International Handbook of Multigenerational Legacies of Trauma

Edited by

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Group Project for Holocaust Survivors and Their Children
New York, New York

PLENUM PRESS • NEW YORK AND LONDON

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Warrior Fathers and Warrior Sons

Intergenerational Aspects of Trauma

ROBERT ROSENHECK and ALAN FONTANA

This chapter considers whether Vietnam veterans *whose fathers served in combat* have an increased risk of posttraumatic stress disorder and other postwar adjustment problems when compared with other Vietnam veterans. Samples are Vietnam veterans who participated in the National Vietnam Veterans Readjustment Study (NVVRS) and veterans seeking treatment for PTSD from the Department of Veterans Affairs (VA). In the total NVVRS sample there were no differences between these two groups. However, *within the subgroup of veterans who met criteria for PTSD,* those whose fathers had been exposed to combat had more severe problems on several measures. In the VA sample, too, veterans whose fathers served in combat scored higher in PTSD symptoms, suicidality, guilt, and loss of religious faith. We conclude that intergenerational effects of trauma emerge when the second generation itself has PTSD, and show that these transgenerational effects are related to intergenerational processes during the homecoming period rather than to differences in premilitary experience.

The role of intergenerational processes in the development and perpetuation of posttraumatic psychological distress has attracted increasing attention from both clinicians and researchers in recent years (Danieli, 1985; Kulka *et al.,* 1990a; Sigal & Weinfeld, 1989). The traumatic experiences of parents have been widely hypothesized to have a continuing effect on the well-being of the next generation, either directly through traumatization of the children by their parents' behavior (Egeland, Jacobvitz, Papataola, 1987; Harkness, 1994; Hunter, Kilstrom, & Kraybill, 1978), through identification of the children with their parents (Danieli, 1985; Felsen & Erlich, 1990), or more indirectly as a result of nonspecific strains or dysfunction in the family that impair child development (Schwartz, Dohrenwend, & Levav, 1994). In this chapter, we review previously published literature and present data from two new studies to examine the specific conditions under which traumatic war-zone experiences of American combat veterans appear to have a significant impact on the psychological status of their children.

The exploration of intergenerational effects of trauma was initiated by reports from psychodynamically oriented clinicians on their treatment of children of Holocaust survivors

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International Handbook of Multigenerational Legacies of Trauma, edited by Yael Danieli. Plenum Press, New York, 1998.

(Bergmann & Jucovy, 1982; Rakoff, Sigal, & Epstein, 1966; Sigal, 1971). Additional insights came from detailed autobiographical accounts of children of survivors themselves (Epstein, 1979). These studies suggested that many children of Holocaust survivors grew up in seriously strained environments. In some case, they were emotionally frozen in a conspiracy of silence, numbing, and grief about wartime horror (Danieli, 1981, 1985, 1993; Davidson, 1980; Kestenberg, 1982), while in others, families were observed to be stiflingly close, with poorly maintained intergenerational boundaries (Barocas & Barocas, 1973; Fryberg, 1980; Trossman, 1968). Children of survivors were described in some accounts as bearing the awesome responsibility of making up to their parents the unimaginable losses they had experienced at the hands of the Nazis.

Echoing these reports, clinical studies identified similar processes in the families of traumatized combat veterans of both World War II (Rosenheck, 1986) and Vietnam (Rosenheck & Nathan, 1985). For the most part, these veterans were seeking treatment for posttraumatic stress disorder (PTSD) from the Department of Veterans Affairs (VA). Like the families of Holocaust survivors, the families of American combat veterans with PTSD were observed to manifest a diversity of interactive patterns ranging from remote detachment to intensive symbiotic involvement (Rosenheck, 1986). In one especially troubled group of Vietnam veterans, veterans whose severe PTSD was accompanied by self-destructive behavior and intense self-loathing (Rosenheck, 1985a, 1985b), a large proportion of their fathers were found to have served in combat in World War II. Clinical exploration suggested that the exposure of these veterans to the brutal realities of the war in Vietnam resulted in an especially devastating loss of patriotic and military idealism—an idealism that developed, originally, out of their childhood images of their fathers as war heroes. Unlike the second-generation Holocaust survivors who were not exposed to catastrophic trauma of their own, the problems faced by these veterans were based on their own personal traumatic experiences, which seemed to have been exacerbated by features of their relationship with their veteran fathers.

