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# Family Risk and Resilience in the Context of War and Terrorism

*War and terrorism are exerting increasing force on world affairs, with growing implications for families and the scholars who study them. In this review, I consider the implications of mass violence for families, with particular emphasis on families with members serving in the U.S. military and families around the world who live where mass violence occurs. Mass violence poses significant threats to mental health and family functioning, but individuals and families also display striking levels of resilience.*

There are at least three reasons that scholars of family life should consider war and terrorism. The first is that war and terrorism are exerting increasing force on world affairs, with growing implications for both families and scholars. Since World War II, the global prevalence of war has increased steadily from about 5 to over 30 countries per year (Bellamy, 2004). Second, war and terrorism have generated important scientific insights, such as Hill's (1949) study of postwar family reintegration that led to family stress theory. Third, the research that scholars conduct in the aftermath of war and terrorism can help families by leading to innovations like the new disaster mental health practice recommendations developed following 9/11 (Hobfoll et al., 2007).

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The breadth of this review required several limiting decisions and the exclusion of many worthy studies. Regrettably, I was able to include only materials available in the English language, which may have resulted in an unintentional bias favoring Western industrialized countries. I also regret my inability to do full justice to the international diversity of family experiences with war and terrorism. The review begins with definitions of war and terrorism and then turns to trauma, the major human consequence for survivors. I then consider two particular manifestations, labeled the "War Away," where I focus primarily on U.S. military families affected by the wars in Iraq and Afghanistan, and the "War at Home," where I focus on families around the world who live where mass violence occurs. I close by considering resilience and growth and implications for future research.

## WAR AND TERRORISM DEFINED

Defining and distinguishing *war* and *terrorism* is not always straightforward. Unlike conventional wars, in which government sanctioned combatants fight one another on behalf of nations, modern conflicts are increasingly unconventional, with rising numbers of combatants lacking official status, no clear front lines (Sammons & Batten, 2008), and increasing use of terrorist tactics, such as targeting civilians with random attacks calculated to generate the most widespread fear possible (Wilkinson, 2003). For these reasons, I use the term *mass violence* to include both war and terrorism (Murthy, 2007).

This review focuses on antistate terrorism, the goals of which are usually nationalist (e.g.,

Basques seeking self-determination in Europe), ideological (e.g., Shining Path trying to replace Peru's political system), or religio-political (e.g., the Islamic Jihad working to establish a religious government in Uzbekistan; Wilkinson, 2003). Nation-states are not only targets but also supporters, sponsors, and perpetrators of terrorism, sometimes against their own citizens. McCauley (2002) pointed out that in the 20th century, Stalin, Mao, and Hitler together killed 99 million of their own citizens, compared to ''only'' 500,000 individuals killed by nonstate terrorists [emphasis added].

According to some political scientists, the September 11, 2001, World Trade Center bombings (9/11) took terrorism to a new level by convincing nation-states that terrorists can pose significant threats to their security and stability, with the ability to cause very large scale death and destruction, including damage to national economies (Wilkinson, 2003). The subsequent wars in Iraq and Afghanistan comprise the largest scale and longest armed conflict for the United States military since the end of the draft (Sammons & Batten, 2008).

MASS VIOLENCE AND EXPOSURE TO TRAUMA

The long-term consequences of mass violence stem primarily from the psychological trauma it causes. Decades of research have shown that distress results when stressful demands overtax the coping capacity of individuals and families (Cowan, Cowan, & Schulz, 1996). Sometimes distress is so severe that it causes psychopathology, usually triggered by a combination of characteristics of the stressor, individual or family factors, and factors in the larger context.

As a stressor, mass violence tends to be unexpected, unwelcome, and complex, and therefore is very likely to be catastrophic rather than normative (Peebles-Kleiger & Kleiger, 1994). In a meta-analysis of natural, technological, and violence disasters in 29 countries from 1981 to 2001, mass violence was 1.5 times more likely to generate severe or very severe impairment, according to levels of psychopathology in each sample (Norris, Friedman, & Watson, 2002).

Contextual factors also affect reactions to potentially traumatic stressors. For example, cultures vary in the degree to which particular events are defined as traumatic (Baingana, Bannon, & Thomas, 2005). When loss of life, resources, property, or territory are widespread and when large numbers of people come to doubt their abilities to find safety and cope, *collective* traumatization may occur (Norris et al., 2002). The primary stress caused by the violent events also may be compounded by secondary stress from disrupted living arrangements and tertiary stress from psychological or physical injuries (Fremont, 2004).

Although mass violence commonly causes widespread distress, most cases do not require treatment; the ones that do are mostly associated with anxiety, depression, and posttraumatic stress disorder (PTSD; Baingana et al., 2005). Children also can develop clinically significant symptoms that vary with their developmental status (Fremont, 2004). Individuals who do develop clinically significant symptoms are disproportionately likely to be members of groups who lack status, experience, or resources: young people, women, members of ethnic minority groups, people with prior psychiatric problems, and people who lack support or the confidence that they can cope (Norris et al., 2002). McNally (2003) worried, however, that ''conceptual bracket creep'' by clinicians and researchers is blurring the distinction between genuine disorders and normal distress reactions that abate without clinical intervention.

Because of logistical challenges, many epidemiological studies of the sequelae of mass violence rely on self-reports from individuals in nonrandom samples, leading to wide variations in prevalence estimates. Studies since 2000 of mass violence in Asia, Africa, and the Middle East revealed levels of clinically significant symptoms (30% of the participants) comparable to those measured in probability samples in lower Manhattan immediately following 9/11 (20% with probable PTSD), but rates in New York fell quickly to lower levels (Galea et al., 2002; Murthy, 2007). The global base rate of psychiatric disorders is estimated at 1% to 3% (Baingana et al., 2005).

PTSD is the most studied of many reactions to mass violence, with a multinational literature covering both veterans and victims from decades of conflicts. PTSD comprises several enduring symptoms, including persistent intrusive memories or dreams; avoidance of reminders through detachment, emotional numbness, or avoiding activities; and increased irritability, anger, or vigilance (McNally, 2003). PTSD is highly comorbid with substance abuse,

depression, and other psychological disorders (Nemeroff et al., 2006).

PTSD can be highly disruptive of both individual well-being and marital and parenting relationships. The arousal cluster of PTSD symptoms appears to promote expressions of anger and hostility toward both spouses and children, and the emotional numbing cluster has been linked to loss of intimacy and withdrawal (Galovski & Lyons, 2004). There is disagreement about whether PTSD can be contagious, but trauma symptoms do reverberate within families. A review of more than 100 studies of Holocaust survivors and U.S. and international veterans of World War II, Korea, and Vietnam with PTSD found that their spouses reported elevated levels of anxiety, depression, hostility, and somatization (Galovski & Lyons). In addition, their children displayed elevated levels of psychopathology, interpersonal difficulties, and psychiatric treatment, although this was primarily in families dealing with other serious issues such as health problems (Van Ijzendoorn, Bakermans-Kranenburg, & Sagi-Schwartz, 2003).

