.

Foreman, C. (1994). Immediate post-disaster treatment of trauma. In M.B. Williams & J.F. Sommer, J.F. (Eds.), Handbook of post-traumatic therapy (pp. 267-282). Westport, Connecticut: Greenwood Press.

Frank, E., & Spanier, C. (1995). Interpersonal psychotherapy for depression. Clinical Psychology, 2, 349-369.

Freedy, J.R., Kilpatrick, D.G., & Resnick, H.S. (1993). Natural disasters and mental health: Theory, assessment, and intervention. Journal of Social Behavior and Personality, 8, 49-103.

Freedy, J.R., Resnick, H.S., & Kilpatrick, D.G. (1992). Conceptual framework for evaluating disaster impact: Implications for clinical intervention. In L.S. Austin, (Ed.), Responding to disaster: A guide for mental health professionals (pp.3-23). Washington, DC: American Psychiatric Press.

Freedy, J.R., Saladin, M.E., Kilpatrick, D.G., Resnick, H.S., & Saunders, B.E. (1994). Understanding acute psychological distress following natural disaster. Journal of Traumatic Stress, 7, 257-273.

Freedy, J.R., Shaw, D.L, Jarrell, M.P., & Masters, C.R. (1992). Towards an understanding of the psychological impact of natural disasters: An application of the Conservation Resources stress model. Journal of Traumatic Stress, 5, 441-454.

Friedman, M.J. (1996). Biological alterations in PTSD: Implications for pharmacotherapy. In E. Giller & L. Weisaeth (Eds.), Baillieu's Clinical Psychiatry: International Practice and Research: Post-Traumatic Stress Disorder, (Volume 2, 245-262). London: Bailliere Tindall.

Friedman, M.J., & Southwick, S.M. (1995). Towards pharmacotherapy for post-traumatic stress disorder. In M.J. Friedman, D.S. Charney & A. Y. Deutch (Eds.),

Neurobiological and clinical consequences of stress: From normal adaptation to post-traumatic stress disorder (pp. 465-481). Philadelphia, PA: Lippincott-Raven.

Friedman, M.J., & Yehuda, R. (1995). Post-traumatic stress disorder and comorbidity: Psychobiological approaches to differential diagnosis. In M.J. Friedman, D.S. Charney, & A.Y. Deutch (Eds.), Neurobiological and clinical consequences of stress: From normal adaptation to post-traumatic stress disorder (pp. 429-445). Philadelphia, PA: Lippincott-Raven.

Friedman, M.J., Charney, D.S., & Deutch, A.Y. (Eds.) (1995). Neurobiological and clinical consequences of stress: From normal adaptation to PTSD. Philadelphia, PA: Lippincott-Raven.

Friedman, M.J., Charney, D.S., & Southwick, S.M. (1993). Pharmacotherapy for recently evacuated military casualties. Military Medicine, 158, 493-497.

Fuentes, A.L. (1987). The seismic disaster in Mexico City: September, 1985. Geographia Medical, 17, 63-84.

Fullerton, C.S., Wright, K.M, Ursano, R.J., & McCarroll, J.E. (1990). Recovery from exposure to death and the dead: The buffering role of spouse/significant other support. In J.E. Lundeborg, U. Otto, & B. Rybeck (Eds.), Wartime Medical Services: Second International Conference, Stockholm, Sweden, 25-29 June 1990 proceedings, 178-182. Stockholm: FOA.

Garrison, C.Z., Bryant, E.S., Addy, C.L., Spurrier, P.G., Freedy, J.R., & Kilpatrick, D.G. (1995). Post-traumatic stress disorder in adolescents after Hurricane Andrew. Journal of the American Academy of Child and Adolescent Psychiatry, 34, 1193-1201.

Gavalya, A.S. (1987). Reactions to the 1985 Mexican earthquake: Case vignettes. Hospital and Community Psychiatry, 38, 1327-1330.

Gelman, D. (1989). Coping with quake fear. Newsweek, 114, 42-47.

Genest, M., Levine, J., Ramsden, V., & Swanson, R. (1990). The impact of providing help: Emergency workers and cardiopulmonary resuscitation attempts. Journal of Traumatic Stress, 3, 305-313.

Gerrity, E.T, & Steinglass, P. (1994). Relocation stress following natural disasters. In R.J. Ursano, B.G. McCaughey, & C.S. Fullerton (Eds.), Individual and community responses to trauma and disaster: The structure of human chaos (pp. 220-247). Cambridge: Cambridge University Press.

Giel, R. (1990). Psychosocial processes in disasters. International Journal of Mental Health, 19, 720.

Gist, R., & Lubin, B. (Eds.). (1989). Psychosocial aspects of disaster. New York: Wiley.

Goenjian, A.K., Pynoos, R.S., Steinberg, A.M., Najarian, L.M., Asarnow, J.R., Karayan, I., Ghurabi, M., & Fairbanks, J.A. (1995). Psychiatric comorbidity in children after the earthquake in Armenia. Journal of the American Academy of Child and Adolescent Psychiatry, 34, 1174-1184.

Goenjian, A., Najarian, L.M., Pynoos, R.S., Steinberg, A.M., Manoukian, G., Tavosian, A., & Fairbanks, L.A. (1994). Post-traumatic stress disorder in elderly and younger adults after the 1988 earthquake in Armenia. American Journal of Psychiatry, 151, 895-901.

Grace, M.C., Green, B.L., Lindy, J.D., & Leonard, A.C. (1993). The Buffalo Creek disaster: A 14-year follow-up. In J.P. Wilson & B. Raphael, B. (Eds.), International handbook of traumatic stress syndromes (pp. 441-449). New York: Plenum Press.

Graeber, M. (1990). Shock and aftershock: Mental health and the California earthquake. VA Practitioner, 7, 80-81.

Green, B.L., & Lindy, J.D. (1994). Post-traumatic stress disorder in victims of disasters. Psychiatric Clinics of North America, 17, 301-309.

Green, B.L. (1991). Evaluating the effects of disasters. Psychological Assessment, 3, 538-546.

Green, B.L., Korol, M., Grace, M.C., Vary, M.G., Leonard, A.C., Gleser, G.C., & Smitson-Cohen. (1991). Children and disaster: Age, gender, and parental effects on PTSD symptoms. Journal of the American Academy of Child and Adolescent Psychiatry, 30, 945-951.

Green, B.L., & Lindy, J.D. (1994). Post-traumatic stress disorder in victims of disasters. Psychiatric Clinics of North America, 17, 301-309.

Green, B.L., Grace, M.C., Lindy, J.D., Gleser, G., Leonard, A.C., & Kramer, T.L. (1990). Buffalo Creek survivors in the second decade: Comparison with unexposed and nonlitigant groups. Journal of Applied Social Psychology, 20, 1033-1050.

Green, B.L., Lindy, J.D., Grace, M.C., & Leonard, A.C. (1992). Chronic post-

traumatic stress disorder and diagnostic comorbidity in a disaster sample. Journal of Nervous and Mental Disease, 180, 760-766.

Green, B.L., Lindy, J.D., Grace, M.C., Gleser, G., Leonard, A.C., Korol, M., & Winget, C. (1990). Buffalo Creek survivors in the second decade: Stability of stress symptoms. American Journal of Orthopsychiatry, 60, 43-54.

Greening, L., & Dollinger, S.J. (1992). Illusions (and shattered illusions) of invulnerability: Adolescents in natural disaster. Journal of Traumatic Stress, 5, 63-75.

Gregg, W., Medley, I., Fowler-Dixon, R., Curran, P.S., Loughrey, G.C., Bell, P., Lee, A., & Harrison, G. (1995). Psychological consequences of the Kegworth air disaster. British Journal of Psychiatry, 167, 812-817.

Griffin, C. (1987). Community disasters and post-traumatic stress disorder: A debriefing model for response. In T. Williams (Ed.), Post-traumatic stress disorders: A handbook for clinicians (pp. 293-298). Cincinnati, OH: Disabled American Veterans.

Gusman, F.D., Abueg, F.R. & Friedman, M.J. (1991). Emotional structural preparedness (ESP): A comprehensive model for management of traumatic stress. National Center for Post-Traumatic Stress Disorder. Operation Desert Storm clinician packet. Palo Alto, CA: U.S. Department of Veterans Affairs.

Haaland, K.Y., Harrington, D.L., Gice, J.W. (1993). Effects of aging on planning and implementing arm movements. Psychology of Aging, 8, 617-632.

Hagstrom, R. (1995). The acute psychological impact on survivors following a train accident. Journal of Traumatic Stress, 8, 391-402.

Hammarberg, M. (1992). Penn Inventory for post-traumatic stress disorder: Psychometric properties. Psychological Assessment, 4, 67-76.

Handford, H.A., Martin, E.D., & Kales, J.D. (1988). Clinical interventions in emergencies: Technological accidents. In M.Lystad (Ed.), Mental health response to mass emergencies: Theory and practice (pp. 181-210). New York: Brunner/Mazel.

Hanson, R.F., Kilpatrick, D.G., Freedy, J.R., & Saunders, B.E. (1995). Los Angeles County after the 1992 civil disturbances: Degree of exposure and impact on mental health. Journal of Consulting and Clinical Psychology, 63, 87-996.