Clinical reports, even when based on detailed observation of numerous cases over many years, are of limited value in determining whether a clinical phenomenon is widespread or rare, or whether the association between current problems and the experiences of previous generations is real or spurious. To address these questions, surveys using standardized measures must be conducted, first on clinical samples, which are more readily accessible, and then on representative community samples. Only through such formal research efforts can hypothesized lines of influence be put to a serious empirical test.

A recent literature review reported that 11 published studies have investigated the effect of surviving the Holocaust on the second generation (Schwartz *et al.*, 1994). In most of these studies, survivor children were compared with children of Jewish immigrants who did not experience the Holocaust, and/or with children of nonimmigrant Jewish families. In contrast to the clinical reports, the majority of these studies (8 of the 11 covered in the review and a ninth presented by the reviewers themselves) found little or no relationship between the children's psychiatric symptoms and either the parents' survival of the Holocaust or their exposure to the environment of the concentration camps (e.g., Leon, Butcher, Kleinman, Goldberg, & Almagor, 1981; Schwartz *et al.*, 1994; Sigal & Weinfeld, 1989; Weiss, O'Connell, & Siiter, 1986).

Examples of nonsymptomatic consequences, however, were noted in several papers. One study found a relationship between survival in a concentration camp and an especially great need for personal support, feelings of low self-esteem, and conflicted family relationships (Last & Klein, 1981). Another study found second-generation survivors less likely to externalize aggression (Nadler, Kav-Venaki, & Gleitman, 1985). One of the more method-

ologically sound studies (Sigal & Weinfeld, 1989) found no differences between groups in clinical status or social adjustment. However, that study did note more liberal political attitudes, a greater sense of political activism, and greater knowledge of the Holocaust among children of survivors than in comparison groups. A fourth study of a large sample of Israeli adults also found no current effects on the second generation, but significantly more frequent reports of psychopathology in the *past* (Schwartz *et al.*, 1994). Another study showed that 3 years after the war ended, Israeli soldiers who suffered from acute combat stress reactions during the Lebanon War, and who were children of Holocaust survivors, had more severe and more prolonged PTSD than other soldiers (Solomon, Kotler, & Mikulciner, 1988). Although findings are not consistent across studies and do not typically suggest significant psychopathology, there is *some* empirical evidence of intergenerational effects on offspring of Holocaust survivors.

Several empirical studies of the children of American combat veterans have also appeared in recent years. The first, conducted in a predominantly VA clinical sample of Vietnam veterans suffering from PTSD, found no relationship between the severity of the veterans' PTSD and their children's adjustment (Harkness, 1994). A significant relationship was observed, however, between violent behavior by the veteran and maladaptive behavior of children living at home. Several clinic-based studies (Davidson, Smith & Kudler, 1989; Matsakis, 1988) and a rigorous community-based epidemiological study of Vietnam veterans, the National Vietnam Veterans Readjustment Study (NVVRS; Jordan *et al.*, 1992; Kulka *et al.*, 1990a), describe clear and consistent relationships between war-related PTSD and disruptive family environments, marital instability, familial psychopathology, and behavioral maladjustment in veterans' children. The apparent discrepancy between the Harkness study and the NVVRS may be attributable to the fact that the Harkness clinic-based study examined the impact of different *degrees* of PTSD on child behavior, whereas the NVVRS compared children of veterans with PTSD to children of all other Vietnam era veterans, most of whom suffered from no psychiatric disorder.

Finally, a recent empirical study of the causes of PTSD in a sample of Vietnam combat veterans treated in VA noted a significant relationship between having a father who had served in combat and symptoms of both war-related PTSD and general psychological distress (Fontana & Rosenheck, 1993). The reasons for this relationship, however, were not a focus of that study.