Methods of trauma transmission among family members are not well understood. Shared genetic material may make children uniquely vulnerable to their parents' trauma, but most methods are related to social processes. Trauma may be transmitted directly when spouses or children identify with the traumatized individual and develop similar symptoms or when the traumatized individual displays hostility or violence. Trauma also may be transmitted indirectly through the family's shared environment, where the traumatic experience may be discussed or reenacted in frightening ways; family members may communicate in unconstructive patterns including avoidance or overdisclosure. Researchers have investigated but found no support for the possibility that spouses' symptoms predate their partners' traumatization and thus are a partial function of assortative mating (Galovski & Lyons, 2004).

Most individuals exposed to traumatic events do not develop PTSD or other psychological problems, indicating that there are important unanswered questions about how these problems are produced (McNally, 2003). There are many aspects of traumatic experiences other than PTSD that also deserve attention from researchers. Individual differences in sensitivity of physiological stress responses, early exposure to traumatic experiences, and access to supportive resources are all areas requiring further research (Nemeroff et al., 2006), as are the mechanisms through which trauma reverberates within families.

## THE WAR AWAY

Since 2000, the largest military actions in the world have been the wars in Afghanistan (Operation Enduring Freedom or OEF) and Iraq (Operation Iraqi Freedom or OIF). Because exposure to combat negatively affects service members and their families (MacLean & Elder, 2007), and because most military combatants in these conflicts have been from the United States, this section focuses primarily on families with members serving in the U.S. military.

### Theoretical Perspectives About Military Families

Several theoretical perspectives have proven useful in accounting for the experiences of military families. For example, life course theory has been productively used to situate the effects of military service in larger contexts including historical time, race, and gender, as MacLean and Elder (2007) demonstrated regarding the effects of U.S. military service during the latter half of the 20th century. MacLean and Elder showed that few effects of military service are consistent across wars and that life course concepts help to explain this variability. For example, veterans of World War II appear to have experienced more positive outcomes than veterans of later conflicts, likely due in part to *historical* factors: more positive public sentiment during the war and better economic and educational prospects afterward. During the all-volunteer era, social inequality across *race* and *gender* has narrowed because White but not African American female veterans have earned less than their nonveteran counterparts following their service. Unlike other aspects of military service, exposure to combat has consistently compromised the later life course of veterans, who subsequently are more likely to divorce and die earlier than their peers (MacLean & Elder).

Family stress theory has long been applied to the study of military and other families. Similar to theories of individual stress, this theory proposes that stressor events impose

potentially disruptive demands, but in this case the focus is on the responses of families rather than individuals. Excessive demands may cause crises that disrupt family functioning, sometimes severely. The double-ABCX expansion of the theory incorporated poststressor family dynamics leading to positive or negative outcomes (McCubbin & Patterson, 1983), and a further expansion called the Family Adjustment and Adaptation Response model incorporated individual, family, and community influences (Cowan et al., 1996). Two family stress constructs are of particular interest: catastrophic stressors and boundary ambiguity. Although some scholars have argued that wartime deployments are catastrophic rather than normative stressors, with high potential to generate prolonged family disruption (Peebles-Kleiger & Kleiger, 1994), it is not clear that deployment to the current conflicts has typically been catastrophic for families. According to the theory, whether or not a stressor proves catastrophic would be determined not just by the properties of the stressor but also by family resources and appraisals. Existing studies of military families suggest several risk factors for poor family adjustment in relation to deployment, including isolation, youth, inexperience, or pileups of additional stressors (Wiens & Boss, 2006). Another family stress construct receiving recent attention is boundary ambiguity, which refers to uncertainty about family roles. During deployments, service members are physically absent from the family, but psychologically present; following return the opposite is true. Several recent studies have found boundary ambiguity a challenge for service members, spouses, and children (Faber, Willerton, Clymer, MacDermid, & Weiss, 2008; Huebner, Mancini, Wilcox, Grass, & Grass, 2007).

The Emotional Cycle of Deployment is a stage model that, like family stress theory, has roots in Hill's (1949) WWII research, when he observed that families appeared to experience stages of disorganization, recovery, and reorganization during both deployment and reintegration. Like some stage models of individual and family development that have fallen from favor, this model may not do enough to acknowledge the diversity of families' experiences, but the standardized elements of deployment cycles may create some predictable experiences. The best known recent version is by Pincus, House, Christenson, and Adler (2001), which proposes that during *predeployment*, families experience negative reactions including shock, anger, anticipation of loss, conflict, and withdrawal. During *deployment*, which comprises the transition to and first month of deployment, families are thought to experience a period of disorganization, followed by stabilization, and anticipation of homecoming during the redeployment stage in the last month of deployment. In the *postdeployment* stage, families experience a euphoric honeymoon, followed by renegotiation and stabilization. The model is grounded in clinical observation but has not been thoroughly tested empirically.

Although it has been applied to military families less often than have other theories, attachment theory holds promise (Basham, 2008). This theory proposes that individuals develop internal working models of attachment as a result of their interactions with caregivers early in life, which then shape their relationships during adulthood; deployment challenges attachment systems by requiring adults to separate from and return to their primary attachment figures. In an extensive review of literature on wartime separation, Vormbrock (1993) predicted that spouses would display the same protest-despair-detachment response typically observed in children upon reunion, which proved largely correct, except that despair appeared to be followed by anger and reorganization. Internal working models of attachment appear to be important influences on the ability to regulate emotions later in life, which is an important skill for healthy functioning in relationships.

## Characteristics of U.S. Military Families

The U.S. military comprises active and reserve components of 1.4 million and 833,930 members, respectively, as well as 2,988,545 spouses and children (Deputy Under Secretary of Defense, Military Community and Family Policy, 2008). The U.S. population also includes 23.4 million veterans, among them 1.8 million women (U.S. Census Bureau, 2008). In recent decades, the military has downsized by about 30% but has become much busier: Use of the military overseas has tripled (Tanielian & Jaycox, 2008).

Today, compared to the civilian labor force, members of the active component military force are younger, more ethnically diverse, and better

educated (i.e., 47% military vs. 14% civilian workers are age 25 or younger, 37% vs. 30% are members of ethnic minority groups, and 99% vs. 57% hold at least high school diplomas; Deputy Under Secretary of Defense, Military Community and Family Policy, 2008; U.S. Census Bureau, 2008). Women remain substantially underrepresented (15% compared to 46% of the civilian labor force; Deputy Under Secretary of Defense, Military Community and Family Policy, 2008; U.S. Census Bureau, 2008). Compared to the active component, members of the reserve component are slightly older and better educated, less ethnically diverse, and include a slightly higher percentage of women (Deputy Under Secretary of Defense, Military Community and Family Policy).

In terms of family, 55% of active and 49.8% of reserve component members are married; men and officers are more likely than others to be married and less likely to divorce (Karney & Crown, 2007). About 61% of active component enlisted spouses are employed or looking for work, including 8% who serve in the military; officers' spouses are less likely to be in the labor force. Just over 40% of military members are parents; children's modal ages are 0 to 5 and 6 to 14 in the active and reserve components, respectively. Military families are about twice as likely as civilians to first bear children during their 20s, and less likely to do so in their teens or 30s. Single parents, 70% of them fathers, comprise 5.2% and 8.2% of the active and reserve components, respectively (Deputy Under Secretary of Defense, Military Community and Family Policy, 2008). Most military families live in civilian communities and most military children attend school in them (Department of Defense Education Activity, 2009).

