

4-1-2011

## Promoting Positive Adaptation in Adult Survivors of Natural Disasters

Judith R. Warchal

Louise B. Graham

Follow this and additional works at: <https://mds.marshall.edu/adsp>

---

### Recommended Citation

Warchal, Judith R. and Graham, Louise B. (2011) "Promoting Positive Adaptation in Adult Survivors of Natural Disasters," *Adultspan Journal*: Vol. 10: Iss. 1, Article 4.

DOI: -

Available at: <https://mds.marshall.edu/adsp/vol10/iss1/4>

This Practitioner Focused Article is brought to you for free and open access by Marshall Digital Scholar. It has been accepted for inclusion in *Adultspan Journal* by an authorized editor of Marshall Digital Scholar. For more information, please contact [zhangj@marshall.edu](mailto:zhangj@marshall.edu), [beachgr@marshall.edu](mailto:beachgr@marshall.edu).

# Promoting Positive Adaptation in Adult Survivors of Natural Disasters

Judith R. Warchal and Louise B. Graham

*This article integrates the guidelines of American Red Cross and the Psychological First Aid: Field Operations Guide (Brymer et al., 2006) with adult development theories to demonstrate the promotion of adaptive functioning in adults after a disaster. Case examples and recommendations for counselors working in disaster situations are included.*

Disasters, natural and human-made, strike with and without warning. Lifetime prevalence for a significant traumatic life event involving posttraumatic stress disorder (PTSD) is estimated at 60.7% for men and 51.2% for women (Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995). Lifetime prevalence for exposure to a natural disaster is approximately 20% (Briere & Elliott, 2000; Kessler et al., 1995). Norris, Friedman, Watson, Byrne, et al. (2002) in a study of 60,000 disaster survivors found that between 18% and 21% of the participants indicated severe to very severe impairment. Survivors' rates of PTSD in technological and human-made disasters range from 29% to 54% (McMillen, North, & Smith, 2000), whereas survivors' rates of PTSD in natural disasters are lower, between 4% and 8% (Norris, Friedman, Watson, Byrne, et al., 2002). Study results also indicate that impairment from experiencing a disaster can endure for years (Briere & Elliott, 2000; Grace, Green, Lindy, & Leonard, 1993). Some researchers have called into question the low rates of PTSD because of the stringent criteria for PTSD and given the higher rates of other psychiatric disorders among those with PTSD (Yehuda & McFarlane, 1995). McMillen et al. (2000) proposed that the low rates of PTSD may reflect the stringency of PTSD symptom Criterion C, avoidance and numbing. In a study of Hurricane Hugo survivors 1 to 2 months postdisaster (Norris, Friedman, Watson, Byrne, et al., 2002), 83% met Criterion B (reexperiencing) and 42% met Criterion D (arousal), but only 6% met Criterion C. This criterion is more difficult to meet given that one must exhibit three symptoms in this category; however, the outpouring of community support that often occurs after a disaster may minimize social withdrawal and numbing symptoms (McMillen et al., 2000). McMillen et al. (2000) tested this hypothesis with 130 Northridge, California,

---

Judith R. Warchal, Department of Psychology and Counseling, Alvernia University; Louise B. Graham, Department of Counselor Education, Bridgewater State University. Correspondence concerning this article should be addressed to Judith R. Warchal, Department of Psychology and Counseling, Alvernia University, 400 Saint Bernardine Street, Reading, PA 19607 (e-mail: Judith.Warchal@alvernia.edu).

© 2011 by the American Counseling Association. All rights reserved.

earthquake survivors. Of the primarily female sample, 13% met the full criteria for PTSD, whereas 48% met both the reexperiencing and the arousal symptoms Criteria B and D, respectively.

As noted earlier, much attention has focused on the psychological effects experienced by survivors in the aftermath of a disaster. Psychologists, licensed professional counselors, social workers, and marriage and family counselors assist survivors of disasters by serving on state and local disaster teams associated with the Disaster Response Network of the American Psychological Association (APA) or by volunteering with the American Counseling Association or the American Red Cross as a disaster mental health volunteer (DMHV). In this article, we integrate adult development theories, the guidelines of the American Red Cross (2005) disaster mental health training workbook, and the principles in the *Psychological First Aid: Field Operations Guide (PFA)*; Brymer et al., 2006) developed by the National Child Traumatic Stress Network in the presentation of case examples of adult disaster survivors who received services from American Red Cross DMHVs.

## PROBLEMATIC RESPONSES

Research on the mental health and psychosocial supports that are most effective during and immediately following a disaster is scarce (Inter-Agency Standing Committee [IASC], 2007). Most empirical studies are conducted in the months and years after a disaster. It is well known that specific subgroups of the population are considered to be at increased risk during a natural disaster. Women, children, older adults, individuals who are poor, and young men who become targets of violence are among the most vulnerable (Cronkite & Moos, 1984; Kessler et al., 1995; Thoitis, 1982). The existing literature is replete with resources to assist professionals and nonprofessionals in helping children (Johnston & Redlener, 2006; Saylor, Cowart, Lipovsky, & Jackson, 2003; Substance Abuse and Mental Health Services Administration, 2002), parents (APA, n.d.; La Greca, Silverman, Vernberg, & Roberts, 2002), older adults (Davidson, 2001; Port, Engdahl, & Frazier, 2001), and vulnerable populations (Jones, 2005; Person & Fuller, 2007) cope with disaster. The assumption is that most adults who are the primary caretakers of children, older people, and individuals who are medically ill will experience mild transient complaints that resolve with the return to safe, predictable routines (Cook & Bickman, 1990). In reality, the stress of a disaster affects the caretaker adult, especially middle-aged women, as much as anyone else, but the physical and emotional needs of adults are often overlooked in the process of recovery, with potentially harmful long-term effects (Norris, Friedman, & Watson, 2002).

Similarly, the older adult, who is recognized as having strengths, resiliency, and coping mechanisms built through years of life experiences, is the subject of much attention in the literature, primarily because of the increased vulnerability to the physical challenges in the aftermath of a disaster (Brown, 2007–2008;

Burnett, Dyer, & Pickins, 2007–2008). PTSD is frequently unidentified or misdiagnosed in studies on the mental health needs of older adults (Davidson, 2001; Port et al., 2001).