Empirical studies thus lend some support to clinical observations of intergenerational effects of trauma, although such confirmation has been more consistent in studies of war veterans' children than in studies of the children of Holocaust survivors. Studies of combat veterans may show stronger intergenerational effects than studies of second-generation Holocaust survivors because (1) they have typically focused on those veterans whose war-zone service resulted in PTSD, rather than on the larger group who were exposed to trauma, and (2) less time elapsed between the time of the trauma and the initiation of intergenerational data collection. Studies of Holocaust survivors have focused more generally on the effect of living through the Nazi period in Europe or of having been incarcerated in an concentration camp. They have not focused directly on those with psychiatric difficulties, since information on whether parents manifest "the Survivor Syndrome" (Niederland, 1961; Krystal & Neiderland, 1968) or PTSD has been lacking in most studies.

Another possible reason for the apparent inconsistencies among intergenerational trauma studies is that there has been a lack of clarity or consistency in defining the traumatic status of both the first and the second generation under study. As indicated earlier, some studies focus on parents who were exposed to trauma (i.e., in concentration camps or in combat), or who

were potentially exposed to trauma (i.e., by living in Europe or serving in a war zone). Others, in contrast, focus on parents who meet formal criteria for PTSD.

In addition, while some studies focus on offspring with no specific exposure to trauma, others focus on those who have been exposed to trauma (whether from their parents' behavior or from nonfamily sources), and a third group has focused on those children who have been exposed to trauma *and* have been diagnosed with PTSD or other psychological problems. Overall, studies that focus on trauma survivors and their nontraumatized offspring have shown weak intergenerational affects (Schwartz *et al.*, 1994). In contrast, studies of children of parents with diagnosed PTSD have shown far stronger intergenerational affects (Kulka *et al.*, 1990a), as have studies of the children of traumatized parents who themselves were traumatized and/or who also manifest PTSD (Fontana & Rosenheck, 1993; Solomon *et al.*, 1988) We feel these differences between samples in the degree of trauma exposure and symptomatology may play a central role in determining the strength of the observed intergenerational effects of trauma. These issues have not received adequate attention. Table 1 illustrates the six possible combinations of parental and second-generation status with respect to trauma and PTSD, and summarizes the proportion of empirical studies in each category showing significant intergenerational affects. In this summary, *all* of the nonconfirming studies have involved nontraumatized offspring.

In this chapter, we seek to enlarge our empirical understanding of intergenerational aspects of the genesis of Vietnam-related PTSD by exploring the impact of having a combat veteran father on (1) childhood family relationships, (2) current psychopathology, and (3) social adjustment and alienation from authority. Toward this end, we present findings from two studies in which we compare Vietnam veterans whose fathers served in combat with those whose fathers did not—one involving 400 Vietnam veterans seeking treatment for PTSD from VA's PTSD Clinical Teams program (Fontana & Rosenheck, 1993), and the second involving over 1,400 male veterans in the national community sample surveyed in the NVVRS (Kulka *et al.*, 1990a). In the course of our investigation, we examine the differential effects of parental combat exposure on offspring who (1) were exposed to little or no war-zone trauma, (2) were exposed to high levels of war-zone trauma, and (3) evidenced symptoms of PTSD.

Table 1. Proportion of Empirical Studies Demonstrating Intergenerational Psychological Effects of Trauma

	Parental exposure	
Offspring exposure	Trauma	PTSD
None	3/12 (25%)[a]	2/3 (67%)[b-d]
Trauma	NA	NA
PTSD	2/2 (100%)[e,f]	NA

Note: Studies are classified by the nature of parent and offspring exposure to trauma and PTSD.
[a]Schwartz, Dohrenwend, & Levav (1994)
[b]Kulka *et al.* (1990a)
[c]Harkness (1994)
[d]Davidson, Smith, & Kudler (1989)
[e]Solomon, Kotler, & Mikulincer (1988)
[f]Fontana & Rosenheck (1994a)
NA = No studies available.