Hardin, S.B., Weinrich, M.W., Sally, H.T.L., & Garrison, C. (1994). Psychological distress of adolescents exposed to Hurricane Hugo. Journal of

Traumatic Stress, 7, 427-440.

Harvey, H., Stein, S.K., Olsen, N., Roberts, R.J., Lutgendorf, S.K; & Ho, J.A. (1995). Narratives of loss and recovery from a natural disaster. Journal of Social Behavior and Personality, 10, 313-330.

Hefez, A.M., & Lavie, P. (1987). Long-term effects of extreme situational stress on sleep and dreaming. American Journal of Psychiatry, 144, 344-347.

Helzer, J.E., Robins, L.N., & McEvoy, L. (1987). Post-traumatic stress disorder in the general population: Findings of the epidemiologic catchment area survey. New England Journal of Medicine, 317, 1630-1634.

Henggeler, S.W., Schoenwald, S.K., & Pickrel, S.G. (1995). Multisystemic therapy: Bridging the gap between university- and community-based treatment. Journal of Consulting & Clinical Psychology, 63, 709-717.

Henry, J.P., & McCallum, J. (1986). Education, lifestyle, and the health of the aging. In, D.A. Peterson, J.E. Thornton, & J. E. Birren (Eds.), Education and aging (pp. 149-184). Englewood Cliffs, NJ: Prentice Hall.

Herman, J.L. (1992). Trauma and Recovery. New York: Basic Books.

Hiley-Young, B. & Gerrity, E. (1994). Critical incident stress debriefing (CISD): Value and limitations in disaster response. National Center for Post Traumatic Stress Disorder Clinical Quarterly, 4 (2), 17-19.

Hiley-Young, B. (1992). Trauma reactivation and treatment: Integrated case examples. Journal of Traumatic Stress, 5, 545-555.

Hiley-Young, B. (1991). "The Parents Drop-In Group Outline." School intervention following a critical incident. Project COPE, Federal Emergency Management Agency Publication 220, pp. 16-17.

Hiley-Young, B., & Giles, S. (1992). Secondary prevention with high risk children in an elementary school. National Center for PTSD: A Clinical Newsletter, 1(4).

Hinks, M. (1991). Post-traumatic stress: You'll never walk alone. Nursing Times, 87, 34-35.

Hodgkinson, P.E. & Shepherd, M.A. (1994): The impact of disaster support work. Journal of Traumatic Stress, 7, 587-600.

Hodgkinson, P.E. (1988). Psychological after effects of transportation disaster. Medicine, Science and the Law, 28, 304-309.

Hodgkinson, P.E. (1989). Technological disaster: Survival and bereavement. Social Science and Medicine, 29, 351-356.

Hodgkinson, P.E., Joseph, S.A., Yule, W., & Williams, R.M. (1993). Viewing human remains following disaster: Helpful or harmful? Medicine, Science and the Law, 33, 197-202.

Hodgkinson, P.E., Joseph, S.A., Yule, W., & Williams, R. (1995). Measuring grief after sudden violent death: Zeebrugge bereaved at 30 months. Personality and Individual Differences, 18, 805-808.

Hoffman, S.M. (1994). Up from the embers: A disaster survivor's story. National Post Traumatic Stress Clinical Quarterly, 4, 15-16.

Holen, A. (1991). A longitudinal study of the occurrence and persistence of post-traumatic health problems in disaster survivors. Stress Medicine, 7, 11-17.

Hutchins, G.L., & Norris, F.H. (1989). Life change in the disaster recovery period. Environment and Behavior, 21, 33-56.

Hytten, K., & Hasle, A. (1989). Fire fighters: A study of stress and coping. Acta Psychiatrica Scandinavica. Supplementum, 355, 50-55.

Ivarsson, B.A.R., & Pollack, D.N. (1992). The Boras hotel fire 1978: Psychosocial reactions in a ten year perspective. Psychiatric Fennic, 23, 120-132.

Jacobs, G.A, Quevillon, R.P., & Stricherz, M. (1990). Lessons from the aftermath of Flight 232: Practical considerations for the mental health profession's response to air disasters. American Psychologist, 45, 1329-1335.

James, B. (Ed). (1989). Crisis intervention in large-scale disasters. In B. James (Ed.), Treating traumatized children: New insights and creative interventions (pp. 179-189). Lexington, MA: Lexington Books.

Janoff-Bulman, R. (1985). The aftermath of victimization: Rebuilding shattered assumptions. In C.R. Figley (Ed.), Trauma and Its Wake, Volume 1, (pp.15-35). New York: Brunner/Mazel.

Johnson, K.J. (1989). Trauma in the lives of children. Claremont, CA: Hunter House.

Jones, R.T., Ribbe, D.P., & Cunningham, P. (1994). Psychosocial correlates of fire disaster among children and adolescents. Journal of Traumatic Stress, 7, 117-122.

Joseph, S.A., Andrews, B., Williams, R.M., & Yule, W. (1992). Crisis support and psychiatric symptomatology in adult survivors of the Jupiter cruise ship disaster. British Journal of Clinical Psychology, 31, 63-73.

Joseph, S.A., Brewin, C.R., Yule, W., & Williams, R. (1992). Survivors of disaster. British Journal of Psychiatry, 160, 715-716.

Joseph, S.A., Brewin, C.R., Yule, W., & Williams, R. (1993). Causal attributions and posttraumatic stress in adolescents. Journal of Child Psychology and Psychiatry and Allied Disciplines, 34, 247-253.

Joseph, S.A., Brewin, C.R., Yule, W., & Williams, R.M. (1991). Causal attributions and psychiatric symptoms in survivors of the Herald of Free Enterprise disaster. British Journal of Psychiatry, 159, 542-546.

Joseph, S.A., Hodgkinson, P.E., Yule, W., & Williams, R. (1993). Guilt and distress 30 months after the capsizing of the Herald of Free Enterprise. Personality and Individual Differences, 14, 271-273.

Joseph, S.A., Williams, R., & Yule, W. (1992). Crisis support, attributional style, coping style, and post-traumatic symptoms. Personality and Individual Differences, 13, 1249-1251.

Joseph, S.A., Yule, W., & Williams, R. (1994). The Herald of Free Enterprise disaster: The relationship of intrusion and avoidance to subsequent depression and anxiety. Behaviour Research and Therapy, 32, 115-117.

Joseph, S.A., Yule, W., & Williams, R.M. (1995). Emotional processing in survivors of the Jupiter cruise ship disaster. Behaviour Research and Therapy, 33, 187-192.

Joseph, S.A., Yule, W., Williams, R., & Andrews, B. (1993). Crisis support in the aftermath of disaster: A longitudinal perspective. British Journal of Clinical Psychology, 32, 177-185.

Joseph, S.A., Yule, W., Williams, R., & Hodgkinson, P.E. (1993). Increased substance use in survivors of the Herald of Free Enterprise disaster Source: British Journal of Medical Psychology, 66, 185-191.

Joseph, S.A., Williams, R., & Yule, W. (1993). Changes in outlook following disaster: The preliminary development of a measure to assess positive and negative responses. Journal of Traumatic Stress, 6, 271-279.

Joseph, S.A., Yule, W., Williams, R., & Hodgkinson, P.E. (1993). The Herald of Free Enterprise disaster: Measuring post-traumatic symptoms 30 months on. British Journal of Clinical Psychology, 32, 327-331.

Joseph, S.A., Yule, W., Williams, R., & Hodgkinson, P.E. (1993). Increased substance use in survivors of the Herald of Free Enterprise disaster. British Journal of Medical Psychology, 66, 185-191.

Kalayam, B., Alexopoulos, G., Merrell, H., Young, R., et al. (1991). Patterns of hearing loss and psychiatric morbidity in elderly patients attending a hearing clinic. International Journal of Geriatric Psychiatry, 6, 131-136.

Kaniasty, K.Z., Norris, F.H., & Murrell, S.A. (1990). Received and perceived social support following natural disaster. Journal of Applied Social Psychology, 20, 85-114.

Kaniasty, K.Z., & Norris, F.H. (1995). In search of altruistic community: Patterns of social support mobilization following Hurricane Hugo. American Journal of Community Psychology, 23, 447-477.

Kapoor, R. (1992). The psychosocial consequences of an environmental disaster: Selected case studies of the Bhopal gas tragedy. Population and Environment, 13, 209-215.

Katz, I.R., Stoff, D., Muhly, C., & Bari, M. (1988). Identifying persistent adverse effects of anticholinergic drugs in the elderly. Journal of Geriatric Psychiatry and Neurology, 1, 212-217.

Kaufman, A. (1989). Counseling disaster victims. Practitioner, 233, 1423.

Keane, A., Pickett, M., Jepson, C., McCorkle, R., & Lowery, B.J. (1994). Psychological distress in survivors of residential fires. Social Science and Medicine, 38, 1055-1060.

Keane, T.M. (1989). Post-traumatic stress disorder: Current status and future directions. Behavior Therapy, 20, 149-153.

Keane, T.M. (1995). The role of exposure therapy in the psychological treatment of PTSD. National Center for PTSD Clinical Quarterly, 5(4) 1-6.