Relative to civilians, military families display both strengths and vulnerabilities. Divorce and family formation rates during the all-volunteer era are lower in the active component military than among civilians (Lundquist & Smith, 2005; MacLean & Elder, 2007). Test scores in Department of Defense schools, especially among African American and Hispanic students, exceed those of most other students around the country (Department of Defense Education Activity, 2009). Studies of child abuse have yielded mixed results, but recent studies with larger samples report military rates similar to or lower than those among civilians (Rentz

et al., 2006). Rates of intimate partner violence, however, are up to three times higher in the military (Rentz et al.).

### Effects of Combat Deployments on Service Members

In the United States, 1.8 million service members have deployed almost 3 million times since September 11, 2001, about 27% of them in the reserve component (Armed Forces Surveillance Center, 2009). About 41% of active and 27% of reserve component members have been deployed multiple times (Armed Forces Surveillance Center). About 36% and 25% of active and reserve component members, respectively, have spent more than 12 months on OIF or OEF deployments (Armed Forces Surveillance Center).

Sammons and Batten (2008) argued that psychological injuries are receiving more attention during the current conflicts than ever before. For example, all service members now complete psychological screenings immediately prior to, immediately following, and 3 to 6 months following deployment. A Mental Health Advisory Team (MHAT) annually gathers data from a stratified sample of service members deployed to Iraq and Afghanistan.

Exposure to combat-related trauma appears to elevate psychological problems (Tanielian & Jaycox, 2008). A recent Institute of Medicine (2008) review concluded that deployment to a war zone was positively related to mental health disorders, including PTSD and other anxiety disorders, depressive disorders, alcohol abuse, accidental death and suicide, and family conflict. In a cross-sectional group comparison of 4,000 infantry members who left for or returned from 6- to 12-month deployments in Iraq or Afghanistan during 2003, the prevalence of probable cases of depression or PTSD was 7.9% and 12.9%, respectively, compared to predeployment rates of 5.3% and 5% (Hoge et al., 2004). Rates of psychological symptoms rise with exposure to combat: In Hoge et al.'s study, service members who had engaged in more than five firefights were more than four times as likely to report symptoms of PTSD as those who had engaged in none. More than half of U.S. service members deployed to Iraq or Afghanistan have been exposed to potentially traumatic events, including incoming weapons fire or ambushes. Unfortunately, those who

screened positive reported greater reluctance to receive help and worried more than other service members about negative consequences of doing so (Milliken, Auchterlonie, & Hoge, 2007).

Special concern may be warranted regarding members of the reserve component. Immediately following return from deployments in 2005 and 2006, members of the reserve and active components reported quite similar levels of psychological symptoms (17.5% vs. 17.0%) and relationship conflict (4.2% vs. 3.5%), but 3 months later, rates in the reserve component had risen much more steeply (to 35.5% vs. 27.1% for psychological symptoms and 21.1% vs. 14% for relationship conflict), despite similar exposure to combat (Milliken et al., 2007).

Finally, although military members wounded in Iraq and Afghanistan are less than half as likely as their counterparts in World War II to die from their injuries (9% vs. 22%; Sammons & Batten, 2008), by December 2009, 5,287 service members had died (Defense Manpower Data Center, 2009), and 36,286 members had been wounded, among them more than 1,100 amputees and over 40,000 diagnosed with traumatic brain injuries (Defense Manpower Data Center; Fischer, 2009).

### Effects of Deployment on Families

Family separation and reunion are defining experiences of military life and generate special concern during wartime. It may be service members who travel ''downrange'' to the battlefield, but deployment can affect their partners, children, parents, siblings, employers, and others in profound ways—not all negative. When given the opportunity, military members and their spouses in both the active and reserve components frequently identify positive aspects of deployment, such as personal growth, opportunities for service members to apply their military skills and to advance their careers, and increased income for families (Castaneda et al., 2008; Newby et al., 2005).

*Before deployment.* On the basis of the experiences of multinational forces serving in conflicts in Kuwait and Iraq, Somalia, Haiti, and Bosnia during the 1990s, McCarroll, Hoffman, Grieger, and Holloway (2005) described stressors for service members and their families during the deployment cycle. The period prior to deployment is often very busy and anxiety producing, as families prepare legally and emotionally for family separation and the anxiety of deployment (McCarroll et al., 2005). In the 2003 Air Force Community Assessment of more than 30,000 members, service members predicted their spouses would have more trouble with deployment when they held junior enlisted rank and had been married fewer than 3 years. Service members were less likely to make such predictions when they perceived good support from leadership, their base agencies, and their community (Spera, 2009), especially married service members who had experienced longer deployments.

During deployment, challenges for service members are thought to fall into three primary categories: *physical*, such as duration, workload, ability to rest, and injuries or disease; *psychological*, such as family worries, exposure to trauma, or boredom; and *moral*, such as ambivalence about military operations (McCarroll et al., 2005). Consistent with this perspective, data gathered during deployments in Iraq and Afghanistan in 2007 indicated that service members' most common concerns were deployment length (57%), family separation (42.6%), boring and repetitive work (44.1%), and lack of privacy (43.6%; Mental Health Advisory Team V, 2008). For spouses, common challenges during deployment are thought to be *psychological*, such as worry, sadness, and loneliness, especially when the deployment is hazardous (Kelley, 2002), and *logistical*, such as communicating with the service member, taking care of household needs, and arranging care for children (Steelfisher, Zaslavsky, & Blendon, 2008). Some spouses (30% to 50%; Flake, Davis, Johnson, & Middleton, 2009) relocate to be closer to extended family members during deployments, leaving local military services and causing children to change schools. There also may be *economic* challenges, such as rearranging employment or paying for household services usually performed by the deployed family member. These challenges appear to be similar for active and reserve component families (Castaneda et al., 2008).

Military members worry about their relationships during deployment. Recent Department of Defense data indicate that 3.6% of all service member marriages ended in divorce in fiscal 2009, compared with 2.6% a decade earlier (McMichael, 2009). In all of the MHAT studies, family separation has been more strongly related

than any other concern to mental health problems (Mental Health Advisory Team V, 2008). Depending on pay grade and the elapsed duration of the deployment (but not number of deployments), up to 30% of deployed service members indicated planning to divorce or separate following their return. There is little evidence that these intentions are carried out, however, at least in the short term, perhaps because military compensation and benefits provide incentives to stay married. In the most definitive study of the current war to date, Karney and Crown (2007) examined personnel records for over 560,000 service members who married between 2002 and 2005. Unexpectedly, more days of deployment usually *decreased* the likelihood of divorce, especially for men, younger couples, and parents. These results were less consistent with the predictions of stress theories than those of life course explanations, suggesting that certain individuals are attracted to enter hasty marriages because of impending deployments or military benefits tied to marriage, which then end prematurely. It is much too soon, however, to draw firm conclusions about the long-term effects of the current conflicts on marital stability, and there are, as yet, no data to address definitively the impact of deployment on marital quality.