It is understandable that the more vulnerable populations receive the most attention. Individuals with preexisting mental health issues are likely to have strong reactions to the life changes imposed on them by a disaster (Person & Fuller, 2007). Women report higher levels of exposure, use avoidance coping styles, and avail themselves of fewer disaster services (Ticehurst, Webster, Carr, & Lewin, 1996). One study found that the interaction of the husbands' and wives' assumptions alone predicted the wives' PTSD symptoms following a flood of the Mississippi River in eight states in 1994 (Monson, Gradus, La Bash, Griffin, & Resick, 2009). Husbands' negative views of benevolent world assumptions adversely influenced their wives' PTSD symptoms. There are also numerous studies indicating that older adults are resilient. Some of these studies suggest that, when compared with other age groups, older people are more resilient and less susceptible to the psychological and physical health effects of disasters (Bolin & Klenow, 1982; Huerta & Horton, 1978).

## ADULTS

### Exposure

Phifer (1990) divided adult survivors of a Kentucky flood into different age groupings and found that flood exposure was related to increases in depressive, anxiety, and somatic symptoms 18 months postflood. Men of lower occupational status and individuals between the ages of 55 and 64 years were at significantly greater risk for increases in psychological symptoms.

Phifer (1990) suggested that there are several factors that may account for the relative resiliency of older old adults, age 75 and older. He believed that they have two advantages that aid in adaptation to disasters: a higher incidence of past resolved stressful experiences and a lower incidence of current unresolved stressful experiences. Phifer's conclusions are consistent with Meichenbaum's (1996) stress inoculation theory.

In their longitudinal study, Knight and Gatz (2000) found that older earthquake survivors in California fared better than did younger adult survivors. They concluded that the individual's degree of prior disaster experience was a better predictor of postearthquake psychological functioning than was chronological age. Predisaster level of depression, not age, almost entirely predicted the level of depressive symptoms. The authors also found that older individuals took fewer preparatory steps for a disaster than did their younger family members and suggested that this lack of preparation might reflect a fatalistic perspective. This would suggest an area of intervention for working with elders.

Disaster characteristics were a better predictor of symptomatology than was disaster type in adults (Briere & Elliott, 2000). More than half of those exposed to disaster reported fearing for their lives (64%) or having lost possessions (57%). Type of natural disaster did not determine symptomatology, whereas specific disaster characteristics did. Briere and Elliott (2000) found that fear of death, physical injury, and property loss correlated with elevated scores on the Traumatic Events Survey (Elliot, 1992). These findings could help clinicians' efforts toward helping individuals in the midst of a disaster who experience any of these disaster characteristics.

In an examination of two disasters, an airplane crash and a freight train crash, participants were divided by differing age groups and by exposure level (Chung, Werrett, Easthope, & Farmer, 2004). The individuals with the greatest level of exposure experienced the most symptoms, regardless of age. These findings support a dose-response relationship in which the type of event and level of exposure cut across all ages, with the more intense exposure to a disaster resulting in greater symptoms (Freed, Saladin, Kilpatrick, Resnick, & Saunders, 1994; Ursano & Fullerton, 2003).

Cohan and Cole (2002) investigated the effects of Hurricane Hugo on marriage, birth, and divorce rates prospectively from 1975 to 1997. According to stress theory (Cohan, Pasch, & Bradbury, 1998), there would be a decline in marriage and birth rates and an increase in divorce rates as a result of the hurricane. In contrast, attachment theory (Bowlby, 1969; Hill & Hansen, 1962) suggests that marriage and birth rates would increase, whereas divorce rates would decrease. Cohan and Cole's results for the year following Hugo indicated that marriage, birth, and divorce rates all increased in the affected areas compared with nonaffected areas of South Carolina. The results are consistent with attachment theory. It may be that life-threatening and uncontrollable events challenge the assumption that the world is a benevolent and ordered place (Janoff-Bulman, 1992). This may motivate people to reevaluate what is important in their lives. The increases in marriage and birth rates may point toward a more positive psychology of adaptation.

Marriages that are most likely to dissolve in the face of disaster may be those of middle-aged couples. Middle-aged couples reported more emotional distress and stressors following Hurricane Hugo than did younger or older couples (Thompson, Norris, & Hanacek, 1993). Thompson et al. (1993) suggested that greater role strain from more family and financial responsibilities in middle age may explain the increased vulnerability.

### **Maladaptation**

The most frequent topics of disaster research are the emotional responses (both short-term and long-term) and pathology of individuals of all ages as a result of the disaster experience (Becker, 2006; Benight & Harper, 2002; van Griensven et al., 2006; Vernberg et al., 2008). Given the psychological and economic costs associated with severe pathology, this is understandable.

**Conservation of Resources (COR)**

According to the COR theory, individuals possess both internal and external resources. Examples of external resources are the following: energy resources (money, time, skills), social relationships, and possessions. Examples of internal resources are personal characteristics such as self-efficacy and control (Hobfoll, 1989). According to Hobfoll’s (1989) COR theory, the loss of resources reduces options and results in psychological distress. Freedy et al. (1994) tested the COR theory’s application to a natural disaster (Hurricane Hugo). Resource loss was positively associated with psychological distress and outweighed demographic or coping variables. Freedy et al. conducted a second test of the COR theory and natural disasters and found that psychological distress occurred with resource loss; that resource loss was an important predictor of psychological distress, when other predictors were statistically controlled; and that higher levels of resource loss were associated with mild to moderate elevations in psychological distress. The authors also noted that these findings support the dose–response relationship between low-magnitude life events, resource loss, and psychological distress (Freedy et al., 1994). People experiencing more low-magnitude life events and more disaster-related resource loss were most prone to report current psychological distress. Higher levels of loss were associated with mild to moderate elevations in psychological distress.

Smith and Freedy (2000) continued the prior work on the COR theory by examining psychosocial resource loss after flooding in the Midwest. They found that psychosocial resource loss mediated the effects of flood exposure regarding psychological distress and physical symptoms at 6 months postflood. Examples of psychosocial losses cited were the following: loss of routine, sense of control, sense of optimism, goals, and time with loved ones. The suggestions emanating from the investigation of the COR theory are that prevention is key. Freedy et al. (1994) suggested two courses of action. One is to minimize the loss of resources via building codes, insurance, and public education regarding preparedness. Public education for preparedness is a major aspect of the American Red Cross. The second area is providing access to needed resources, such as shelter, food, water, medical care, and money. American Red Cross DMHVs are in a position to help survivors problem solve to acquire the needed resources and provide contact information for these resources.