- Keckich, W.A., & Young, M. (1983). Anaclitic depression in the elderly. Psychiatric Annals, 13, 691-696.
- Kenney, W.L. & Hodgson, J.L. (1987). Heat tolerance, thermoregulation and aging. Sports Medicine, 4, 446-456.
- Kent, G. (1991). Reactions of medical students affected by a major disaster. Academic Medicine, 66, 368-370.
- Kent, G.G., & Kunkler, A.J. (1992). Medical student involvement in a major disaster. Medical Education, 26, 87-91.
- Kim-Goh, M., Suh, C., Blake, D.D., & Hiley-Young, B. (1995). The psychological impact of the Los Angeles Riots on Korean-American victims and implication for treatment. Journal of Orthopsychiatry, 65, 138-146.
- Koopman, C., Classen, C., Cardena, E., & Spiegel, D. (1995). When disaster strikes, acute stress disorder may follow. Journal of Traumatic Stress, 8, 29-46.
- Koopman, C., Classen, C.C., & Spiegel, D. (1994). Predictors of post-traumatic stress symptoms among survivors of the Oakland/Berkeley, Calif., firestorm. American Journal of Psychiatry, 151, 888-894.
- Koss, M.P., Woodruff, W.J., & Koss, P G. (1990). Relation of criminal victimization to health perceptions among women medical patients. Journal of Consulting and Clinical Psychology, 58, 147-152.
- Kutner, M. (1996). Crisis management: Keeping a company strong in times of trouble. Disaster Recovery Journal, 9(1), 77-79.
- La Greca, A.M., Silverman, W.K., Vernberg, E.M., & Prinstein, M.J. (1996). Symptoms of post-traumatic stress in children after Hurricane Andrew: A prospective study. Journal of Consulting and Clinical Psychology, 64, 712-723.
- Lebedun, M., & Wilson, K.E. (1989). Planning and integrating disaster response. In R. Gist, & B. Lubin (Eds.), Psychosocial aspects of disaster (pp.268-279). New York: Wiley.
- Lechat, M.F. (1990). The public health dimensions of disasters. International Journal of Mental Health, 19, 70-79.
- Lee, P. (1994). The psychological effects of disaster. Macedon Digest, 9, 25-27.

Lifton, R.J. (1979). The psychology of the survivor and the death imprint. Psychiatric Annals, 12, 1011-1020.

Lima, B.R., Santacruz, H., & Lozano, J. (1988). Extending mental health care to disaster victims. UNDRO News, 18-20.

Lima, B.R., Chavez, H., Samaniego, N., Pompei, M.S., Pai, S., Santacruz, H., & Lozano, J. (1989). Disaster severity and emotional disturbance: implications for primary mental health care in developing countries. Acta Psychiatrica Scandinavica, 79, 74-82.

Lima, B.R., Chavez, H., Samaniego, N., & Pai, S. (1992). Psychiatric disorders among emotionally distressed disaster victims attending primary mental health clinics in Ecuador. Bulletin of the Pan American Health Organization, 26, 60-66.

Lima, B.R., Pai, S., Caris, L., Haro, J., M., Lima, A.M., Toledo, V., Lozano, J., & Santacruz, H. (1991). Psychiatric disorders in primary health care clinics one year after a major Latin American disaster. Stress Medicine, 7, 25-32.

Lima, B.R., Pai, S., Lozano, J., & Santacruz, H. (1990). The stability of emotional symptoms among disaster victims in a developing country. Journal of Traumatic Stress, 3, 497-505.

Lima, B.R., Pai, S., Santacruz, H., & Lozano, J. (1991). Psychiatric disorders among poor victims following a major disaster: Armero, Colombia. Journal of Nervous and Mental Disease, 179, 420-427.

Lima, B.R., Pai, S., Santacruz, H., Lozano, J., & Luna, J. (1987). Screening for the psychological consequences of a major disaster in a developing country: Armero, Colombia. Acta Psychiatrica Scandinavica, 76, 561-567.

Lima, B.R., Pai, S., Santacruz, H., Lozano, J., Chavez, H., & Samaniego, N. (1989). Conducting research on disaster mental health in developing countries: A proposed model. Disasters, 13, 177-184.

Lima, B.R., Pai, S., Toledo, V., Caris, Luis, H., Josep M., Lozano, J., & Santacruz, H. (1993). Emotional distress in disaster victims: A follow-up study. Journal of Nervous and Mental Disease, 181, 388-393.

Lima, B.R., Santacruz, H., Lozano, J., Chavez, H., Samaniego, N., Pompei, M. S., & Pai, S. (1990). Disasters and mental health: Experience in Colombia and Ecuador and its relevance for primary care in mental health in Latin America.

International Journal of Mental Health, 19, 3-20.

Lin, E.H., Von Korff, M.K., Bush, T., Simon, G.E., Walker, E., & Robinson, P. (1995). The role of the primary care physician in patients' adherence to antidepressant therapy. Medical Care, 33, 67-74.

Lindgren, C.L., Burke, M.L., Hainsworth, M.A., & Eakes, G.G. (1992). Chronic sorrow: A lifespan concept. Nursing Practitioner, 6, 27-40.

Linehan, M.M., Tutek, D.A., Heard, H.L., Armstrong, H.E. (1994). Interpersonal outcome of cognitive behavioral treatment for chronically suicidal borderline patients. American Journal of Psychiatry, 151, 1771-1776.

Lipovsky, J.A. (1991). Children's reaction to disaster: A discussion of recent research. Advances in Behaviour Research and Therapy, 13, 185-192.

Livingston, H.M., Livingston, M.G, Brooks, D.N., & McKinlay, W.W. (1992). Elderly survivors of the Lockerbie air disaster. International Journal of Geriatric Psychiatry, 7, 725-729.

Lloyd, C., Creson, D.L., & D'Antonio, M.S. (1993). A petrochemical plant disaster: Lessons for the future. Journal of Social Behavior and Personality, 8, 281-298.

Lonigan, C.J., Shannon, M.P., Taylor, C.M., Finch, A.J., & Sallee, F.R. (1994). Children exposed to disaster: Risk factors for the development of post-traumatic symptomatology. Journal of the American Academy of Child and Adolescent Psychiatry, 33, 94-105.

Lonigan, C.J., Shannon, M.P., Finch, A.J., Daugherty, T.K., & Taylor, C.M. (1991). Children's reactions to a natural disaster: Symptom severity and degree of exposure. Advances in Behaviour Research and Therapy, 13, 135-154.

Lopez-Ibor, J.J. (1987). Social reinsertation after catastrophes: The toxic oil syndrome experience. European Journal of Psychiatry, 1, 12-19.

Lord, J. (1996). Trauma death and death notification (pp.44-53). Dallas, TX: Mothers Against Drunk Driving.

Lundeberg, J.E., Otto, U., & Rybeck, B. (1990). Wartime Medical Services: Second International Conference. Stockholm, Sweden, 25-29 June 1990 proceedings, Stockholm: FOA.

Lundervold, D.A., & Young, L.G. (1992). Older adults' attitudes and knowledge regarding use of mental health services. Journal of Clinical and Experimental Gerontology, 14, 45-55.

Lundin, T. (1987). The stress of unexpected bereavement. Stress Medicine, 3, 109-114.

Lundin, T. (1990). Bereavement in late adolescence-after a major fire disaster. Bereavement Care, 9, 7-8.

Lundin, T. (1990). The rescue personnel and the disaster stress. In J.E. Lundeberg, J.E., U. Otto, & B. Rybeck (Eds.), Wartime Medical Services: Second International Conference. Stockholm, Sweden, 25-29 June 1990 proceedings, 208-216. Stockholm FOA.

Lundin, T. (1991). Train disaster survivors: Long-term effects on mental health and well-being. Stress Medicine, 7, 87-91.

Lundin, T., & Bodegard, M. (1993). The psychological impact of an earthquake on rescue workers: A follow-up study of the Swedish group of rescue workers in Armenia, 1988. Journal of Traumatic Stress, 6, 129-139.

Lystad, M. (1990). Flood, tornado, and hurricane. In J.D. Noshpitz, R.D., & Coddington (Eds.), Stressors and the adjustment disorders (pp.247-259). New York: John Wiley & Sons.

Lystad, M. (1990). United States programs in disaster mental health. International Journal of Mental Health, 19, 80-88.

Madakasira, S., & O'Brien, K. F. (1987). Acute post-traumatic stress disorder in victims of a natural disaster. Journal of Nervous and Mental Disease, 175, 286-290.

Maida, C.A., Gordon, N.S., Steinberg, A., & Gordon, G. (1989). Psychosocial impact of disasters: Victims of the Baldwin Hills fire. Journal of Traumatic Stress, 2, 37-48.

Maida, C.A., Gordon, N.S., & Strauss, G. (1993). Child and parent reactions to the Los Angeles Area Whittier Narrows Earthquake. Journal of Social Behavior and Personality, 8, 421-436.

Maj, M., Starace, F., Crepet, P., Lobraccio, S., Veltro, F., De Marco, F., & Kemali, D. (1989). Prevalence of psychiatric disorders among subjects exposed to a

natural disaster. Acta Psychiatrica Scandinavica, 79, 544-549.

Malt, U.F., & Ugland, O.M. (1989). A long-term psychosocial follow-up study of burn adults. Acta Psychiatrica Scandinavica, 355, 94-102.

Malt, U.F., & Weisaeth, L. (1989). Disaster psychiatry and traumatic stress studies in Norway. Acta Psychiatrica Scandinavica, 355, 7-12.