By 2008, more than a million children had been separated from their parents during the wars in Iraq and Afghanistan, sometimes for most of their lives (Moran, 2008). Although there is considerable interest in the implications for children of war-related deployments, the number of published studies remains small. Studies of prior conflicts, some of which are longitudinal and quasi-experimental, showed that children display a variety of internalizing and externalizing symptoms associated with deployment that usually do not require clinical attention (Cozza, Chun, & Polo, 2005). Consistent with many studies of children under stress, studies of military children also have shown that children's psychological symptoms are more severe when their at-home parent's own well-being is compromised (Chandra et al., 2010; Cozza et al.).

So far, recent findings are consistent with earlier research. Among preschoolers, Chartrand, Frank, White, and Shope (2008) found elevated internalizing and externalizing behaviors during deployment in a sample of 169 children in child development centers on Marine Corps installations. In Flake et al.'s (2009) study of 101 Army parents with children age 5 to 12 years and a deployed spouse, 42% reported significant levels of parenting stress and 32% reported significant psychological symptoms in their children. Parents were seven times more likely to report child symptoms when they also reported high levels of stress, but only one third as likely when they felt supported by the military and those around them (Flake et al.). In a new study of 1,507 children age 11 to 17 and caregivers, Chandra et al. (2010) found elevated emotional difficulties both during and after deployment, particularly among girls, older children, and children who had experienced longer deployments. Patterns of significant factors differed for caregivers and children, however. Department of Defense health records indicate that per capita mental health appointments for children under 18 have increased more than 85% between 2003 and 2008, and inpatient days have risen at least 50%. The increase in unique patients among spouses and children is much smaller, however, suggesting that more care is being provided per patient (M. Dinneen, personal communication, August 2009).

There is troubling evidence that child maltreatment rises during deployment. Rates of substantiated maltreatment in military families across all branches of service living in Texas increased 30% for each 1% increase in active duty personnel departing for deployment between 2000 and 2003 (Rentz et al., 2007). In Army families that experienced deployment *and* child maltreatment between 2001 and 2004, rates of physical abuse almost doubled, rates of maltreatment tripled, and rates of neglect quadrupled during deployment (Gibbs, Martin, Kupper, & Johnson, 2007).

*After deployment.* Few studies have focused on the specific processes of the postdeployment period, even though many studies are conducted then. The emotional cycle of deployment model (Pincus et al., 2001) proposes that during reintegration spouses will have to cope with the loss of independence gained during the deployment, negotiate needs for personal space and family routines, and resume their roles as parents. In the one longitudinal study found of reintegration during OIF, Faber et al. (2008) conducted up to seven semistructured interviews during the year following return with 34 Army reservists and spouses. Consistent with the emotional cycle model, these couples were preoccupied

with relational communication and expectations, especially regarding independence, roles, and responsibilities. A third issue, which the emotional cycle model did not predict (perhaps because it is based primarily on the experiences of active component families), was the transition from soldier to civilian; service members whose returns to the civilian workforce did not go smoothly experienced prolonged ambiguity about their psychological presence and greater adjustment difficulties. In a recent study of OIF/OEF veterans referred for mental health evaluations, substantial proportions of veterans reported that they felt like guests or were unsure about their family roles and that their family members were afraid of them; more than half reported conflicts involving shouting, pushing, or shoving (Sayers, Farrow, Ross, & Oslin, 2009).

Some recent studies show that symptoms of combat-related trauma are related to marital distress for both partners. In one study of 45 National Guard couples, wives were more distressed when they could not attribute their husbands' symptoms to an obvious cause, because husbands either failed to acknowledge symptoms the wives perceived or reported more symptoms than their combat experience had led their wives to expect (Renshaw, Rodrigues, & Jones, 2008).

Reintegration also can be a dangerous period. Some studies suggest positive relationships between deployment length and subsequent intimate partner violence, especially when service members are suffering from combat-related trauma (McCarroll et al., 2000). Rentz et al. (2007) found increases in rates of child maltreatment as service members returned from deployment.

### Populations Deserving Special Consideration

Reserve component families are being relied upon more heavily now than in any recent conflicts. In addition, they may experience more complex transitions than other military families because service members must exit and reenter civilian communities and workplaces, not just their military duty station at home. Spouses and children may need to change health care providers when military benefits replace those of the service member's civilian employer during deployment. Civilian communities may be poorly prepared to serve military families

(Huebner et al., 2009). Early data suggest that reserve component members may have higher rates of psychological and substance abuse problems, but little is known about the predictors or consequences.

Individual augmentees (IAs), or service members deployed with units other than their own—sometimes in other branches of military service—comprise another group of service members who deserve special attention. Because it is sometimes unclear whether the service member's home unit or host unit should provide support services, IA families sometimes receive little attention (Castaneda et al., 2008), but little is known about the consequences of these circumstances.

Wounds and injuries can present families with severe challenges, even when service members fully recover. There are few studies of civilian or military families' processes of adjustment to acquired physical injuries (Cozza et al., 2005). Injuries that cause long-term changes in behavior, emotions, or abilities can seriously challenge marriages, thrusting spouses into caregiving, even parental, roles, altering or ending their intimate relationship with their partner and increasing their risk of psychological problems and divorce (Blais & Boivert, 2005). Military family members may need to relocate or separate to tend to the needs of hospitalized service members during a long rehabilitation (Cozza et al.). Family members who are not authorized to hold military identification cards face additional challenges because they may have difficulty gaining access to military facilities and services (Blais & Boisvert).

By March 2008 over 3,400 children had experienced the death of a parent during the current conflicts (Moran, 2008). Available data are limited but, in general, suggest that bereaved children are at elevated risk of psychiatric disorders and behavioral or emotional problems (Cozza et al., 2005). Children of wounded parents may be disadvantaged in two ways: Injured parents may be less able to respond sensitively to children and noninjured parents may be so preoccupied with caregiving that children receive reduced attention (Cozza et al.). Research is needed to guide parents and practitioners in helping children to adjust to their parents' wounds and injuries. It is not clear whether or how the experiences of military children are distinct from those of civilians, although the care systems for

the two groups of wounded families are quite different.

Families serving in the U.S. military are models of both strength and vulnerability. Although many families are functioning well, there is also mounting evidence in the form of mental health problems and child maltreatment that the wars are taking their toll. Research on military families entails significant methodological challenges, including mobility of the population and competition from large numbers of military surveys. Perhaps as a result, few studies include multiple family members, probability samples, or longitudinal designs. There are also many more studies of PTSD than other disorders, and few studies of resilience. Readers of this literature also must be careful to pay close attention to the empirical basis for general conclusions, as repeated citations of some findings have made the evidence seem stronger than it is. We know much more about families who will, can, and do seek help than those who will not, cannot, and do not. In terms of theory, most studies have been either purely descriptive or conducted from a family stress perspective. In most cases, there has been greater attention to stressors than to resources, although recent studies by Flake et al. (2009) and Spera (2009) are exceptions. Youth and lack of experience with both marriage and military life have emerged repeatedly as risk factors, as has social support as protective. Many studies focus on how much, or prevalence; more studies are needed about why, how, or for whom under which conditions families experience particular strengths or challenges.