STUDY 1: TREATMENT-SEEKING VIETNAM VETERANS' METHODS

Sample

Data for this study were gathered as baseline assessments in the national evaluation of the Department of Veterans Affairs (VA) PTSD Clinical Team (PCT) Program. Six teams, located in Boston, Massachusetts, Jackson, Mississippi, Kansas City, Missouri, New Orleans, Louisiana, Providence, Rhode Island, and San Francisco, California, were invited to participate in an intensive outcome monitoring study. During 1990–1991, 439 male veterans who served in the Vietnam theater of war completed baseline assessments. Each veteran was asked if his father was a veteran (n = 256, 58.3%) and if he had been involved in combat (n = 155, 39.5%). This study focuses on a comparison of two groups: those whose fathers were exposed to combat (n = 155, 39.5%) and those who were not (n = 241, 61%). The father's combat exposure did not differ significantly among the six sites.

Measures

Veterans in these two groups were compared on measures in four principal domains: (1) demographic characteristics, (2) premilitary family environment and personal adjustment, (3) conditions of military entry and war-zone experiences, and (4) current symptomatology and social adjustment.

Demographic Characteristics. Data on age (mean = 42.9 years; SD = 3.13) and race (n = 283, 72.2% white; n = 94, 23.9% black; n = 4, 0.9% Hispanic; and n = 12, 3.0% other) were recorded for each veteran.

Premilitary Family Environment. A negative family environment was assessed by two measures. One was the Family Stability Scale (Kadushin, Boulanger & Martin, 1981) which is coded in the direction of family instability (mean = 3.0, SD = 2.15). This scale is composed of 11 dichotomous items covering experiences before the age of 18, such as parental separation, divorce, or death; father being out of wok; or family income less than $5,000 per year.

The second measure is composed of two questions concerning whether either parent had been hospitalized for a psychiatric or substance-abuse problem during the veteran's childhood (n = 43, 9.9%), or whether either parent seemed to the veteran to have a problem with alcohol or drug abuse (n = 141, 32.6%). They were combined to identify families in which there was evidence of parental psychological problems (n = 161, 37.2%).

A positive family environment was identified by questions concerning whether the veteran felt emotionally close to his or her family (n = 307, 70,9%) and whether he or she was free of physical or sexual abuse by either parent (n = 389, 88.5%). We combined these two items to identify close, nonabusive families (n = 291, 67.1%).

Premilitary Personal Adjustment. Conduct disorder in childhood was measured by an index composed of behaviors such as being in trouble with the law or school officials, playing hookey, being suspended or expelled, or doing poorly academically (Helzer 1981) (mean = 1.54, SD = 2.08).

Positive adjustment prior to entry into the military was measured by an Adolescent Social Adjustment Index (ASAI) that we constructed as the sum of three aspects of the veteran's

interaction with his or her peers: (1) having close friends, (2) dating, and (3) being actively involved in extracurricular activities (mean = 6.1, *SD* = 1.97, alpha = 0.67).

Military Entry and Experience. Age at entry into the military was recorded (mean = 18.93, *SD* = 1.84), as was the issue of whether the veteran entered the military willingly (*n* = 278, 64.7%) or reluctantly (*n* = 152, 35.3%). Specific war-zone experiences were assessed by three variables. Exposure to combat was measured by the Revised Combat Scale (mean = 10.72, *SD* = 2.74). Laufer, Yager, Frey-Wouters, & Donnellan, 1981). Witnessing and participating in abusive violence were assessed, following the convention advocated by Laufer and his colleagues (Laufer, Brett, & Gallops, 1985), as two mutually exclusive categories: witnessing abusive violence perpetrated by others only (*n* = 173, 39.4%), and participating in abusive violence oneself (*n* = 138, 31.4%).