Marmar, C.R., Weiss, D.S., & Pynoos, R.S. (1995). Dynamic psychotherapy of post-traumatic stress disorder. In M.J. Friedman, D.S. Charney, & A.Y. Deutch (Eds.), Neurobiological and clinical consequences of stress: From normal adaptation to post-traumatic stress disorder (pp. 495-506). Philadelphia: Lippincott-Raven.

Marmar, C.R., Weiss, D.S., Metzler, T.J., & Delucchi, K.L. (1996). Characteristics of emergency services personnel related to peritraumatic dissociation during critical incident exposure. American Journal of Psychiatry, 153, 7 Festschrift Supplement, 94-102 .

McCammon, S.L., & Long, T.E. (1993). A post-tornado support group: Survivors and professionals in concert. Journal of Social Behavior and Personality, 8, 131-148.

McCarroll, J.E., Ursano, R.J., Fullerton, C.S., Oates, G.L., Ventis, W.L., Friedman, H., Shean, G.L., & Wright, K.M. (1995). Gruesomeness, emotional attachment, and personal threat: Dimensions of the anticipated stress of body recovery. Journal of Traumatic Stress, 8, 343-349.

McCarroll, J.E., Ursano, R.J., Fullerton, C.S., & Wright, K.M. (1992). Community consultation following a major air disaster. Journal of Community Psychology, 20, 271-275.

McCarroll, J.E., Ursano, R.J., Ventis, W.L., Fullerton, C.S., Oates, G.L., Friedman, H.S., Glenn, D., & Wright, K.M. (1993). Anticipation of handling the dead: Effects of gender and experience. British Journal of Clinical Psychology, 32, 466-468.

McCarroll, J.E., Ursano, R.J., Wright, K.M., & Fullerton, C.S. (1990). Psychiatric and psychological aspects of the management of catastrophic incidents. Journal of the U.S. Army Medical Department, 1, 36-41.

McCarroll, J.E., Ursano, R.J., Fullerton, C.S., & Lundy, A. (1995). Anticipatory stress of handling human remains from the Persian Gulf War: Predictors of intrusion and avoidance. Journal of Nervous and Mental Disease, 183, 698-703.

McCaughey, B.G. (1987). U.S. Navy Special Psychiatric Rapid Intervention Team (SPRINT). Military Medicine, 152, 133-135.

McCaughey, B.G., Kelley, J.B., & Silverman, G. (1988). A post-disaster follow-up of health-related outcomes in U.S. naval personnel. San Diego: Naval Health Research Center, 88-39.

McFarlane, A.C. (1987). Family functioning and overprotection following a natural disaster: The longitudinal effects of post-traumatic morbidity. Australian and New Zealand Journal of Psychiatry, 21, 210-218.

McFarlane, A.C. (1987). Life events and psychiatric disorder: The role of a natural disaster. British Journal of Psychiatry, 151, 362-367.

McFarlane, A.C. (1987). Post-traumatic phenomena in a longitudinal study of children following a natural disaster. Journal of the American Academy of Child and Adolescent Psychiatry, 26, 764-769.

McFarlane, A.C. (1988). Recent life events and psychiatric disorder in children: The interaction with preceding extreme adversity. Journal of Child Psychology and Psychiatry and Allied Disciplines, 29, 677-690.

McFarlane, A.C. (1988). Relationship between psychiatric impairment and a natural disaster: The role of distress. Psychological Medicine, 18, 129-139.

McFarlane, A.C. (1988). The aetiology of post-traumatic stress disorders following a natural disaster. British Journal of Psychiatry, 152, 116-121.

McFarlane, A.C. (1988). The phenomenology of post-traumatic stress disorders following a natural disaster. Journal of Nervous and Mental Disease, 176, 22-29.

McFarlane, A.C. (1989). The aetiology of post-traumatic morbidity: Predisposing, precipitating and perpetuating factors. British Journal of Psychiatry, 154, 221-228.

McFarlane, A.C. (1990). An Australian disaster: The 1983 bushfires. International Journal of Mental Health, 19, 36-47.

McFarlane, A.C. (1992). Avoidance and intrusion in post-traumatic stress disorder. Journal of Nervous and Mental Disease, 180, 439-445.

McFarlane, A.C. (1993). PTSD: Synthesis of research and clinical studies:

The Australia bushfire disaster. In J.P. Wilson & B. Raphael, (Eds.), International handbook of traumatic stress syndromes (pp.421-429). New York: Plenum Press.

McFarlane, A.C. (1988). The longitudinal course of post-traumatic morbidity: The range of outcomes and their predictors. Journal of Nervous and Mental Disease, 176, 30-39.

McFarlane, A.C., & Hua, C. (1993). Study of a major disaster in the People's Republic of China: The Yunnan earthquake. In J.P Wilson & B. Raphael (Eds.), International handbook of traumatic stress syndromes (pp. 493-498). New York: Plenum Press.

McFarlane, A.C., & Papay, P. (1992). Multiple diagnoses in post-traumatic stress disorder in the victims of a natural disaster. Journal of Nervous and Mental Disease, 180, 498-504.

McFarlane, A.C., McFarlane, C.M., & Gilchrist, P.N. (1988). Post-traumatic bulimia and anorexia nervosa. International Journal of Eating Disorders, 7, 705-708.

McFarlane, A.C., Policansky, S.K., & Irwin, C. (1987). A longitudinal study of the psychological morbidity in children due to a natural disaster. Psychological Medicine, 17, 727-738.

McManus, M. (1988). Quake stress: Preparation for the psychological effects of a major disaster. Santa Monica, CA: California Psychological Publishers.

McNally, R.J. (1993). Stressors that produce post-traumatic stress disorder in children. In J.R.T. Davidson, E.B. Foa (Eds.), Post-traumatic stress disorder: DSM-IV and beyond (pp.57-74). Washington, DC: American Psychiatric Press.

Mega, L.T., McCammon, S.L. (1992). Tornado in eastern North Carolina: Outreach to school and community. In L.S. Austin (Ed.), Responding to disaster: A guide for mental health professionals (pp. 211-230). Washington, DC: American Psychiatric Press.

Mehta, M.D., & Simpson-Housley, P. (1994). Trait anxiety and perception of a potential nuclear power plant disaster. Psychological Reports, 74, 291-295.

Meichenbaum D. (1995). A clinical handbook/practical therapist manual for assessing and treating adults with post-traumatic stress disorder. Institute Press, Waterloo, Canada.

Middleton, W., & Raphael, B. (1990). Consultation in disasters. International

Journal of Mental Health, 19, 109-120.

Milgram, N.A., Toubiana, Y.H., Klingman, A, Raviv, A., & Goldstein, I. (1988). Situational exposure and personal loss in children's acute and chronic stress reactions to a school bus disaster. Journal of Traumatic Stress, 1, 339-352.

Miller, R.S., (1995). Largest earthquake at an American university, January 1994: University counseling perspective. Crisis Intervention, 1, 215-223.

Milne, C. (1988). Post-traumatic stress syndrome. Nursing Standard, 2, 22-23.

Mitchell, J.T., Dyregrov, A. (1993). Traumatic stress in disaster workers and emergency personnel: Prevention and intervention. In J.P. Wilson & B. Raphael, (Eds.), International handbook of traumatic stress syndromes (pp. 905-914). New York: Plenum Press.

Mitchell, J.T. (1983). When disaster strikes: The critical incident stress debriefing. Journal of Medical Emergency Services, 8, 36-39.

Moore, P. (1990). Psychological consequences of a major disaster. In Lundeberg, J.E., Otto, U., & Rybeck, B. (Eds.), Wartime Medical Services: Second International Conference. Stockholm, Sweden, 25-29 June 1990 proceedings, 189-191. Stockholm FOA.

Moran, C.C. (1994). Psychological benefits of disaster and emergency work. Macedon Digest, 9, 4-6.

Morgan, J. (1994). Providing disaster mental health services through the American Red Cross. National Center for PTSD Clinical Quarterly, 4, 13-14.

Murphy, S.A. (1988). Mediating effects of intrapersonal and social support on mental health 1 and 3 years after a natural disaster. Journal of Traumatic Stress, 1, 155-172.

Murphy, S.A., & Keating, J.P. (1995). Psychological assessment of post-disaster class action and personal injury litigants: A case study. Journal of Traumatic Stress, 8, 473-482.

Murthy, R.S. (1990). Bhopal. International Journal of Mental Health, 9, 30-35.

Murthy, R.S., & Isaac, M.K. (1987). Mental health needs of Bhopal disaster victims & training of medical officers in mental health aspects. Indian Journal of

Medical Research, 86, 51-58.

Myers, D. (1994). Disaster response and recovery: A handbook for mental health professionals. Dept. of Human and Health Services, Publication No. (SMA) 94-3010.

Myers, D.G. (1994). Psychological recovery from disaster: Key concepts for delivery of mental health services. National Center for PTSD Clinical Quarterly, 4, 3-5.

Myers, D. (1987). Prevention and control of stress among emergency workers: A pamphlet for team managers. DHHS Publication No. (ADM 90-1496).

Nader, K., Pynoos, R.S. (1993). School disaster: Planning and initial interventions. Journal of Social Behavior and Personality, 8, 299-320.