Some military families have been studied more than others. More is known about Army families, active component families, married-couple families, and the families of male service members than other families (Kelley, 2002). Little is known about systematic variations among children or the long-term adjustment of families to serious wounds and injuries. There have also been relatively few studies of ethnic minority military families (Westhuis, Fafara, & Ouellette, 2006). Puzzling questions remain. For example, why do so many service members indicate during deployment that they intend to end their relationships but so few divorce, at least in the short term? How can the corrosive effects of combat-related trauma on family relationships be reduced? How can children be better protected from their parents' stressors? What are the typical and problematic trajectories of adjustment following return from deployment? During the past 5 years, hundreds of studies have been launched that may address these gaps.

## THE WAR AT HOME

Millions of families around the world live on battlefields, trying to raise and educate children, obtain food and medical care, and stay alive as bombs drop and land mines explode around them. The World Health Organization estimates that 191 million people, 60% of them not combatants, lost their lives to mass violence in the 20th century (Krug, Dahlberg, Mercy, Zwi, & Lozano, 2002). In 2000, 5.2 of every 100,000 persons on the globe died as a result of mass violence (Baingana et al., 2005), with much higher rates in the most vulnerable societies—the death rate in Africa in 2000, for example, was 32 per 100,000 persons (Baingana et al.). Recent research focuses on conflicts in Bosnia, Palestine, Afghanistan, Rwanda, Iraq, Croatia, Northern Ireland, Cambodia, and other locations. The September 11, 2001, bombings in New York, Washington, and Pennsylvania exposed U.S. families to the long-standing experiences of their global counterparts.

Researchers' understanding of families' experiences amidst mass violence is very incomplete. Because it is extremely difficult to gather data in dangerous and unstable circumstances, most studies are conducted when conditions have already begun to improve, not when family challenges are most acute (McGinn, 2000). It is even difficult to document casualties because counts are distorted intentionally for political reasons (Krug et al., 2002) or unintentionally because bodies cannot be found (Farooq, Guitard, McCoy, & Piachaud, 2003). For all of these reasons, methodological rigor, including longitudinal data, probability sampling, or experimental intervention, is exceedingly difficult to achieve. Researchers also sometimes oversimplify the complexity of mass violence and overemphasize negative outcomes in what may be well-intentioned efforts to underscore the gravity of families' circumstances, but in doing so overlook examples of individual and family resilience (Barber, 2008; Panos & Panos, 2007). Researchers also have focused more on individual mental health than on family functioning (Norris et al., 2002).

September 11, 2001, provided an unwelcome opportunity to collect unusually detailed data in

the immediate aftermath of an episode of mass violence. Within days, researchers began tracking the impact of the bombings across the country. These studies provide an unusually detailed and immediate data record. Immediately, psychological symptoms rose sharply, similar to patterns observed around the world in the aftermath of mass violence, but then fell to about half the initial level within a few weeks, a drop much larger than in locations around the world where the initial violence is compounded by infrastructure damage or long duration. Within a week of the bombings, nationally representative studies found that over 40% of adults screened positive for at least one symptom consistent with posttraumatic stress (e.g., Schuster et al., 2001). When asked, more than one third of parents (35%) also reported that their child displayed at least one symptom (Schuster et al.). Two months later, rates among adults had subsided to between 17% and 21%, and by March 2002, the rate had fallen to 5.8% (Silver, Holman, McIntosh, Poulin, & Gil-Rivas, 2002). Studies using more stringent clinical cutoffs estimated probable prevalence of PTSD at about half the rate of the screening studies (Galea et al., 2002).

Also consistent with other studies of mass violence, stress reactions to the bombings were related to dosage of trauma and personal characteristics. In terms of dosage, psychological symptoms were more common among individuals who were located closer to the World Trade Center or who lost more friends, family, or possessions in the bombing (Galea et al., 2002). Women and children appeared to be more vulnerable (Schuster et al., 2001; Silver et al., 2002), as were members of ethnic minority groups (Galea et al.; Schuster et al.) and individuals with prior trauma or psychological problems (Schuster et al.).

Again consistent with earlier studies, children's reactions were related to those of their parents. Randomly selected children aged 6 to 17 in the New York City area who reported the most symptoms were also most likely to have parents who were involved in rescue efforts, experiencing psychological symptoms themselves, or who did not know how their child was responding (Stuber et al., 2005). In the months after the attack, parents temporarily decreased their focus on discipline and increased their focus on emotional connections with their children (Stuber et al.).

A new finding was that watching television appeared to increase trauma symptoms. Rates of probable PTSD were 37% among those who watched 3 or fewer hours of television but 58% among those who watched 13 or more hours on the day of the attack (Schuster et al., 2001).

*Theoretical Perspectives About Context*

Because wars at home occur where families live, theoretical perspectives that articulate the mechanisms connecting daily life to its surrounding context are especially useful. Large-scale mass violence affects every layer of a society, from individual well-being and family functioning to community infrastructures and cultural norms (Murthy, 2007). Mass violence damages the capacity to deliver supportive services at the same time as it generates urgent need for them (Baingana et al., 2005). In Iraq, for example, military operations have inflicted serious environmental damage in the form of air and water pollution, abandoned explosives, and destruction of agricultural land and damaged the infrastructures for delivering food, water, sanitation, power, health care, education, and employment (Farooq et al., 2003). The war also loosened social controls and reduced the number of functioning courts, leading to expansion of violence throughout the society (Farooq et al.). As public confidence, social control, and self-sufficiency eroded, it became increasingly difficult to develop and implement strategies to solve community problems (Farooq et al.). In developing countries where infrastructures are not robust, the impact of mass violence is especially severe (Norris et al., 2002).

In addition to theories of stress and family functioning already mentioned, Bronfenbrenner's bioecological theory and Hobfoll's conservation of resources (COR) theory are particularly useful in accounting for families' experiences in the aftermath of mass violence (Bronfenbrenner & Morris, 2006; Hobfoll, 1989). Bioecological theory makes explicit the anatomy of multiple layers of the environment surrounding individuals and families (Bronfenbrenner & Morris). This nested perspective is treated as essential by many scholars and policy makers for addressing the needs of individuals and families following mass violence and disasters (Baingana et al., 2005). Bioecological theory also provides a framework for explaining variation in responses to outwardly similar episodes of mass violence.

By recognizing that development is a function of characteristics of persons, processes connecting individuals to others in relationships and contexts, characteristics of the settings within which they grow and develop, and their location in time, they create a person-process-context-time model that provides a framework for accounting for variability.

COR theory is being applied to an increasing variety of family circumstances, including mass violence. According to this theory, strain is the result of actual or threatened loss of resources, or ''objects, personal characteristics, conditions or energies that are valued by the individual or that serve as a means of attainment'' of additional resources (Hobfoll, 1989, p. 516). Hobfoll disputed earlier claims that even positive events can prove stressful, arguing that resource losses are far more powerful predictors of distress. He also disputed the prominence of the role of appraisals in earlier stress theories, arguing that some resource losses are objectively negative regardless of how they are appraised. Consistent with bioecological theory, COR theory recognizes that resource losses at group or community levels impede coping at individual or family levels (Hobfoll et al., 2007). These principles are illustrated clearly by the consequences of mass violence.