Current Symptomatology. PTSD symptoms were measured with the Mississippi Scale for Combat-Related PTSD (mean = 126.02, *SD* = 20.7) (Keane, Caddell, & Taylor, 1989), and general psychiatric symptoms with the Global Severity Index of the Brief Symptom Inventory (BSI-GSI) (mean = 2.18, *SD* = 0.79). (McLellan *et al.,* 1985). A Suicidal Behavior Index (0 = never made a suicide attempt, 1 = made one or more attempts but never required medical hospitalization, 2 = made at least one attempt that required medical hospitalization) was constructed as an indicator of severe psychiatric problems (mean = 0.49 *SD* = 0.76). Guilt was measured by the Guilt Inventory (Laufer & Frey-Wouters, 1988) (mean = 2.75, *SD* = 0.98), an instrument specifically designed to assess issues of war-related guilt. Change in religious faith during Vietnam service was also assessed, using a 5-point scale, with scores below 3 representing loss of faith, and scores above 3 representing strengthened faith (mean = 2.69, *SD* = 1.04). Eight items concerning violent behavior (each rated on a 5-point scale) were used to create a violence index (mean = 10.18, *SD* = 6.56, alpha = 0.77). The Addiction Severity Index (ASI; McLellan *et al.,* 1985) was used to measure alcohol problems (mean = 0.12, *SD* = 0.20) and drug abuse problems (mean = 0.04, *SD* = 0.11).

Social Adjustment

Several aspects of postwar social adaptation were assessed: (1) educational attainment (mean = 13.09 years, *SD* = 2.39), (2) marital status (*n* = 208 married, 47.4%), (3) current full-time employment (*n* = 134, 30.5%), (4) total monthly income (mean = $1,187, *SD* = $1,134), (5) the number of people with whom the veteran felt close (mean = 10.37, *SD* = 7.47), and (6) the number of people from whom the veteran felt he could currently receive advice, material assistance, or psychological support (mean = 8.49, *SD* = 5.14, alpha 0.78). Current (7) recreational and social activity was measured using the Katz and Lyerly (1963) index (mean = 11.09, *SD* = 5.33). Antisocial adjustment since leaving the military was also measured, by (8) the number of arrests for different categories of felonies (mean = 1.0, *SD* 1.49) and (9) misdemeanors (mean = 0.89, *SD* = 0.97).

Analyses

The significance of differences in all measures between the two groups was tested using *t* tests for continuous variables and chi-square tests for categorical variables. One-way analysis of covariance (ANCOVA) was then used to determine whether significant differences in symptoms and social adjustment between father–combat groups in the bivariate comparisons

could be accounted for by premilitary or wartime experiences that also differed significantly between the groups.

Results from Study 1

Bivariate Analyses. Table 2 shows that Vietnam veterans whose fathers also served in combat were currently younger than other veterans, but they were not significantly different in race or on any measure of premilitary family environment or childhood behavior. Veterans

Table 2. Comparison of Vietnam Veterans in VA's PCT program According to Whether Their Father Ever Served in Combat

	Father not in combat $N = 284$ (60.5%)	Father in combat $N = 155$ (39.5%)	T	Chi-Square	N
Demographics					
Age	43.3	42.3	3.37		0.00
Race				5.44	NS
White	70.5%	79.6%			
Black	25.7%	15.9%			
Hispanic	1.3%	0.8%			
Other	3.2%	2.9%			
Premilitary behavior and family environment					
Family Stability Index	3.06	2.87	0.89		NS
Close, nonabusive family	63.9%	68.9%		1.07	NS
Parent mentally ill	35.4%	41.9%		1.67	NS
Childhood Problem Index	1.45	1.66	0.98		NS
Adolescent Social Adjustment	6.02	6.16	0.67		NS
Military service					
Age at entry to military	19.14	18.57	3.23		0.00
Reluctant service entry	37.3%	32.3%		1.04	NS
Combat scale	10.58	10.73	0.50		NS
Witnessed abusive violence	43.2%	38.2%		0.96	NS
Participated in abusive violence	27.4%	37.6%		4.56	0.03
Current symptoms					
Mississippi PTSD Scale	122.8	129.7	3.30		0.00
BSI-GSI	2.07	2.29	2.67		0.01
Suicidal Behavior Index	0.38	0.63	3.17		0.00
Laufer–Parson Guilt Inventory	2.61	2.98	3.78		0.00
Change in religious faith	2.80	2.50	2.76		0.01
Violence Index	10.02	10.61	0.87		NS
Alcohol Index (ASI)	0.11	0.13	1.01		NS
Drug Index (ASI)	0.03	0.04	0.99		NS
Current social adjustment					
Highest education	13.09	13.21	0.51		NS
Never married	48.6%	45.9%		0.28	NS
Currently working	39.0%	32.5%		3.68	NS
Income (past month)	$1,206	$1,189		0.15	NS
Social activities (Katz, 1963)	11.4	10.5	1.64		NS
People feel close to	10.83	9.45	1.82		0.06
Social support	8.6	8.44	0.30		NS
Major crimes	0.92	1.12	1.33		NS
Misdemeanors	0.90	0.88	0.17		NS