Nelson, G.D., & Barbaro, M.B. (1985). Fighting the stigma: A unique approach to marketing mental health. Health Marketing Quarterly, 2, 89-101.

Newburn, T. (1993). Disaster and after: Social work in the aftermath of disaster. London: Jessica Kingsley.

Newburn, T. (1993). Making a difference?: Social work after Hillsborough. London National Institute for Social Work.

Niles, D.P. (1991). War trauma and post-traumatic stress disorder. American Family Physician, 44, 1663-1669.

Nolen-Hoeksema, S., & Morrow, J. (1991). A prospective study of depression and post-traumatic stress symptoms after a natural disaster: The 1989 Loma Prieta earthquake. Journal of Personality and Social Psychology, 61, 115-121.

Norris, F.H., & Kaniasty, K. (1996). Received and perceived social support in times of stress: A Test of the social support deterioration deterrence model. Journal of Personality and Social Psychology, 71, 498-511.

Norris, F.H., & Murrell, S.A. (1988). Prior experience as a moderator of disaster impact on anxiety symptoms in older adults. American Journal of Community Psychology, 16, 665-683.

Norris, F.H., & Uhl, G.A. (1993). Chronic stress as a mediator of acute stress: The case of Hurricane Hugo. Journal of Applied Social Psychology, 23, 1263-1284.

Norris, F.K., & Krzysztof, K.Z. (1992). Reliability of delayed self-reports in

disaster research. Journal of Traumatic Stress, 5, 575-588.

Norris, F.H., Phifer, J.F., & Kaniasty, K.Z. (1994). Individual and community reactions to the Kentucky floods: Findings from a longitudinal study of older adults. In R.J. Ursano, B.G. McCaughey, & C.S. Fullerton (Eds.), Individual and community responses to trauma and disaster: The structure of human chaos (pp.378-400). Cambridge: Cambridge University Press.

North, C.S., & Smith, E.M. (1990). Conspectus: Post-traumatic stress disorder in disaster survivors. Comprehensive Therapy, 16, 3-9.

North, C.S., Smith, E.M., McCool, R.E., & Lightcap, P.E. (1989). Acute postdisaster coping and adjustment. Journal of Traumatic Stress, 2, 353-360.

North, C.S., Smith, E.M., Spitznagel, & Edward L. (1994). Post-traumatic stress disorder in survivors of a mass shooting. American Journal of Psychiatry, 151, 82-88.

Norvell, N.K., Cornell, C.E., & Limacher, M.C. (1993). Emotional and coping responses to serial killings: The Gainesville murders. Journal of Nervous and Mental Disease, 181, 417-421.

O'Connell, M. (1991). Stress and the professional: Some recent naval engagements. Journal of the Royal Society of Health, 111, 64-66.

Omer, H. (1991). Massive trauma: The role of emergency teams. Sihot/Dialogue, 5, 157-170.

Omer, H., & Alon, N. (1994). The continuity principle: A unified approach to disaster and trauma. American Journal of Community Psychology, 22, 273-287.

Oppegard, K. et.al. (1984). Sensory loss, family support, and adjustment among the elderly. Journal of Social Psychology, 123, 291-292.

Pagel, J.F, Vann, B.H., & Altomare, C.A. (1995). Reported association of stress and dreaming: Community background levels and changes with disaster (Hurricane Iniki). Dreaming, 5, 43-50.

Palinkas, L.A., Petterson, J.S., Russell, J., & Downs, M.A. (1993). Community patterns of psychiatric disorders after the Exxon Valdez oil spill. American Journal of Psychiatry, 150, 1517-1523.

Palinkas, L.A., Russell, J., Downs, M.A., & Petterson, J.S. (1992). Ethnic

differences in stress, coping, and depressive symptoms after the Exxon Valdez oil spill. Journal of Nervous and Mental Disease, 180, 287-295.

Parkes, C.M. (1991). Planning for the aftermath. Journal of the Royal Society of Medicine, 84, 22-25.

Paton, D. (1994). Disaster relief work: An assessment of training effectiveness. Journal of Traumatic Stress, 7, 275-288.

Peterson, K.C., Prout, M.F., & Schwarz, R.A. (1991). Subtypes and course of the disorder. In K.C. Peterson, K.C., M.F. Prout, & R.A.Schwarz (Eds.), Post-traumatic stress disorder: A clinician's guide (pp. 43-60). New York: Plenum Press.

Peuler, J.N. (1988). Community outreach after emergencies. In M. Lystad (Ed.), Mental health response to mass emergencies: Theory and practice (pp.239-261). New York: Brunner/Mazel.

Pfeiffer, E. (1978). Psychotherapy with the elderly. Journal of the National Association of Private Psychiatric Hospitals, 10, 41-46.

Phifer, J.F. (1990). Psychological distress and somatic symptoms after natural disaster: Differential vulnerability among older adults. Psychology and Aging, 5, 412-420.

Phifer, J.F., & Norris, F.H. (1989). Psychological symptoms in older adults following natural disaster: Nature, timing, duration, and course. Journal of Gerontology: Social Sciences, 44, S207-S217.

Pichot, J.T., & Rudd, M.D. (1991). Preventative mental health in disaster situations: "Terror on the autobahn." Military Medicine, 156, 540-543.

Pinsof, W.M., & Wynne, L.C. (1995). The efficacy of marital and family therapy: An empirical overview, conclusions, and recommendations. Special Issue: The effectiveness of marital and family therapy. Journal of Marital & Family Therapy, 21, 585-613.

Plummer, B. (1992). Disaster survivors. British Journal of Psychiatry, 160, 420-421.

Ponton, L.E., & Bryant, E.C. (1991). After the earthquake: Organizing to respond to children and adolescents. Psychiatric Annals, 21, 539-546.

Prince-Embury, & Sooney, J.F. (1987-1988). Interest in information as a

function of worry and perceived control in the aftermath of nuclear disaster. International Quarterly of Community Health Education, 8, 33-50.

Prince-Embury, S. (1991). Information seekers in the aftermath of technological disaster at Three Mile Island. Journal of Applied Social Psychology, 21, 569-584.

Prince-Embury, S. (1992). Information attributes as related to psychological symptoms and perceived control among information seekers in the aftermath of technological disaster. Journal of Applied Social Psychology, 22, 1148-1159.

Prince-Embury, S. (1992). Psychological symptoms as related to cognitive appraisals and demographic differences among information seekers in the aftermath of technological disaster at Three Mile Island. Journal of Applied Social Psychology, 22, 38-54.

Prince-Embury, S., & Rooney, J.F. (1995). Psychological adaptation among residents following restart of Three Mile Island. Journal of Traumatic Stress, 8, 47-59.

Pynoos, R.S., & Nader, K. (1993). Issues in the treatment of post-traumatic stress in children and adolescents. In J.P. Wilson & B. Raphael, (Eds.), International handbook of traumatic stress syndromes (pp.535-549). New York: Plenum Press.

Pynoos, R.S., Goenjian, A.K., Tashjian, M., Karakashian, M., & Manjikian, R.M. (1993). Post-traumatic stress reactions in children after the 1988 Armenian earthquake. British Journal of Psychiatry, 163, 239-247.

Quarantelli, E.L., & Dynes, R.A. (1986). Community responses to disasters. In B.J. Sowder & M. Lystad (Eds.), Disasters and mental health: Contemporary perspectives and innovations in services to disaster victims (pp. 169-179). Washington, DC: American Psychiatric Press.

Rahe, R.H. (1998). Acute versus chronic psychological reactions to combat. Military Medicine, 153, 365-372.

Ralph, K., & Alexander, J. (1994). Born under stress. Nursing Times, 90, 28-30.

Ramsay, R., Gorst-Unsworth, C., & Turner, S.W. (1993). Psychiatric morbidity in survivors of organised state violence including torture: A retrospective series. British Journal of Psychiatry, 162, 55-59.

Raphael, B. & Wilson, J.P. (1994). When disaster strikes: Managing emotional reactions in rescue workers. In J.P. Wilson & J.D. Lindy (Eds.), Countertransference in the treatment of PTSD (pp.333-350). New York: Guilford Press.

Raphael, B. (1986). When disaster strikes: How individuals and communities cope with catastrophe. New York: Basic Books.

Raphael, B., & Meldrum, L. (1993). The evolution of mental health responses and research in Australian disasters. Journal of Traumatic Stress, 6, 65-89.

Raphael, B., & Middleton, W. (1987). Mental health responses in a decade of disasters: Australia, 1974-1983. Hospital and Community Psychiatry, 38, 1331-1337.

Raphael, B., & Wilson, J.P. (1993). Theoretical and intervention considerations in working with victims of disaster. In J.P. Wilson & B. Raphael, (Eds.), International handbook of traumatic stress syndromes (pp.105-117). New York: Plenum Press.

Realmuto, G.M., Wagner, N., & Bartholow, J. (1991). The Williams pipeline disaster: A controlled study of a technological accident. Journal of Traumatic Stress, 4, 469-479.

Realmuto, G.M., Wagner, N., & Bartholow, J. (1991). The Williams pipeline disaster: A controlled study of a technological accident. Journal of Traumatic Stress, 4, 469-479.

Reijneveld, S.A. (1994). The impact of the Amsterdam aircraft disaster on reported annoyance by aircraft noise and on psychiatric disorders. International Journal of Epidemiology, 23, 333-340.