**RESILIENCY**

Trained disaster mental health workers recognize that not everyone who experiences a disaster will develop a psychiatric illness or have long-term difficulties (Bonanno, Galea, Bucciarelli, & Vlahov, 2006; McMillen et al., 2000; Norris, Friedman, & Watson, 2002). Most adults are quite resilient and rely on existing coping mechanisms to endure difficult situations (North, Hong, Suris, & Spitznagel, 2008). However, it is equally important to understand the mecha-

nisms that can promote adaptive functioning after a disaster and alleviate, if not prevent, severe pathology from developing. Despite the focus of research on pathology after disasters, adaptive functioning and effective coping are much more common reactions, partly because of coping skills developed throughout childhood and adulthood. Although resiliency in children after traumatic events has received some attention (Garmezy, 1991; Masten, 2001), few studies on resiliency in adulthood exist.

Attention is now slowing focusing on the concept of resiliency (Nemeroff, Bremner, Foa, Mayberg, & Stein, 2006). A “paradigm shift” (Richardson, 2002, p. 309) toward favorable outcomes and protective factors is occurring. Bonanno et al. (2006), in a study of New York area residents 6 months after the September 11, 2001, terrorist attack, found that although PTSD symptoms were greater in highly exposed individuals, resiliency was observed in 65.1% of the sample. The question of what predicts psychological resiliency after a disaster and how mental health professionals can best facilitate effective coping while serving the mental health needs of adults remains unanswered. Bonanno (2004) defined adult resilience as

the ability of adults in otherwise normal circumstances who are exposed to an isolated and potentially highly disruptive event such as the death of a close relative or a violent or life-threatening situation to maintain relatively stable, healthy levels of psychological and physical functioning . . . as well as the capacity for generative experiences and positive emotions. (pp. 20–21)

Other researchers have identified factors such as a sense of cultural/racial identity (Tummala-Narra, 2007) and family support (Spaccarelli & Kim, 1995) as protective factors. Recognizing that most adults will not develop severe emotional reactions after a disaster, both the American Red Cross and the National Child Traumatic Stress Network developed guidelines to assist mental health professionals in facilitating effective coping in disaster survivors. These guidelines form the foundation for the work of American Red Cross DMHVs.

In a disaster context, “psychological resilience may present as distress (bending) without succumbing to psychiatric illness (breaking)” (North et al., 2008, p. 36). Characteristics of resiliency, such as self-esteem, self-efficacy, internal locus of control, resourcefulness, problem-solving and adaptive coping skills, and perception of difficult situations, have been cited in the literature as challenges or opportunities for growth rather than as threats (Agaibi & Wilson, 2005; Chung, Easthope, Chung, & Clark-Carter, 1999; Richardson, 2002; Waysman, Schwarzwald, & Solomon, 2001). A study of the Oakland/Berkeley, California, firestorm supported the concept of resiliency in adult survivors most of whom were married and female (North et al., 2008). The data collection occurred at 4, 16, and 39 months postfire. Of the sample, only 5% met the criteria for

PTSD and only 16% met the criteria for any other mental health diagnosis. However, survivors did report PTSD symptoms, functional impairment, and emotional distress, all of which decreased over time. The authors concluded that the survivors had generally healthy personalities reflecting psychological resiliency.

## MENTAL HEALTH TRAINING

### American Red Cross

The American Red Cross (2005) disaster mental health training workbook stresses the importance of helping adults access their existing coping strategies. Through a daylong training program, the American Red Cross emphasizes seven areas of basic intervention tasks for adults: psychological triage, advocacy, casualty support, crisis intervention, education, emotional care and support, and problem solving. Psychological triage requires DMHVs to rapidly identify individuals in need of more intensive mental health services and provide appropriate referrals for their care. Advocacy is defined as helping individuals access needed services and working through the maze of applying for relief programs and services. Casualty support involves providing emotional support for disaster survivors who have lost a loved one or who have a severe physical injury because of the crisis. Crisis intervention includes providing information, education, and emotional support for adults in immediate emotional crisis. Educational services provide clients with information about disaster recovery and effective coping. Emotional care and support helps clients manage their emotional reactions to a crisis through problem solving, conflict resolution, crisis intervention, and appropriate referrals. The last task, problem solving, helps clients to develop adaptive responses and/or appropriate plans of action related to difficulties that may arise in a disaster setting.

### Psychological First Aid

The National Child Traumatic Stress Network, in collaboration with the National Center for Posttraumatic Stress Disorder, developed the *PFA* (Brymer et al., 2006). This is an evidenced-informed modular approach for helping disaster survivors reduce the initial distress caused by exposure to the disaster. There are eight core modules described as *core actions*, with each core action area containing specific recommendations for working with the survivors. Five principles endorsed within the eight core areas have received broad empirical support for facilitating positive adaptation: promote a sense of safety, promote calming, promote a sense of self- and community efficacy, promote connectedness, and promote hope (Hobfoll et al., 2007). The eight core actions are contact and engagement, safety and comfort, stabilization, information gathering, practical assistance, connection with social supports, information on coping, and linkage with collaborative services.



**THEORY-BASED APPLICATION**

It is evident that disaster response initiatives recognize Maslow’s (1954) hierarchy of needs and prioritize food, shelter, and safety as the most basic and immediate concerns. The *PFA* (Brymer et al., 2006) core actions and American Red Cross intervention tasks also consider Erikson’s (1950) adult development theory as a framework for examining the stressors of adults after a disaster. Erikson (1950) advanced a unique view of development that he called the psychosocial life span theory. Social interactions throughout the life span are critical, particularly in the development of ego strengths, identified by Erikson (1950) as hope, will, purpose, competence, fidelity, love, care, and wisdom. Recent studies have linked the positive emotions of joy, humor, interest, contentment, and love with effective coping (Fredrickson, 2001; Fredrickson, Tugade, Waugh, & Larkin, 2003). Promoting ego strength and mitigating crisis reactions in disaster recovery in adulthood are the goals of the *PFA* and American Red Cross interventions. Erikson (1968) believed that identity was a central issue in adult development and considered an identity crisis as “designating a necessary turning point, a crucial moment when development must move one way or another, marshaling resources of growth, recovery and further differentiation” (p. 16). Recognizing that a loss of identity, be it individual, family, community, or culture, can occur during a natural disaster is vital in the recovery process. Individual responses to a disaster may be highly dependent on prior development of ego strengths and positive emotions. Research indicates that an insulating factor after a disaster may be the social aspect of recovery, because the outpouring of help and aid may increase adaptive coping (Gottlieb, 1996; Hagan, 2005). The *PFA*’s five principles, which have empirical support for facilitating positive adaptation after a disaster, mirror Erikson’s (1950) ego strengths and Maslow’s hierarchy of needs, specifically by promoting a sense of safety, calmness, a sense of self- and collective efficacy, connectedness, and hope (Hobfoll et al., 2007).