Both bioecological and COR theory, like family stress theory, also recognize that accumulations or pileups of stressors can compound initial trauma. Bioecological theory proposes that impoverished environments boost the power of processes leading to negative developmental outcomes (Bronfenbrenner & Morris, 2006). Hobfoll (1989) used the term ''loss spirals'' to recognize that, in already impoverished environments, resource losses are likely to beget additional losses. These theories offer useful bases for explaining why mass violence is so likely to generate trauma: Resource losses are often substantial, widespread, and long-lasting, affecting not just isolated individuals but families, entire communities, and even nations, thus generating trauma that is both compound and collective.

### Effects of Mass Violence on Families Around the World

Beyond compromising the health and well-being of individual family members, mass violence disrupts many aspects of family life (Baingana

et al., 2005). The effects of mass violence can be extremely long lasting: The Holocaust continues to generate negative effects in families five decades later (e.g., Van Ijzendoorn et al., 2003). Mass violence disrupts the ability to carry out family functions including marriage, bearing and rearing children, and allocating family responsibilities. For example, in the 1990s, following the war in Lebanon, women became substantially more likely to delay or forgo marriage because the population of men had shrunk through mortality and migration. Data collected for the National Housing Survey indicated only 50 men remained in the country per every 100 women in some age groups (Saxena, Kulczycki, & Jurdi, 2004). A review of studies of refugees in Asia, Africa, the Middle East, and South America found that in locations around the world where medical care became unavailable or social disruption was extreme, infant birth weights fell and mortality of both mothers and infants rose.

Daily life is extremely difficult in the context of mass violence: Family members may be separated by imprisonment or forced military recruitment, the need to care for members in multiple locations, or safety concerns (Panos & Panos, 2007). Families may have to relocate to shelters or refugee camps, suddenly finding themselves in extreme poverty. Their access to employment may be compromised, making it difficult to purchase supplies or food. Schools may be closed, making it difficult to supervise or provide safety for children. It may take hours each day to acquire food or potable water (Somasundaram, 2004).

Some scholars are concerned that the special circumstances of women during war do not receive sufficient attention. To the extent that women are targets of discrimination and violence during peacetime, their treatment worsens during war (Park, 2006). Where social controls have loosened (runaway norms) and families have been displaced to refugee camps, the incidence of sexual violence and sexually transmitted diseases has risen (McGinn, 2000; Park).

Increasingly, women and girls are being specifically targeted for systematic rape campaigns as a weapon of war—now a war crime—aimed specifically at destroying family units and ethnic group solidarity (Diken & Laustsen, 2005). In camps in Bosnia, women and girls were raped until pregnant, sometimes in front of family members, then imprisoned until abortion

was no longer possible. According to traditions in some cultures, such women would be condemned and their children ostracized (Diken & Laustsen).

Mass violence alters patterns of family structure and role allocation. In Rwanda, for example, the genocide of one million adults left so many children with no living relatives that there are now hundreds of thousands of child-headed households (Schaal & Ebert, 2006). In Sri Lanka, thousands of widowed women have been thrust into the unfamiliar and nontraditional role of sole provider for their families (Somasundaram, 2004). To the extent that they were prevented from obtaining education or skills to prepare for employment, their families risked prolonged periods of poverty. In Iraq, many families in which fathers have been killed or captured have been ostracized and family members are afraid to search for them (Farooq et al., 2003). Even such negative circumstances, however, may generate positive change, such as the emergence of new community organizations, improved status for women, and erosion of caste systems (Somasundaram).

The uncertainty and hardship following mass violence appear to make it very difficult for parents to function effectively, although only a small amount of research is available. A review of research on Palestinian families emphasized the importance of warm and supportive parenting in the aftermath of mass violence: Children whose parents were supportive and nonpunitive were better adjusted, less aggressive, and better problem solvers than children whose parents became more hostile and punitive, even if the latter group of parents remained supportive (Qouta, Punamäki, & El Sarraj, 2008). Parents preoccupied with worries about safety and the future were perceived by their children as having greater difficulty recognizing and responding to their children's emotional needs (Qouta et al.). In a study of more than 600 Croatian children from two-parent families, Kerestenes (2006) found that children who perceived their parents' behavior more positively were judged as more prosocial by their teachers, even though children who were exposed to more trauma were also perceived as more aggressive by themselves and their teachers.

An important insight is that discrepant behaviors between parents can be problematic for children. In a longitudinal study conducted during and after Israeli troops occupied Gaza in the early 1990s, Palestinian adolescents who perceived their mothers as warm and supportive but their fathers as not so reported significantly higher levels of PTSD than other adolescents (Punamäki, Qouta, & El-Sarraj, 2001). There is also evidence that parents' treatment of children became more gender specific: Parents tended to increase their restrictions on girls' behavior but encourage boys' participation in the political conflict (Qouta et al., 2008).

*Challenges for children.* As some of the most vulnerable members of society, children are particularly susceptible to interruptions in infrastructure (e.g., education, health care, food supplies) or primary social relationships (e.g., bereavement, relocation, separation, and parental distress). Exposure to mass violence is associated with substantial increases in symptoms of distress among children, including PTSD, depression, and anxiety (Norris et al. 2002).

Children's experiences in the context of mass violence vary widely. For example, compared to adolescents in Gaza, adolescents in Bosnia in the 1990s were far more likely to experience the destruction of their home or the death of a family member but far less likely to experience a raid on their home or school, to be assaulted or tortured, or to experience systematic humiliation of their fathers (Barber, 2008). Studies of children in Afghanistan, Bosnia, and Rwanda revealed that almost half had experienced—and many had witnessed—the death of one or more family members, but this was much less common in Gaza (Barber; Schaal & Ebert, 2006).

Children are also combatants. Approximately 300,000 boys and girls are currently serving as soldiers in more than 50 countries around the world, many of them abducted or recruited forcibly into military service around the age of 12 (Levy & Sidel, 2008; Park, 2006). Child soldiers are exposed to very high levels of trauma—as many as one half report having killed someone—and report very high levels of distress. Most serve for multiple years, during which they experience abuse, poverty, and death threats. Girl soldiers, such as those in Sierra Leone, may experience especially egregious conditions such as being frequently raped by or forcibly married to other soldiers, as a result facing distinct challenges in the form of risks to their reproductive health (Park). Child combatants with more PTSD

symptoms report less openness to reconciliation and greater interest in revenge (Levy & Sidel).

*Challenges for refugee families.* During 2008, 42 million people were displaced as a result of armed conflict, almost half of them children under 18 (United Nations High Commission for Refugees, 2008). In 10 countries, more than 40% of the population was displaced (Baingana et al., 2005). Refugee camps are dangerous places; mortality rates for displaced persons are as much as 50 times higher than the rates in their home communities, largely because of preventable diseases and violence (Baingana et al.; Levy & Sidel, 2008).