Resick, P.A., & Schnicke, M.K. (1992). Cognitive processing therapy for sexual assault victims. Journal of Consulting and Clinical Psychology, 60, 748-756.

Resnick, H.S., Kilpatrick, D.G., Best, C.L., & Kramer, T.L. (1992). Vulnerability-stress factors in development of posttraumatic stress disorder. Journal of Nervous and Mental Disease, 180, 424-430.

Revel, J.P. (1993). The Erzincan (Turkey) earthquake, March 1992: Psychosocial consequences and search and rescue teams. Disasters, 17, 56-60.

Ritchie, E.C. (1994). Psychiatric medications for deployment. Military Medicine, 159, 647-649.

Rosen, G.M. (1995). The Aleutian Enterprise sinking and posttraumatic stress disorder: Misdiagnosis in clinical and forensic settings. Professional Psychology: Research and Practice, 26, 82-87.

Rosen, J., Sweet, R., Pollock, B.G., & Mulsant, B.H. (1993). Nortriptyline in the hospitalized elderly: Tolerance and side effect reduction. Psychopharmacology Bulletin, 29, 327-331.

Rosenmayr, L. (1985). Changing values and positions of aging in western culture. In J.E. Birren, & K.W. Schaie (Eds.), Handbook of the psychology of aging (2nd Ed.) (pp. 190-215). New York: Van Nostrand.

Rosse, W.L. (1993). Volunteers and post-disaster recovery: A call for community self-sufficiency. Journal of Social Behavior and Personality, 8, 261-266.

Rosser, R.M., Dewar, S., & Thompson, J.A. (1991). Psychological aftermath of the King's Cross fire. Journal of the Royal Society of Medicine, 84, 4-8.

Rotenberg, Z., Noy, S., & Gabbay, U. (1994). Israeli ED experience during the Gulf War. American Journal of Emergency Medicine, 12, 118-119.

Ruben, H.L. (1992). Interacting with the media after trauma in the community. In L.S. Austin (Ed.), Responding to disaster: A guide for mental health professionals (pp.125-136). Washington, DC: American Psychiatric Press.

Rubonis, A.V., & Bickman, L. (1991). A test of the consensus and distinctiveness attribution principles in victims of disaster. Journal of Applied Social Psychology, 21, 791-809.

Rubonis, A.V., & Bickman, L. (1991). Psychological impairment in the wake of disaster: The disaster-psychopathology relationship. Psychological Bulletin, 109, 384-399.

Salive, M.E., Guralnik, J., Glynn, R.J., Christen, W., Wallace, R.B., & Ostfeld, A.M. (1994). Association of visual impairment with mobility and physical function. Journal of the American Geriatrics Society, 42, 287-292.

San, B., & Mary, L. (1994). Crisis intervention: Aftershocks in the quake zone. Journal of Psychosocial Nursing and Mental Health Services, 32, 29-30.

Sattler, D.N., Sattler, J.M., Kaiser, C., Hamby, B.A., Adams, M.G., Love, L., Winkler, J., Abu-Ukkaz, C., Watts, B., & Beatty, A. (1995). Hurricane Andrew: Psychological distress among shelter victims. International Journal of Stress

Management, 2, 133-143.

Saylor, C.F. (1993). Children and disasters. New York: Plenum Press.

Saylor, C.F., Swenson, C.C., & Powell, P. (1992). Hurricane Hugo blows down the broccoli: Preschoolers' post-disaster play and adjustment. Child Psychiatry and Human Development, 22, 139-149.

Schuffel, W. The mining disaster of Borcken, the implementation of a 3-year support programme and the help through EuroActDIS. Journal of the Royal Society of Medicine, 86, 625-627.

Schutze, F. (1992). Pressure and guilt: War experiences of a young German soldier and their biographical implications (part 1). International Sociology, 7, 187-208.

Schwarz, E.D., Kowalski, J.M., & McNally, R.J. (1993). Malignant memories: Post-traumatic changes in memory in adults after a school shooting. Journal of Traumatic Stress, 6, 545-553.

Schwarz, E.D., & Kowalski, J.M. (1991). Malignant memories: PTSD in children and adults after a school shooting. Journal of the American Academy of Child and Adolescent Psychiatry, 30, 936-944.

Schwarz, E.D., & Kowalski, J.M. (1992). Malignant memories: Reluctance to utilize mental health services after a disaster. Journal of Nervous and Mental Disease, 180, 767-772.

Schwarz, E.D., & Kowalski, J.M. (1993). Malignant memories: Effect of a shooting in the workplace on school personnel's attitudes. Journal of Interpersonal Violence, 8, 468-485.

Schwarz, E.D., & Kowalski, J.M. (1991). Post-traumatic stress disorder after a school shooting: Effects of symptom threshold selection and diagnosis by DSM-III, DSM-III-R, or proposed DSM-IV. American Journal of Psychiatry, 148, 592-597.

Scott, R.B., Brooks, N., & McKinlay, W. (1995). Post-traumatic morbidity in a civilian community of litigants: A follow-up at 3 years. Journal of Traumatic Stress, 8, 403-417 .

Scignar, C.B. (1988). Trauma and PTSD. Post-traumatic stress disorder: Diagnosis, treatment, and legal issues (pp. 35-61). New Orleans: Bruno Press.

Sewell, J.D. (1993). Traumatic stress of multiple murder investigations. Journal of Traumatic Stress, 6, 103-118.

Shalev, A.Y. (1994). Editorial: The role of mental health professionals in mass casualty events. Israel Journal of Psychiatry and Related Sciences, 1, 243-245.

Shalev, A., Schreiber, S., & Galai, T. (1993). Early psychological responses to traumatic injury. Journal of Traumatic Stress, 6, 441-450.

Shalev, A.Y. (1994). The role of mental health professionals in mass casualty events. Israel Journal of Psychiatry and Related Sciences, 1, 243-245.

Shalev, A.Y., Peri, T., Canetti, L., & Schreiber, S. (1996). Predictors of PTSD in injured trauma survivors: A prospective study. American Journal of Psychiatry, 153, 219-225.

Shannon, M.P., Lonigan, C.J, Finch, A.J, & Taylor, C.M. (1994). Children exposed to disaster: Epidemiology of post-traumatic symptoms and symptom profiles. Journal of the American Academy of Child and Adolescent Psychiatry, 33, 80-93.

Shaw, J.A., Applegate, B., Tanner, S., Perez, D., Rothe, E., Campo-Bowen, A. E., & Lahey, B.L. (1995). Psychological effects of Hurricane Andrew on an elementary school population. Journal of the American Academy of Child and Adolescent Psychiatry, 34, 1185-1192.

Shechet, A.L. , & Jordan, C.E. (1993). The Kentucky Post Trauma Response Team: Development of a statewide crisis response capability. Journal of Social Behavior and Personality, 8, 267-280.

Shelby, J.S. (1994). Psychological intervention with children in disaster relief shelters. Child, Youth, and Family Services Quarterly, 17, 14-18.

Shelby, J.S., & Tredinnick, M.G. (1995). Crisis intervention with survivors of natural disaster: Lessons from Hurricane Andrew. Journal of Counseling and Development, 73, 491-497.

Shepherd, M., & Hodgkinson, P.E. (1990). The hidden victims of disaster: Helper stress. Stress Medicine, 6, 29-35.

Shore, J.H., Vollmer, W.M., & Tatum, E.L. Community patterns of post-traumatic stress disorders. Journal of Nervous and Mental Disease, 177, 681-685.

Sitterle, K.A. (1995). Mental health services at the Compassion Center: The

Oklahoma City Bombing. National Center for PTSD Clinical Quarterly, 5(4), 20-23.

Skolnick, A.A. (1995). First complex disasters symposium features dramatically timely topics. Journal of the American Medical Association, 274, 11-12.

Skolnick, A.A., & Winker, M.A. (1992). Eleventh annual Science Reporters Conference offers cornucopia of medical research stories. Journal of the American Medical Association, 268, 2620-2622, 2627-2629.

Sloan, P. (1988). Post-traumatic stress in survivors of an airplane exploratory research intervention. Journal of Traumatic Stress, 1, 211-229.

Smith, E.M., & North, C.S. (1993). Post-traumatic stress disorder in natural disasters and technological accidents. In J.P. Wilson & B. Raphael, (Eds.), International handbook of traumatic stress syndromes (pp.405-419). New York: Plenum Press.

Smith, E.M., North, C.S., & Spitznagel, E.L. (1993). Post-traumatic stress in survivors of three disasters. Journal of Social Behavior and Personality, 8, 353-368.

Smith, E.M., North, C.S., McCool, R.E., & Shea, J.M. (1990). Acute post-disaster psychiatric disorders: Identification of persons at risk. American Journal of Psychiatry, 147, 202-206.

Sokol, R.J. (1989). Early mental health intervention in combat situations: The U.S.S. Stark. Military Medicine, 154, 407-409.

Solomon, M.J., & Thompson, J.A. (1995). Anger and blame in three technological disasters. Stress Medicine, 11, 199-206.

Solomon, S.D., Smith, E.M., Robins, L.N., & Fischbach, R.L. (1987). Social involvement as a mediator of disaster-induced stress. Journal of Applied Social Psychology, 17, 1092-1112 .