As is apparent, there are a number of similarities between the *PFA* (Brymer et al., 2006) core actions and the American Red Cross intervention tasks. Both advocate adaptive functioning after a disaster for adult survivors. Both are based on Maslow’s (1954) hierarchy of needs and Erikson’s (1950) psychosocial stages of adulthood. Both provide for education, advocacy, and referral. Finally, both provide the social support that is critical to effective coping. The case examples that follow illustrate the integration of Maslow’s and Erikson’s (1950) theories of adult development with the guidelines provided in the *PFA*, the American Red Cross’s disaster mental health training interventions for adults, and the interventions of American Red Cross DMHVs to facilitate effective coping and positive adaptation in young and midlife adults after a disaster.

## CASE EXAMPLES

### Physiological Stress Response

When the threat is encountered, the body responds with an outpouring of neurotransmitters and hormones. Typically, the first reaction to danger is to freeze, to stop all movement (LeDoux, 1996). Then, the sympathetic nervous system signals the body to initiate a fight-or-flight response by increasing respiration and heart rate and releasing adrenalin and glucose (Tortora & Grabowski, 2000). Immediately after a disaster, individuals attempt to make sense of what has occurred, while still feeling vulnerable and fearful. The body often responds by maintaining a state of high alert, ready to adapt to any imminent threat. This physiological state can result in sleep difficulties, loss of appetite, hypervigilance, anxiety, irritability, and concentration difficulties. Trauma disrupts the normal functioning of the stress response and causes memory disturbances such as amnesia or the intrusive reliving of painful experiences (Stien & Kendall, 2004). People in this heightened state of arousal find it difficult to make decisions and tackle the maze of paperwork and agency requirements. This is often the point of entry for the DMHV to assist adults through the *PFA* (Brymer et al., 2006) core actions of contact, engagement, safety, and comfort. Tasks such as distributing food, setting up cots in the shelter, or handing out water provide the opportunity to connect with adults in a nonthreatening manner. DMHVs provide disaster survivors with assistance by offering the basic needs in Maslow's (1954) hierarchy, such as water, food, a chair to sit and rest in while they wait in line, or sunscreen as they stand in the hot sun. DMHVs pack bags of food and water for families to take with them as they move from agency to agency. Often, the American Red Cross intervention of education is sufficient. Informing people that the emotional reactions they are experiencing are normal responses to an abnormal event helps to normalize the situation and reduce anxiety and fears.

### Medical Issues

Most middle-aged adults use medications and often neglect their medications in the first days after a disaster, placing them at greater risk for medical complications. Common conditions such as high blood pressure and diabetes can go untreated for days or weeks. In one case, a middle-aged couple waited in line for 3 hours in a 97°F waiting room with no ventilation to see an American Red Cross case manager. Both husband and wife were hungry and dehydrated. The husband had lost his diabetes medication in the fire disaster they had experienced. He did not want to leave to have the prescription filled because he would lose his place in line. If he waited to go to the pharmacy until after his meeting with the caseworker, the pharmacy would be closed and he would be without his diabetes medication for a day. The DMHV found a cooler location for the couple and brought them food and water. The DMHV intervened and suggested to the service center manager that the couple needed assistance out

of waiting order for safety reasons. Immediate intervention by the DMHV with emotional care, support, and problem solving allowed this couple to be seen quickly and have the much-needed prescription filled that day. Adults in shelters also often have special medical needs such as having a sleeping cot located near an outlet for a breathing machine or providing diabetic amputees in wheelchairs with special accommodations for hygiene needs, sleeping, and eating. This reflects the COR stress model in that resource loss is associated with psychological distress (Freedy et al., 1994).

### **Substance Abuse/Dependency**

Disasters often exacerbate existing problems (Crawford, 2006). Adults who rely on alcohol, illegal drugs, or prescription medications to cope with the stress of everyday life are more likely to turn to these ineffective coping mechanisms when stressed by a natural disaster. Because American Red Cross shelters have a zero tolerance policy regarding substance use, DMHVs can initiate a discussion of this policy as a segue to education about substance use as an ineffective coping mechanism. DMHVs can inquire about substance use/abuse and educate the person about deleterious effects, especially postdisaster, such as exacerbation of sleep difficulties, fatigue, and irritability. This discussion may lead to teaching the individual other self-soothing techniques, such as relaxation or deep breathing. It may also evolve into an opportunity to offer a referral for substance abuse/dependency treatment. Shelter residents generally adhere to the zero tolerance policy while in the shelter but often leave the shelter grounds to use substances in the shelter parking lot. This is not tolerated because it creates unsafe situations for other shelter residents.

### **Anger**

Anger is another normal response in people coping with disasters when their sympathetic nervous systems are in high gear. The amygdala lies at the center of the limbic or emotional system in the brain (Carter, 1998). Different parts of the amygdala trigger various survival responses, including withdrawal, immobility, and aggression (Carter, 1998). Some manifestations of anger after a disaster can be attributed to the physiological effects of poor diet, fatigue, and fear. Frustrations and feelings of helplessness are also factors. Privacy in a shelter is nonexistent. Space is limited. Food is adequate, but special dietary needs are difficult to manage. With the increased stress after a disaster, individuals who are not normally irritable and short-tempered often respond with anger, and people who normally use anger as a coping mechanism will often exhibit an intensification of their anger response. For example, a man being interviewed by a caseworker started verbally abusing the caseworker. The verbal abuse seemed to be escalating to physical violence. The DMHV approached the man and sat with him as he vented his feelings regarding the caseworker and expressed his frustration and humiliation with the situation. Using crisis intervention

techniques, the DMHV normalized this frustrating situation, acknowledged the man’s feelings of frustration and humiliation, and provided emotional support and comfort. The man calmed down, felt that his concerns had been heard, and ultimately apologized for his outburst and thanked the staff. This is an example of the American Red Cross’s principles of crisis intervention and emotional care and support. It also reflects the COR stress model in that resource loss is associated with psychological distress (Freedy et al., 1994). In this example, the disaster survivor was unable to provide for his family and was distressed.