According to a meta-analysis of 56 studies, refugees' scores on assessments of mental health were about 0.41 *SD* lower than those of nonrefugees, even several years after relocation, with higher scores among refugees who had relocated to permanent accommodations and employment. Unexpectedly, neither access to cultural practices nor returning home appeared to improve refugees' mental health; higher education and socioeconomic status prior to displacement also offered no benefit, perhaps because those families were poorly prepared for their new impoverished status (Porter & Haslam, 2005).

In one of the few studies of dynamics within refugee families, Weine et al. (2004) analyzed transcripts from support group meetings of 125 Bosnian refugee families living in Chicago. Families reported that their roles had been altered. In some cases, traditional patriarchalism had been challenged by new arrangements. In others, children had taken on roles as cultural translators; children also were seen as providing the family with hope for the future. Grandparents sometimes took on responsibilities for children whose parents were working. Families struggled to maintain relationships with family members who were widely scattered or needed assistance. Families also worried about losing touch with their way of life. On a positive note, families enjoyed spending time together, teaching children about their heritage, and planning for the future.

Clearly, mass violence that occurs ''at home'' can disrupt both the structure and functioning of families in profound and long-lasting ways. Around the world, families have been separated, displaced from their homes and communities, and thrust into other dangerous circumstances.

Family members have had to take on roles that they did not expect and for which they were not prepared. Family groups and ethnic societies have been targeted for acts of war specifically aimed at their destruction. Much remains to be learned, however. Most samples to date have been small and have focused on documenting levels of negative outcomes, particularly among individuals. Relatively few studies have focused on family processes, although those that did suggest that parents who can remain supportive, consistent, and unified can minimize the effects of mass violence on their children.

Contextual factors appear to be extremely important in shaping the consequences of mass violence: The accumulated evidence is very consistent with the notion that more severe and widespread resource losses will generate more severe and widespread pathology in individuals and families. The research also clearly suggests that the negative effects of mass violence spread far beyond the families who are directly affected; as one example, recall the psychological impact of the 9/11 bombings across the United States. Nonetheless, most individuals and families display resilience even in the most horrible of circumstances, which leads to the final topic of this review.

## RESILIENCE, COPING AND GROWTH IN THE CONTEXT OF MASS VIOLENCE

Although it would be understandable if most individuals and families exposed to mass violence were permanently harmed, such a conclusion would not only be incorrect but would also overlook valuable lessons provided by those who survive and even thrive. In this final section I focus on resilience, coping and posttraumatic growth.

### *Resilience*

There are many definitions of resilience, but common elements are (a) successful adaptation following (b) exposure to adverse or traumatic circumstances (Luthar, 2006). The term is used in many different ways, however, sometimes resulting in positive outcomes being both equated with and predicted by resilience (Leipold & Greve, 2009). Physiologically, resilience refers to the body's ability to regulate hormonal and other responses to stress, quickly returning to a baseline level when stressors abate

(Ozbay et al., 2007). Other aspects of ''human capital'' that have been implicated in resilience are the capacity to solve problems and regulate emotions, a sense of mastery, and relevant skills (MacDermid, Samper, Schwarz, Nishida, & Nyaronga, 2008). Existing studies have also repeatedly shown a significant role for social support in the form of caring relationships with others and contextual factors in the form of formal support mechanisms in communities (MacDermid et al.). Recent evidence suggests that the social and biological elements of resilience may be tightly connected. Social isolation and low levels of social support have been shown to negatively affect psychological and physical health, with effects as severe as those of obesity or cigarette smoking. Conversely, social support has been associated with reductions in the release of stress hormones, suggesting that social support can reduce vulnerability to those negative effects (Ozbay et al.).

Existing literature suggests that resilience is neither universal nor stable. Individuals or families may display resilience in some domains but not others, and their ability to do so may change over time (MacDermid et al., 2008). Even when they ultimately display resilience, individuals and families are not impervious to stress and may experience considerable distress in the aftermath of adverse events (Cowan et al., 1996).

*Resilience in individuals.* The study of resilience in individuals has focused heavily on disposition or personality. In adults, there has been an emphasis on ''hardiness,'' or the ''sense that life is meaningful, we choose our own futures, and change is interesting'' (Bartone, 2006, p. S131). Bartone argued that hardiness is tied to how people interpret what happens to them, describing hardy individuals as ''interpret[ing] stressful and painful experiences as a normal aspect of existence, part of life that is overall interesting and worthwhile, believing that they have the capacity to cope with difficult circumstances and actively attempting to do so'' (p. S137). In children, good cognitive ability and easy temperaments that promote high quality social relationships are characteristics that have been associated with resilience (MacDermid et al.).

Much of children's resilience appears to be socially influenced, primarily by parents. This can occur through several mechanisms, including modeling by appearing calm and confident and demonstrating effective problem solving in response to adversity (Walsh, 2007). Parents also shape behavior with warmth and limit setting, which teach children how to manage their emotions and interact with others (Walsh). Parents who are unresponsive, inconsistent, or hostile undermine children's resilience by teaching them to mistrust others, feel insecure in relationships, and use ineffective strategies to secure social support (Walsh). Similarly, regarding adults, Bartone (2006) offered examples suggesting that hardy military leaders promote demonstration of greater resilience within their units by modeling hardiness.

*Resilience in families.* Because of the significant challenges of conducting research in the aftermath of traumatic events, it is even more difficult to study family groups than individuals, and so limited evidence is available. Walsh (2007) proposed nine family resilience processes in three categories: belief systems, organizational patterns, and communication/problem solving, illustrated below with examples from a study of more than 600 members of 216 refugee families from 13 countries in Asia, Africa, Europe, Latin America, the Caribbean, and North America (Panos & Panos, 2007).

Walsh (2007) proposed that *shared beliefs and values* among family members shape their collective responses to adverse events. Families who demonstrate resilience will be more likely than others to feel confident that they can deal with difficulties and that the eventual outcomes will be positive (Black & Lobo, 2008; Walsh, 2007). The refugee families described parents who instilled a belief in their families that they would be able to return to a civilized social order and have a normal life (Panos & Panos, 2007). According to Walsh, resilient families are more likely than others to maintain certain *organizational patterns*, including spending time together and maintaining routines and rituals (Black & Lobo). The refugee families described efforts to protect family members, keep them together, and maintain family routines and rituals, even if delayed (Panos & Panos). Resilient families also are thought to have characteristics promoting *effective problem solving*, including good communication, effective behavior management, and clear but flexible allocations of responsibility (Black & Lobo; Walsh). In the refugee families, this was demonstrated by their ability to develop creative

alternative plans and collaborative solutions and to communicate openly (Panos & Panos).

Black and Lobo (2008) proposed effective use of external support as an additional characteristic of resilient families. Although the refugee families acknowledged that they received help from others, they also suffered because external support was unreliable. For example, they felt endangered much of the time because security services were lacking, and some died from preventable illnesses because basic drugs or clean water were unavailable (Panos & Panos, 2007).