Solomon, S.D., & Canino, G.J. (1990). Appropriateness of DSM-III-R criteria for post-traumatic stress disorder. Comprehensive Psychiatry, 31, 227-237.

Solomon, S.D., & Green, B.L. (1992). Mental health effects of natural and human-made disasters. National Center for PTSD Research Quarterly, 3, 1-7.

Solomon, S.D., & Smith, E.M. (1994). Social support and perceived control as moderators of responses to dioxin and flood exposure. In R.J. Ursano, B.G. McCaughey, & C.S. Fullerton (Eds.), Individual and community responses to trauma

and disaster: The structure of human chaos (pp.179-200). Cambridge: Cambridge University Press.

Solomon, S.D., Bravo, M., & Rubio-Stipec, M., & Canino, G. (1993). Effect of family role on response to disaster. Journal of Traumatic Stress, 6, 255-269.

Solomon, S.D., Regier, D.A., & Burke, J.D. (1989). Role of perceived control in coping with disaster. Journal of Social and Clinical Psychology, 8, 376-392.

Solomon, S.D., Gerrity, E.T., & Muff, A.M. (1991). Efficacy of treatments for post-traumatic stress disorder: An empirical review. Journal of the American Medical Association, 268, 633-638.

Solomon, S.D., Smith, E.M., Robins, L.N., & Fischbach, R.L. (1987). Social involvement as a mediator of disaster-induced stress. Journal of Applied Social Psychology, 17, 1092-1112 .

Soloman, Z., Laor, N., Weiler, D., Muller, U.F., Hadar, O., Waysman, M., Koslowsky, M., Benyakar, M., & Bleich, A. (1993). The psychological impact of the Gulf War: A study of acute stress in Israeli evacuees. Archives of General Psychiatry, 50, 320-321.

Solomon, Z., & Benbenishty, R. (1989). The role of proximity, immediacy, and expectancy in frontline treatment of combat stress reaction among Israelis in the Lebanon war. American Journal of Psychiatry, 143, 613-617.

Solomon, Z., Garb, R., Bleich, A., & Grupper, D. (1987). Reactivation of combat-related posttraumatic stress disorder. American Journal of Psychiatry, 144, 51-55.

Southwick, S.M., Yehuda, R., Giller, E.L., & Chamey, D.S. (1994). Use of tricyclics and monoamine oxidase inhibitors in the treatment of PTSD: A quantitative review. In M.M. Murburg, (Ed.), Catecholamine function in post-traumatic stress disorder: Emerging concepts (pp.293-305). Washington, DC: American Psychiatric Press.

Spurrell, M.T., & McFarlane, A.C. (1993). Post-traumatic stress disorder and coping after a natural disaster. Social Psychiatry and Psychiatric Epidemiology, 28, 194-200.

Spurrell, M.T., & McFarlane, A.C. (1995). Life-events and psychiatric symptoms in a general psychiatry clinic: The role of intrusion and avoidance. British Journal of Medical Psychology, 68, 333-340.

Stafford, M.C., & Galle, O. (1984). Victimization rates, exposure to risk, and fear of crime. Criminology: An Interdisciplinary Journal, 22, 173-185.

Stahmer, H.M. (1985). Values, ethics and aging. In G. Lesnoff-Caravaglia, (Ed.), Values, ethics and aging (pp. 26-40). New York: Human Sciences Press.

Stearns, S.D. (1993). Psychological distress and relief work: Who helps the helpers? Refugee Participation Network, 1, 3-8.

Steeffel, L. (1993). The World Trade Center disaster: Healing the unseen wounds. Journal of Psychosocial Nursing and Mental Health Services, 31, 5-7.

Steinberg, A.M., Manoukian, G., Tavosian, A., & Fairbanks, J.A. (1994). Post-traumatic stress disorder in elderly and younger adults after the 1988 earthquake in Armenia. American Journal of Psychiatry, 151, 895-901.

Steinglass, P., & Gerrity, E. (1990). Natural disasters and post-traumatic stress disorder: Short-term versus long-term recovery in two disaster-affected communities. Journal of Applied Social Psychology, 20, 1746-1765.

Stevens, J.C., & Dadrwala, A.D. (1993). Variability of olfactory threshold and its role in assessment of aging. Perception and Psychophysics, 54, 296-302.

Stokes, J. Psychopharmacotherapy in a theater of operations. Presented at VA/DoD Joint Contingency Plan. Fort Benjamin Harrison, Indianapolis, IN, December 17-21, 1990.

Sugar, M. (1988). A preschooler in a disaster. American Journal of Psychotherapy, 42, 619-629.

Sugar, M. (1988). Children and the multiple trauma in a disaster. In E.J. Anthony, & C. Chiland (Eds.), Perilous development: Child raising and identity formation under stress (pp. 429-442). New York: Wiley.

Sugar, M. (1989). Children in a disaster: An overview. Child Psychiatry and Human Development, 19, 163-179.

Sukiasian, S.G. (1994). Characteristics of post-traumatic stress disorders following the earthquake in Armenia. Journal of Russian and East European Psychiatry, 27, 62-75.

Sullivan, M.A., Saylor, C.F., & Foster, K.Y. (1991). Post-hurricane adjustment of preschoolers and their families. Advances in Behaviour Research and Therapy, 13,

163-171.

Summers, G.M., & Cowan, M.L. (1991). Mental health issues related to the development of a national disaster response system. Military Medicine, 156, 30-32.

Taylor, A.J. (1987). A taxonomy of disasters and their victims. Journal of Psychosomatic Research, 31, 535-544.

Teff, H. (1992). The Hillsborough football disaster and claims for 'nervous shock.' Medicine, Science and the Law, 32, 251-254.

Terr, L.C. (1992). Large-group preventive treatment techniques for use after disaster. In L.S. Austin (Ed.), Responding to disaster: A guide for mental health professionals (pp. 81-100). Washington, DC: American Psychiatric Press.

Thaggard, S.L. (1991). The Huntsville tornado of 1989: A psychiatrist's perspective. Psychiatric Annals, 21, 553-555.

Thomas, D.R. (1988). Accidental hypothermia in the sunbelt. Journal of General Internal Medicine, 3, 552-554.

Thompson, J., Chung, M.C., & Rosser, R. (1994). The Marchioness disaster: Preliminary report on psychological effects. British Journal of Clinical Psychology, 33, 75-77.

Thompson, J.A., Solomon, & Michael J. (1991). Body recovery teams at disasters: Trauma or challenge? Anxiety Research, 4, 235-244.

Thompson, J.A., Charlton, P.F., Kerry, R., Lee, D., & Turner, S.W. (1995). An open trial of exposure therapy based on deconditioning for post-traumatic stress disorder. British Journal of Clinical Psychology, 34, 407-416.

Thompson, L.W., Breckenridge, J.N., Gallagher, D., & Peterson, J. (1984). Effects of bereavement on self-perceptions of physical health in elderly widows and widowers. Journal of Gerontology, 39, 309-314.

Thompson, M., Norris, F.H., & Hanacek, B. (1993). Age differences in the psychological consequences of Hurricane Hugo. Psychology and Aging, 8, 606-616.

Thompson, M.E. (1987). Speech discrimination skills in the elderly: A critical review. Journal of Otolaryngology, 16, 354-361.

Thrasher, S.M., Dalglish, T., & Yule, W. (1994). Information processing in post-traumatic stress disorder. Behaviour Research and Therapy, 32, 247-254.

Titchener, J.L. (1988). Clinical intervention after natural and technological disasters. In M. Lystad (Ed.), Mental health response to mass emergencies: Theory and practice (pp.160-180).

Trevisan, M., Jossa, F., Farinaro, E., Krogh, V., Panico, S., Giumetti, D., & Mancini, M. (1992). Earthquake and coronary heart disease risk factors: A longitudinal study. American Journal of Epidemiology, 135, 632-637.

Turner, R.J., & Lloyd, D.A. (1995). Lifetime traumas and mental health. Journal of Health and Social Behavior, 36, 360-376.

Turner, S.W., Thompson, J.A., & Rosser, R.M. (1989). The King's Cross fire: Planning a "phase two" psychosocial response. Disaster Management, 2, 31-37.

Turner, S.W., Thompson, J.A., & Rosser, R.M. (1993). The Kings Cross fire: Early psychological reactions and implications for organizing a "phase-two" response. In J.P. Wilson, B. Raphael (Eds.), International handbook of traumatic stress syndromes (pp.451-459). New York: Plenum Press.

Turner, S.W., Thompson, J., Rosser, & R.M. (1995). The Kings Cross fire: Psychological reactions. Journal of Traumatic Stress, 8, 419-427.

Ursano, R.J., Fullerton, C.S., & Norwood, A.E. (1995). Psychiatric dimensions of disaster: Patient care, community consultation, and preventive medicine. Harvard Review of Psychiatry, 3, 196-209.

Ursano, R.J., Fullerton, C.S., Kao, T., & Bhartiya, V.R. (1995). Longitudinal assessment of post-traumatic stress disorder and depression after exposure to traumatic death. Journal of Nervous and Mental Disease, 183, 36-42.