**Family Issues**

A family of seven presented a unique challenge to the American Red Cross staff. The parents faced the challenge of keeping five children, whose ages ranged from 6 months to 16 years, entertained in crowded shelter conditions while dealing with the knowledge that they had lost their home and all their possessions. The parents were upset when they saw their children engaging in regressive behaviors, such as enuresis or thumb sucking. They complained that their children were irritable and argumentative, and they worried that something was wrong with them. They blamed themselves and interpreted these behavioral aberrations as evidence of their poor parenting skills, which is reflective of Maslow’s (1954) self-esteem concerns. DMHVs were able to use the American Red Cross’s principles of education, crisis intervention, and emotional care and support to explain common behavioral and physical responses exhibited by children after traumatic events. When DMHVs assure parents that their children’s behaviors are normal responses to abnormal situations, both parents and children can focus on returning to their normal baseline, which illustrates the *PFA* (Brymer et al., 2006) core actions of stabilization and practical assistance, as well as all five principles. Parents in these situations are usually unaware of their own physiological needs (Maslow, 1954) or emotional needs of Erikson’s (1950) Intimacy vs. Isolation stage as they focus on their children.

Adults in the first half of Erikson’s (1950) Generativity vs. Stagnation stage will often ignore their own basic needs to care for an aged parent. These adults are simultaneously dividing their attention between their own children, spouse, and parent, while neglecting their basic nutritional needs, sleep, and self-care. The activities in which the DMHV engages are providing multiple functions for the survivors as delineated by the American Red Cross’s principles of education, crisis intervention, and emotional care and support.

**Child Care**

One young mother in a shelter after a fire disaster required assistance with her baby. Caring for her child, who was just beginning to walk and who found the open spaces of a shelter gym the ideal place to practice his newly developing skills, was overwhelming, as chasing after a toddler can be under the best of circumstances. Given the additional burdens of common courtesy and consid-

eration for other shelter residents, she was exhausted and overwhelmed by her child care responsibilities. She approached the DMHV and asked for assistance in watching the child so she could shower. The willingness of the DMHV to provide the American Red Cross intervention of emotional care and support and the *PFA* (Brymer et al., 2006) core actions of safety and comfort and practical assistance in meeting the physical needs of this resident led to hours of problem solving and education. This is illustrative of the *PFA* core actions of information on coping and linkage with collaborative services. The resident was also more amenable to advocacy intervention because the DMHV was able to connect her with the agencies (a *PFA* core action) available to assist in her recovery.

### **Family First**

An incident illustrating self-neglect due to caring for family members occurred during a bereavement visit to a married couple in which the DMHV used the American Red Cross intervention of casualty support. The husband had lost his sister in Hurricane Gustav. His wife had been the caregiver for her sister-in-law, who was mentally ill. The deceased lived by herself but relied on her sister-in-law for financial management, emotional support, and physical care. When the DMHV arrived to express condolences (an example of the *PFA* [Brymer et al., 2006] core action of contact and engagement), the husband replied, "You are the first person to acknowledge this. Thank you." The first floor of the couple's house had received water damage, and the house was in disarray from the damage. The city was still on a ban for drinking water. The wife had what appeared to have been a second- or third-degree burn on her thigh from spilling water on herself that she was boiling. She had not seen a doctor because, in her words, she did not have the time; she was dealing with her sister-in-law's death and the devastation in their own home. A naturally slender adult, she admitted to failing to care for herself, eating poorly since the disaster, and having difficulties sleeping as she broke down in tears. The DMHV was able to convince the woman of her need to see her doctor and have the burn cared for by using the *PFA* principle of safety. The couple had multiple issues to solve. The most pressing issue was to ascertain if they were eligible for American Red Cross financial assistance for the burial expenses of the sister. The flood damaged much of the couple's house, and they needed to apply for financial assistance to begin restoration. The decisions and cleanup related to the flood were daunting. Once this relationship was established, the DMHV was able to continue to work with this woman over the course of 2 weeks to help her process her emotions and problem solve.

### **Mental Health**

DMHVs identified a shelter resident as needing more intensive mental health services than just a compassionate presence. The man was in need of mental health screening/informal assessment and triage (i.e., psychological triage). The

resident had become highly agitated in response to an incident with another resident involving personal space in the shelter. One can only imagine the importance of one’s “cot space” when sharing a gymnasium with hundreds of others. While intervening in the immediate crisis as it erupted by using the American Red Cross’s principle of crisis intervention, the DMHVs quickly realized that the resident’s reactions were not typical. Further evaluation revealed that the resident had a significant mental health history and a long association with the local mental health agencies. A DMHV connected the resident with an agency and stabilized the situation so that he could remain in the shelter with additional emotional care and support. This is an example of the American Red Cross’s advocacy principle and illustrates the use of the *PFA* (Brymer et al., 2006) core actions of information gathering, practical assistance, connection with social supports, and linkage with collaborative services. Early intervention prevented serious decompensation of this person’s mental illness and promoted effective coping mechanisms.

**System Errors**

Initiation of the American Red Cross’s principle of crisis intervention occurred when the unexpected testing of a fire alarm in the school gymnasium, which was serving as a shelter, sent residents diving under their cots and dashing for the door. Situations like this require the immediate intervention of the DMHV to calm the residents’ reactions and educate them about common reactions to disasters. In this case, the DMHV immediately responded to an adult shaking under his cot. This adult, and the others in the shelter, had been awakened in their homes in the middle of the night three times in the preceding 3 weeks by sirens sounding evacuation alarms as wildfires threatened their homes in the mountains. The unexpected and acute stress reactions are soothed when DMHVs provide calm reassurance that “this too shall pass,” thus restoring a sense of safety and promoting resiliency and effective coping.