*Resilience in communities.* There is increasing recognition of the importance of communities in relation to mass violence. Recent reports from the World Bank (Baingana et al., 2005) and the World Health Organization (Krug et al., 2002), for example, argue strongly that responses to mass violence will not succeed unless they specifically address the functioning not only of individuals but also of families and communities (Hobfoll et al., 2007) because communities need to be able to mobilize in an organized way to achieve long-term recovery. For example, a common recommendation following large-scale traumatic events is to restore a sense of safety among community members, but this goal is likely much harder to achieve when addressed only at the individual level. Community-level efforts to manage flows of accurate information can do much to restore individuals' perceptions of safety (Hobfoll et al.). Another common recommendation is to promote collective efficacy through religious activities, collaboration with local healers, or the use of collective healing and mourning rituals to help community members regain their belief that they can overcome threats (Hobfoll et al.). Regarding the U.S. military, Huebner and others (2009) wrote about the importance of promoting *community capacity* so that members will feel both a sense of shared responsibility for the general welfare of the community and confidence in their ability to solve community problems.

## Coping

A very large literature documents considerable variability in how individuals and families cope with stressors (Folkman & Moskowitz, 2004). The classic typology includes problem-focused (i.e., active efforts to solve problems) and emotion-focused coping (i.e., focusing on

thoughts or emotions), and there is considerable evidence that problem-focused strategies are more effective (Folkman & Moskowitz). Successful coping efforts must fit environmental demands, however, and because there may be little ability to control circumstances in the aftermath of mass violence, constructive management of thoughts and emotions may also be effective (Folkman & Moskowitz). For example, in the aftermath of 9/11, Silver et al. (2002) found that individuals reported less distress not only when they engaged in active problem-focused coping but also when they developed a sense of acceptance. Individuals experienced more distress when they denied their problems, looked for someone to blame, or disengaged from coping entirely.

Another form of coping that may be especially important in the context of mass violence is meaning-focused coping. One of the most troubling aspects of traumatic experiences is that they challenge core assumptions that are necessary for daily functioning, such as that the world is predictable, safe, and secure (Hobfoll et al., 2007). In the aftermath of mass violence events around the world, Murthy (2007) observed that adults who lost confidence in these assumptions were more likely to believe that there was no way to surmount challenges and no point in planning (Murthy). Similarly, children who felt less optimistic about the future were more likely to engage in antisocial behavior (Barber, 2008). Tang (2007) pointed out, however, that in some cultures, ''traumatic events may actually validate instead of violate one's assumptive worldviews'' (n.p.). For example, Buddhism views suffering not only as unavoidable but also necessary for growth.

## Posttraumatic Growth

Some individuals display not just resilience or coping but transformational growth in the aftermath of trauma, defined as ''positive psychological change experienced as a result of the struggle with highly challenging life circumstances'' (Tedeschi & Calhoun, 2004, p. 1). Multiple mechanisms have been proposed for posttraumatic growth, but all assume that individuals are motivated toward personal growth, which in turn is a joint function of biological and psychological factors as well as sociocultural influences such as cultural philosophies (Tang, 2007).

Research findings so far are puzzling, because posttraumatic growth appears to be related to both positive and negative adjustment. A meta-analysis by Helgeson, Reynolds, and Tomich (2006) revealed that posttraumatic growth was related to higher levels of both global distress and intrusive thoughts but also lower levels of depression. Zoellner and Maercker (2006) suggested that posttraumatic growth comprises two elements: a ''functional'' component that is real and promotes positive adjustment, and an ''illusory'' one that is self-deceptive and promotes distress. In the short term, the illusory component may be a useful coping strategy, but long-term positive adjustment requires the more difficult-to-achieve functional component.

The concepts of resilience and posttraumatic growth are appealing at first glance because they offer the hope of minimizing the misery inflicted by mass violence. Unfortunately, the available evidence—most of it based on limited acts of violence or other tragedies—suggests that resilience and growth are usually achieved only after considerable distress. There is much yet to learn about how physiological, psychological, social, and contextual elements combine to produce resilience, effective coping, or growth. In particular, compared to other traumatic events, mass violence may require a broader array of coping strategies that includes the ability to preserve fundamental assumptions about oneself and the world. Cultural beliefs are likely important moderators of these patterns but have not been widely studied. Although it is clear that family members provide important social support for one another in the aftermath of mass violence, research is still limited regarding how processes of resilience and vulnerability play out in families, in particular when they live amidst collective and compound trauma.

## CONCLUDING THOUGHTS

The first decade of this century has introduced families around the world to a new age of mass violence, with preemptive war, large-scale attacks on civilians, and global instability. New technologies are enabling even more frightening acts of violence, including biological, nuclear, and cyber-terrorism (Wilkinson, 2003). Ready access to communication technology expands the reach of these events to generate fear and anxiety among millions of people.

Studies consistently show that most individuals and families display resilience in the aftermath of mass violence, even when severe distress occurs. Understandably, researchers have devoted most of their attention to the significant minority who do suffer clinically significant consequences. In doing so, however, researchers may have overlooked opportunities to understand the complexities of families' experiences amidst mass violence and the processes that allow most to avoid long-term negative consequences. As a result, much of the literature on mass violence focuses on documenting rates of individual psychopathology, with less attention to family processes or to family resilience. Data also show that mass violence has the potential to be traumatic regardless of whether it is experienced at home or away, but wars at home appear far more likely to generate trauma that is both collective and compound.

Researchers will continue to face the challenge of documenting families' experiences under very difficult circumstances and doing so in ways that acknowledge not just their vulnerability but also their resilience and their diversity (Barber, 2008). New knowledge is needed about how family dynamics interact with individual psychological health and other factors to prevent trauma, minimize illness, and support family functioning. New insights are also needed regarding the biological aspects of trauma and how they interact with family relationships. The wars in Iraq and Afghanistan have led to the creation of many new programs and intervention strategies, but evaluation studies will be needed to develop and refine appropriate prevention and treatment programs. Recent recommendations for ''disaster mental health'' are a beginning, but they focus primarily on individuals, even though findings clearly show that family support is key to the recovery of many individuals.

Researchers also face the challenge of bringing attention to families who might otherwise suffer invisibly. Displaced and disenfranchised families in Africa, women and girls in societies where low status exacerbates their vulnerability, and private contractors who face elevated rates of death and injury in Iraq (Feinstein & Botes, 2009) all deserve to have their experiences understood. Beyond simply documenting the content and prevalence of concerns, researchers also must push forward to develop theory-driven models that will help to explain variations among individuals and families, ultimately generating

insights that will help to prevent mass violence, prepare families for it, and intervene in its aftermath. Researchers who read the *Journal of Marriage and Family* can do much to contribute to this effort, continuing the legacy of contributions to family research associated with prior conflicts.

It is impossible to read research about families dealing with the most awful circumstances imaginable without feeling both appalled by their suffering and impressed by their strength. Global society will be influenced for years to come by September 11, the subsequent wars in Iraq and Afghanistan, and the legacies of many past conflicts. The legacies of mass violence, regardless of where it occurs, include mostly resilience but also psychopathology, illness, relationship difficulties, substance use, poverty, violence, and loss of hope. It is difficult to find a global challenge more worthy of researchers' attention than preventing and minimizing families' misery and preparing and supporting their resilience whenever and wherever they are confronted by mass violence.

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