Ursano, R.J., Fullerton, C.S., Wright, K.M., & McCarroll, J.E. (1990). U.S.S. Iowa naval disaster: Dover Air Force Base body handlers and spouses/significant others. In R.J. Ursano, C.S. Fullerton, K.M., Wright, & J.E. McCarroll, (Eds.), Trauma, disasters and recovery (pp. 73-97). Bethesda, MD: Department of Psychiatry, F. Edward Hebert School of Medicine, Uniformed Services University of the Health Sciences.

Ursano, R.J., Fullerton, C.S., Wright, K., McCarroll, J.E., & James E. (1990). Landstuhl Army Regional Medical Center personnel. In R.J. Ursano, C.S. Fullerton, K.M., Wright, & J.E. McCarroll, (Eds.), Trauma, disasters and recovery (pp.19-41). Bethesda, MD: Department of Psychiatry, F. Edward Hebert School of Medicine, Uniformed Services University of the Health Sciences.

Ursano, R.J., & McCarroll, J.E. (1990). The nature of a traumatic stressor: Handling dead bodies. Journal of Nervous and Mental Disease, 178, 396-398.

Ursano, R.J., Fullerton, C.S., & McCaughey, B.G. (1994). Trauma and disaster. In R.J. Ursano, B.G. McCaughey, & C.S. Fullerton (Eds.), Individual and community responses to trauma and disaster: The structure of human chaos (pp. 3-27). Cambridge: Cambridge University Press.

Ursano, R.J., Fullerton, C.S., Wright, K.M., & McCarroll, J.E. (1990). Trauma, disasters and recovery. Bethesda, MD: Department of Psychiatry, F. Edward Hebert School of Medicine, Uniformed Services University of the Health Sciences.

Ursano, R.J., Fullerton, C.S., Wright, K.M., McCarroll, J.E., Norwood, A.E., & Dinneen, M.M. (1992). Disaster workers: trauma and social support. Bethesda, MD: Department of Psychiatry, F. Edward Hebert School of Medicine, Uniformed Services University of the Health Sciences.

Ursano, R.J., McCaughey, B.G., & Fullerton, C.S. (Eds.) (1994). Individual and community responses to trauma and disaster: The structure of human chaos. Cambridge: Cambridge University Press.

U.S. Administration on Aging & Kansas Department on Aging (1995). Disaster preparedness manual for the aging network.

Vernberg, E.M., La Greca, A.M., Silverman, W.K., & Prinstein, M.J. (1996). Prediction of post-traumatic stress symptoms in children after Hurricane Andrew. Journal of Abnormal Psychology, 105, 237-248.

Watson, R. (1993). Hypothermia. Eldercare, 5, 41-44.

Watts, R. (1994). Detecting people with PTSD following a disaster. Medical Journal of Australia, 160, 312.

Weathers, F., Litz, B., & Keane, T. (in press). The PTSD Checklist. Journal of Traumatic Stress.

Weaver, J.D. (1995). Disasters: Mental health interventions. Sarasota FL: Professional Resource Press.

Webb, N.B. (1994). School-based assessment and crisis intervention with kindergarten children following the New York World Trade Center bombing. Crisis Intervention and Time-Limited Treatment, 1, 47-59.

Webster, R.A., McDonald, R., Lewin, T.J., & Carr, V.J. (1995). Effects of a

natural disaster on immigrants and host population. Journal of Nervous and Mental Disease, 183, 390-397.

Weisaeth, L. (1989). A study of behavioural responses to an industrial disaster. Acta Psychiatrica Scandinavica, 355, 13-24.

Weisaeth, L. (1989). The stressors and the post-traumatic stress syndrome after an industrial disaster. Acta Psychiatrica Scandinavica, 355, 25-37.

Weisaeth, L. (1992). Prepare and repair: Some principles in prevention of psychiatric consequences of traumatic stress. Psychiatria Fennica, 23, Supplementum, 11-18.

Weisaeth, L. (1994). Psychological and psychiatric aspects of technological disasters. In R.J. Ursano, B.G. McCaughey, & C.S. Fullerton (Eds.), Individual and community responses to trauma and disaster: The structure of human chaos (pp. 72-102). Cambridge: Cambridge University Press.

Weissman, M.M., & Markowitz, J.C. (1995). Interpersonal psychotherapy: Current status. Archives of General Psychiatry, 51, 599-606.

Weyrauch, K., Rhodes, L., Psaty, B., & Grubb, D. (1995). The role of physicians' personal knowledge of the patient in clinical practice. Journal of Family Practice, 40, 249-256.

Wilder, G. (1983). Preparing for Disasters: A Conference on Emergency Planning for Disabled and Elderly Persons. Washington: Federal Emergency Management Agency.

Williams, C.L., Solomon, S.D., & Bartone, P.T. (1988). Primary prevention in aircraft disasters: Integrating research and practice. American Psychologist, 43, 730-739.

Williams, D.R., & Sturzl, J. (1990). Grief ministry: Helping others mourn. San Jose, CA: Resource Publications.

Williams, M. (1990). School social work with victims of trauma. Iowa Journal of School Social Work, 5, 11-19.

Williams, M.B., & Sommer, J.F. (1994). Handbook of post-traumatic therapy. Westport, CT: Greenwood Press.

Williams, R.M., Hodgkinson, P.E., Joseph, S.A., & Yule, W. (1995). Attitudes

to emotion, crisis support and distress 30 months after the capsizing of a passenger ferry disaster. Crisis Intervention and Time-Limited Treatment, 1, 209-214.

Wood, J.M.B., Richard, R., Rosenhan, D., Nolen-Hoeksema, S., & Jourden, F. (1992). Effects of the 1989 San Francisco earthquake on frequency and content of nightmares. Journal of Abnormal Psychology, 101, 219-224.

Woody, G.E., McLellan, A.T., & O'Brien, C.P. (1990). Research on psychopathology and addiction: Treatment implications. Drug & Alcohol Dependence, 25, 121-123.

Woody, G.E., McLellan, A.T., Luborsky, L., & O'Brien, C.P. (1995). Psychotherapy in community methadone programs: A validation study. American Journal of Psychiatry, 152, 1302-1308.

Wright, K.M., & Bartone, P.T. (1994). Community responses to disaster: The Gander plane crash. In R.J. Ursano, B.G. McCaughey, & C.S. Fullerton (Eds.), Individual and community responses to trauma and disaster: The structure of human chaos (pp.267-284). Cambridge: Cambridge University Press.

Wright, K.M., Ursano, R.J., Ingraham, L.H., & Paul, T. (1990). Back to the front: Recurrent exposure to combat stress and reactivation of post-traumatic stress disorder. In W.E. Wolf, & A.D. Mosnaim (Eds.), Post-traumatic stress disorder: Etiology, phenomenology, and treatment (pp.126-138). Washington, DC: American Psychiatric Press.

Wright, K.M., Ursano, R.J., Paul, T., & Ingraham, L.H. (1990). The shared experience of catastrophe: An expanded classification of the disaster community. American Journal of Orthopsychiatry, 60, 35-42.

Wysocki, C.J., & Gilbert, A.N. (1989). National Geographic Smell Survey: Effects of age are heterogeneous. Annals of the New York Academy of Sciences, 561, 12-28.

Yehuda, R., Resnick, H., Kahana, & Giller, E.L. (1993). Long lasting hormonal alterations to extreme stress in humans: Normative or maladaptive? Psychosomatic Medicine, 55, 287-297.

Yehuda, R., & McFarlane, A.C. (1995). Conflict between current knowledge about post-traumatic stress disorder and its original conceptual basis. American Journal of Psychiatry, 152, 1705-1713.

Young, B.H., Ford, J.D., Ruzek, J.I., Friedman, M.J., & Gusman, F.D. (in

press). Disaster Mental Health Services: A guidebook for clinicians and administrators. Menlo Park, CA: Department of Veterans National Center for PTSD.

Young, B.H., Ruzek, J.I., Ford, J.D., & Foy D.W. (in press). Beyond debriefing: Time-limited cognitive-behavioral group treatment for disaster survivors diagnosed with PTSD. In B.H. Young & D. D. Blake (Eds.), Group treatment for post-traumatic stress: Conceptualizations, themes, and processes. Washington, DC: Taylor & Francis.

Young, M.A., & Stein, J.H. (1994). Responding to community crisis. In M.B. Williams & J.F. Sommer (Eds.), Handbook of post-traumatic therapy (pp.283-298). Westport, CT: Greenwood Press.

Yule, W., & Williams, R.M. (1990). Post-traumatic stress reaction in children. Journal of Traumatic Stress, 3, 279-295.

Yule, W., Ten, B., Sandra, J., & Stephen, A. (1994). Principal components analysis of the Impact of Events Scale in adolescents who survived a shipping disaster. Personality and Individual Differences, 16, 685-691.

Yule, W., Udwin, O., & Murdoch, K. (1990). The Jupiter' sinking: Effects on children's fears, depression and anxiety. Journal of Child Psychology and Psychiatry and Allied Disciplines, 31, 1051-1061.

Zeidner, M. (1993). Coping with disaster: The case of Israeli adolescents under threat of missile attack. Journal of Youth and Adolescence, 22, 89-108.

Zeidner, M., & Hammer, A.L. (1992). Coping with missile attack: Resources, strategies, and outcomes. Journal of Personality, 60, 709-746.

Zisook, S., Shuchter, S., Sledge, P., & Mulvihill, M. (1993). Aging and bereavement. Journal of Geriatric Psychiatry and Neurology, 6, 137-143.