**Existentialism**

Although many people immediately return to the most basic of Maslow’s (1954) hierarchy of needs in the aftermath of a disaster, not all survivors are in the survival mode. One shelter resident spent the days and weeks after the disaster in a search for meaning, one of Maslow’s higher level stages. Once he was physically safe in the shelter, he immediately began to assist others in whatever way he could, illustrating the *PFA* (Brymer et al., 2006) core action of connection with social supports. Although he needed and gratefully accepted the advocacy and educational services provided by the American Red Cross DMHVs, it was clear that these were not his primary concerns. His needs were more spiritual, because he sought to make sense of the disaster and ponder his life choices in relationship to it. His reaction is reflective of the *PFA*’s five principles, which are important in disaster recovery, specifically in this case, reestablishing a sense

of self-efficacy and community, connectedness, and hope. When time permitted, he engaged DMHVs in deep discussions about their own commitments to volunteer work. His parting remarks were “You have restored my soul.”

### **Connectedness, Hope, and Community**

Another example of the *PFA* (Brymer et al., 2006) principles of connectedness, hope, and self- and community efficacy occurred in the California fires when the homes on an entire side of a mountain were burned to the ground. All that remained were ashes and iron supports rising out of the rubble. The American Red Cross set up an area at the base of the mountain where community members gathered for food, water, shovels, gloves, garbage bags, and equipment necessary for the survivors to sift through the rubble. With support from the American Red Cross volunteers, community members searched through the ashes for any valuables. One mother and son drove around the mountainside stopping and offering sandwiches and drinks at lunchtime. Near the end of one day, a woman drove into the staging area with a case of beer and suggested that they all have a drink together. There was a sense of pride and belonging in this small town. One lone house somehow survived the inferno. The residents of the only standing house on the mountain opened up their home to all the neighbors and provided a haven for weary friends and neighbors to drop in and talk, eat, rest, and use the bathroom.

### **Positive Coping**

Promoting positive emotions is an effective coping intervention. In one situation, the shelter supervisor and DMHVs organized an ice cream party and karaoke night in the shelter. The residents were able to put aside their concerns about their homes for a few hours and focus on enjoying the party and music. The effects of this evening lasted for days, because the residents realized that they could experience laughter and joy in the midst of tragedy. Shelter residents referred to the party as one of the bright spots in their shelter experience.

### **Recommendations for Counselors**

Anyone who chooses to be trained as an American Red Cross DMHV and respond to a disaster situation should understand that the most desired characteristic is flexibility. The counselor must assume a role very different from the traditional 50-minute office counseling session. Counselors are called on to respond to needs that often fall outside the range of talk therapy. Opportunities to make connections with disaster survivors occur everywhere—in the food line, in the restroom, in the parking lot. In disaster relief, counselors need to act as team members, coordinating efforts with multiple agencies to be part of the solution, not a hindrance to the process. Counselors need to understand that manifestations of pathology in a disaster situation do not necessarily indicate mental illness, but the reactions of normal people to abnormal situations. It is

also vital to remember that most people are highly resilient in the aftermath of a disaster, and the role of the counselor is to remind individuals of the coping skills they already possess. The counselor’s focus should be on the identification of strengths, not pathology. Interventions that empower the survivors to participate in their recovery are most effective and sustainable. Counselors need to emphasize activities that promote positive coping, such as seeking out social support, providing structure to the day, relaxation techniques, and healthy recreational activities, and discourage solutions that foster dependency (IASC, 2007). Issues related to age, gender, culture, and spirituality need to be considered, and, above all, the dignity of the survivor must be respected and supported. Counselors also need to remember that their services to adults also extend to the other disaster workers and volunteers.

**DISCUSSION**

Quickly and systematically addressing the immediate needs of adult survivors of disasters after the traumatic event, such as facilitating effective coping mechanisms in the adults, will have potentially long-term effects not only on them but also on the children and older adults in their care. Exposure is an important ingredient in predicting who will or will not develop distress (Knight & Gatz, 2000; Meichenbaum, 1996). Disaster characteristics, not type of disaster, are also associated with postdisaster adjustment (Briere & Elliott, 2000). This points to a dose–response relationship (Freedy et al., 1994; Ursano & Fullerton, 2003). The COR theory points to resource loss predicting psychological distress (Freedy et al., 1994; Hobfoll, 1989). This information gives clinicians an important point of entry in disaster work. Specifically, preventive education provides effective coping mechanisms and resources for people when disaster strikes.

Evidence of widespread resilience after disasters exists (Bonanno et al., 2006); however, the exact mechanisms that facilitate this resilience remain a mystery. Adult development theories, such as those of Maslow (1954) and Erikson (1950), provide insight into the satisfaction of basic needs and psychosocial ego strengths postdisaster. However, future research, difficult as it may be to conduct in the chaos immediately following a disaster, may reveal that specific interventions, such as those recommended by the PFA (Brymer et al., 2006) and the American Red Cross and implemented by the DMHVs in the case examples presented in this article, do in fact facilitate positive coping in adult survivors of disasters and prevent future mental health issues. As in this article, the case study approach is often the most common research methodology used in the days immediately following a disaster. Case examples demonstrate the effectiveness of the American Red Cross DMHVs’ use of advocacy, education, emotional care and support, referral, and crisis intervention in alleviating stress after natural disasters.



REFERENCES

Agaibi, C. E., & Wilson, J. P. (2005). Trauma, PTSD, and resilience: A review of the literature. *Trauma, Violence, & Abuse, 6*, 195–216.

American Psychological Association. (n.d.). *Recovering from the wildfires*. Retrieved from <http://www.apa.org/helpcenter/wildfire.aspx>

American Red Cross. (2005). *Foundations of disaster mental health: Participant's workbook* (ARC 3077-4A). Washington, DC: Author.

Becker, S. M. (2006). Psychosocial care for adult and child survivors of the 2004 tsunami disaster in India. *American Journal of Public Health, 96*, 1397–1398.

Benight, C. C., & Harper, M. L. (2002). Coping self-efficacy perceptions as a mediator between acute stress response and long-term distress following natural disasters. *Journal of Traumatic Stress, 15*, 177–186.

Bolin, R., & Klenow, D. J. (1982). Response of the elderly to disaster: An age-stratified analysis. *International Journal of Aging and Human Development, 16*, 283–296.

Bonanno, G. A. (2004). Loss, trauma, and human resilience: Have we underestimated the human capacity to thrive after extremely aversive events? *American Psychologist, 59*, 20–28.

Bonanno, G. A., Galea, S., Bucciarelli, A., & Vlahov, D. (2006). Psychological resilience after disaster. *Psychological Science, 17*, 181–186.

Bowlby, J. (1969). *Attachment and loss: Vol. 1. Attachment*. New York, NY: Basic Books.

Briere, J., & Elliott, D. (2000). Prevalence, characteristics and long-term sequelae of natural disaster exposure in the general population. *Journal of Traumatic Stress, 13*, 661–679. doi:10.1023/A:1007814301369

Brown, L. M. (2007–2008). Issues in mental health care for older adults after disasters. *Generations, 31*, 21–26.

Brymer, M., Jacobs, A., Layne, C., Pynoos, R., Ruzek, J., Steinberg, A., . . . Watson, P. (2006). *Psychological first aid: Field operations guide* (2nd ed.). Retrieved from [http://www.ptsd.va.gov/professional/manuals/manual-pdf/pfa/PFA\\_V2.pdf](http://www.ptsd.va.gov/professional/manuals/manual-pdf/pfa/PFA_V2.pdf)

Burnett, J., Dyer, C. B., & Pickins, S. (2007–2008). Rapid needs assessments for older adults in disasters. *Generations, 31*, 10–15.

Carter, R. (1998). *Mapping the mind*. Berkeley: University of California Press.

Chung, M. C., Easthope, Y., Chung, C., & Clark-Carter, D. (1999). The relationship between trauma and personality in victims of the Boeing 737-2D6C crash in Coventry. *Journal of Clinical Psychology, 55*, 617–629.

Chung, M. C., Werrett, J., Easthope, Y., & Farmer, S. (2004). Coping with post-traumatic stress: Middle-aged and elderly comparisons. *International Journal of Geriatric Psychiatry, 19*, 333–343.

Cohan, C. L., & Cole, S. W. (2002). Life course transitions and natural disaster: Marriage, birth, and divorce following Hurricane Hugo. *Journal of Family Psychology, 16*, 14–25.

Cohan, C. L., Pasch, L., & Bradbury, T. N. (1998, June). *The social support dilemma among married couples*. Poster session presented at the International Conference on Personal Relationships, Saratoga Springs, NY.

Cook, J. D., & Bickman, L. (1990). Social support and psychological symptomatology following a natural disaster. *Journal of Traumatic Stress, 3*, 541–556.

Crawford, K. A. (2006). Intervention: Goals of behavioral health disaster response. In Massachusetts Department of Mental Health and Massachusetts Department of Public Health Center for Emergency Preparedness, *Massachusetts behavioral health disaster responder participant reference guide* (p. 31). Unpublished participant manual.

Cronkite, R. C., & Moos, R. H. (1984). The role of predisposing and moderating factors in the stress-illness relationship. *Journal of Health and Social Behavior, 25*, 372–393.

Davidson, J. R. (2001). Recognition and treatment of posttraumatic stress disorder. *The Journal of the American Medical Association, 286*, 584–588.

Elliott, D. M. (1992). *Traumatic Events Survey* (TES). Torrance, CA: Author.

Erikson, E. (1950). *Childhood and society* (2nd ed.). New York, NY: Norton.

Erikson, E. (1968). *Identity: Youth and crisis*. New York, NY: Norton.

Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist, 56*, 218–226. doi:10.1037/0003-066X.56.3.218

Fredrickson, B. L., Tugade, M. M., Waugh, C. E., & Larkin, G. R. (2003). What good are positive emotions in crisis? A prospective study of resilience and emotions following the terrorist attacks on the United States on September 11th, 2001. *Journal of Personality and Social Psychology, 84*, 365–376. doi:10.1037/0022-3514.84.2.365

- 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.
- Garmezy, N. (1991). Resilience and vulnerability to adverse developmental outcomes associated with poverty. *American Behavioral Scientist, 34*, 416–430.
- Gottlieb, B. H. (1996). Theories and practices of mobilizing support in stressful circumstances. In C. L. Cooper (Ed.), *Handbook of stress, medicine, and health* (pp. 339–356). Boca Raton, FL: CRC Press.
- 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 (Eds.), *International handbook of traumatic stress syndromes* (pp. 441–449). New York, NY: Plenum.
- Hagan, J. F. (2005). Psychological implications of disaster or terrorism on children: A guide for the pediatrician. *Pediatrics, 116*, 787–795.
- Hill, R., & Hansen, D. A. (1962). Families in disaster. In G. W. Baker & D. W. Chapman (Eds.), *Man and society in disaster* (pp. 185–222). New York, NY: Basic Books.
- Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist, 44*, 513–524.
- Hobfoll, S. E., Watson, P., Bell, C. B., Bryant, R. A., Brymer, M. J., Friedman, M. J., . . . Ursano, R. J. (2007). Five essential elements of immediate and mid-term mass trauma intervention: Empirical evidence. *Psychiatry, 70*, 283–315.
- Huerta, F., & Horton, R. (1978). Coping behavior of elderly flood victims. *The Gerontologist, 18*, 541–546.
- Inter-Agency Standing Committee. (2007). *IASC guidelines on mental health and psychosocial support in emergency settings*. Geneva, Switzerland: Author.
- Janoff-Bulman, R. (1992). *Shattered assumptions*. New York, NY: Free Press.
- Jenike, M. A. (1995). Post-traumatic stress disorder in the elderly: A 3-year follow-up of the Lockerbie disaster. *Journal of Geriatric Psychiatry and Neurology, 8*, 137. doi:10.1177/089198879500800213
- Johnston, C., & Redlener, I. (2006). Critical concepts for children in disasters identified by hands-on professionals: Summary of issues demanding solutions before the next one. *Pediatrics, 117*, S458–S460.
- Jones, N. (2005). *Report for Congress: The Americans With Disabilities Act and emergency preparedness and response* (Vol. RS22254). Washington, DC: Congressional Research Service.
- Kessler, R. C., Sonnega, A., Bromet, E., Hughes, M., & Nelson, C. B. (1995). Posttraumatic stress disorder in the National Comorbidity Survey. *Archives of General Psychiatry, 52*, 1048–1060.
- Knight, B. G., & Gatz, M. (2000). Age and emotional response to the Northridge earthquake: A longitudinal analysis. *Psychology and Aging, 15*, 627–635.
- La Greca, A. M., Silverman, W. K., Vernberg, E. M., & Roberts, M. C. (Eds.). (2002). *Helping children cope with disasters and terrorism*. Washington, DC: American Psychological Association.
- LeDoux, J. (1996). *The emotional brain: The mysterious underpinnings of emotional life*. New York, NY: Simon & Schuster.
- Maslow, A. H. (1954). *Motivation and personality*. New York, NY: Harper & Row.
- Masten, A. S. (2001). Ordinary magic: Resilience processes in development. *American Psychologist, 56*, 227–238.
- McMillen, J. C., North, C. S., & Smith, E. M. (2000). What parts of PTSD are normal: Intrusion, avoidance, or arousal? Data from the Northridge, California, earthquake. *Journal of Traumatic Stress, 13*, 57–75.
- Meichenbaum, D. (1996). Stress inoculation training for coping with stressors. *The Clinical Psychologist, 49*, 4–7.
- Monson, C. M., Gradus, J. L., La Bash, H. A. J., Griffin, M. G., & Resick, P. A. (2009). The role of couples' interacting world assumptions and relationship adjustment in women's postdisaster PTSD symptoms. *Journal of Traumatic Stress, 22*, 276–281. doi:10.1002/jts.20432
- Nemeroff, C. B., Bremner, J. D., Foa, E. B., Mayberg, H. S., & Stein, M. B. (2006). Posttraumatic stress disorder: A state-of-the-science review. *Journal of Psychiatric Research, 65*, 207–239.
- Norris, F. H., Friedman, M. J., & Watson, P. J. (2002). 60,000 disaster victims speak: Part II. Summary and implications of the disaster mental health research. *Psychiatry, 65*, 240–260. doi:10.1521/psyc.65.3.240.20169
- Norris, F. H., Friedman, M. J., Watson, P. J., Byrne, C. M., Diaz, E., & Kaniasty, K. (2002). 60,000 disaster victims speak: Part I. An empirical review of the empirical literature, 1981–2001. *Psychiatry, 65*, 207–239. doi:10.1521/psyc.65.3.207.20173
- North, C. S., Hong, B. A., Suris, A., & Spitznagel, E. L. (2008). Distinguishing distress and psychopathology among survivors of the Oakland/Berkeley firestorm. *Psychiatry, 7*, 35–45.
- Person, C., & Fuller, E. J. (2007). Disaster care for persons with psychiatric disabilities: Recommendations for policy change. *Journal of Disability Policy Studies, 17*, 238–248.

- Phifer, J. F. (1990). Psychological distress and somatic symptoms after natural disaster: Differential vulnerability among older adults. *Psychology and Aging, 5*, 412–420.
- Port, C. L., Engdahl, B., & Frazier, P. (2001). A longitudinal and retrospective study of PTSD among older prisoners of war. *American Journal of Psychiatry, 158*, 1474–1479.
- Richardson, G. E. (2002). The metatheory of resilience and resiliency. *Journal of Clinical Psychology, 58*, 307–321. doi:10.1002/jclp.10020
- Saylor, C. F., Cowart, B. L., Lipovsky, J. A., & Jackson, C. (2003). Media exposure to September 11: Elementary school students' experiences and posttraumatic symptoms. *American Behavioral Scientist, 46*, 1622–1642.
- Smith, B., & Freedy, J. (2000). Psychosocial resource loss as a mediator of the effects of flood exposure on psychological distress and physical symptoms. *Journal of Traumatic Stress, 13*, 349–357.
- Spaccarelli, S., & Kim, S. (1995). Resilience criteria and factors associated with resilience in sexually abused girls. *Child Abuse & Neglect, 19*, 1171–1182. doi:10.1016/0145-2134(95)00077-L
- Stien, P. T., & Kendall, J. C. (2004). *Psychological trauma and the developing brain*. New York, NY: Haworth Maltreatment and Trauma Press.
- Substance Abuse and Mental Health Services Administration. (2002). *How families can help children cope with fear and anxiety*. Washington, DC: U.S. Department of Health and Human Services.
- Thoitis, P. A. (1982). Life stress, social support, and psychological vulnerability: Epidemiological considerations. *Journal of Community Psychology, 10*, 341–362.
- Thompson, M. P., Norris, F. H., & Hanacek, B. (1993). Age differences in the psychological consequences of Hurricane Hugo. *Psychology and Aging, 8*, 606–616.
- Ticehurst, S., Webster, R., Carr, V., & Lewin, T. (1996). Psychological impact of an earthquake on the elderly. *International Journal of Geriatric Psychiatry, 13*, 943–951.
- Tortora, G. J., & Grabowki, S. R. (2000). *Principles of anatomy and physiology* (9th ed.). New York, NY: Wiley.
- Tummala-Narra, P. (2007). Trauma and resilience: A case of individual psychotherapy in a multi-cultural context. *Journal of Aggression, Maltreatment, & Trauma, 14*, 205–225.
- Ursano, R. J., & Fullerton, C. S. (2003). *Terrorism and disaster: Individual and community mental health interventions*. Cambridge, England: Cambridge University Press.
- van Griensven, F., Chakkraband, M., Thienkrua, W., Pengjuntr, W., Lopes Cardozo, B., Tantipiwatanaskul, P., . . . Tappero, J. W. (2006). Mental health problems among adults in tsunami-affected areas in southern Thailand. *The Journal of the American Medical Association, 296*, 537–548.
- Vernberg, E., Steinberg, A., Jacobs, A., Brymer, M., Watson, P., Osofsky, J., . . . Ruzek, J. I. (2008). Innovations in disaster mental health: Psychological first aid. *Professional Psychology: Research and Practice, 39*, 381–388.
- Waysman, M., Schwarzwald, J., & Solomon, Z. (2001). Hardiness: An examination of its relationship with positive and negative long term changes following trauma. *Journal of Traumatic Stress, 14*, 531–548. doi:10.1023/A:1011112723704
- Yehuda, R., & McFarlane, A. C. (1995). Conflict between current knowledge about posttraumatic stress disorder and its original conceptual basis. *American Journal of Psychiatry, 152*, 1705–1713.