whose fathers saw combat were also younger when they entered the military, and they participated more frequently in abusive violence, although there were no differences in the frequency of witnessing abusive violence, or in combat exposure. Significant differences were found on four symptom measures: the Mississippi PTSD Scale, the BSI-GSI, the Suicidal Behavior Index, and the Guilt Inventory. There was also a significantly greater loss of religious faith among those whose fathers saw combat (Table 2). There were no significant differences in current social adjustment.

One-Way Analyses of Covariance. After controlling for current age, age at entry into the military, and participation in abusive violence, a significant relationship persisted between father's combat experience and all five measures that had shown a significant difference in the bivariate analyses: the Mississippi PTSD Scale ($F = 4.17$; $df = 1, 435$; $p < .05$), the BSI-GSI ($F = 3.90$; $df = 1, 435$; $p < .05$), the Suicidal Behavior Index ($F = 8.44$; $df = 1, 435$; $p < .01$), the Guilt Inventory ($F = 7.03$; $df = 1, 435$; $p < .01$), and the loss of religious faith ($F = 4.30$; $df = 1, 435$; $p < .05$). Thus, after controlling for other potentially explanatory variables, veterans whose fathers saw combat still had more severe and pervasive psychological symptoms than other veterans. It is notable that these differences emerge in the absence of any measured differences in childhood experience that might explain them.

STUDY 2: A COMMUNITY SAMPLE—THE NATIONAL VIETNAM VETERANS READJUSTMENT SURVEY (NVVRS) METHODS

Sample

The NVVRS was conducted on a national sample of veterans who served in the U.S. Armed Forces during the Vietnam era. The sampling frame was a national screening sample of military personnel records and is described in detail in the original publications on the survey (Kulka *et al.,* 1990a, 1990b). Blacks and Hispanics were oversampled.

Measures

As in the previous study, the full sample of Vietnam theater veterans were classified as those who reported that their fathers had served in combat ($n = 278$, 26.8%) and those who reported that their fathers had not served in combat ($n = 761$, 73.2%). Unfortunately, no data were available on whether their fathers had suffered psychological or other sequelae of their wartime service.

Characteristics of these veterans that are of relevance to assessing the impact of their father's combat service were grouped into five sets of variables. Only males were included in this study.

Demographic Characteristics. Data on age (mean = 41.9 years, $SD = 5.6$) and race ($n = 519$, 50% white; $n = 283$, 27% black; $n = 237$, 27% Hispanic) were obtained on all subjects.

Premilitary Family Environment. Family instability was measured, as in the VA study, by (1) the Family Stability Scale (Kadushin *et al.,* 1981) (mean = 2.88, $SD = 1.91$). Other measures of premilitary experience included (2) indicators of exposure to physical violence or abuse in the family before the age of 18 ($n = 223$, 21.5%); (3) having a parent who suffered

from substance abuse or mental illness (n = 227, 21.8%); (4) positive qualities in the veteran's relationship to his or her father (the average of five items that assessed affection, sharing of interests, confiding, closeness, and helpfulness on a series of 5-point scales) (mean = 3.27, SD = 1.08, Cronbach's alpha = 0.89); (5) positive qualities in his or her relationship to his or her mother using the same items (mean = 4.04, SD = 0.86, Cronbach's alpha = 0.88); (6) how much the veteran wanted to be like his or her father (mean = 3.13, SD = 1.44); and (7) the veteran's history of conduct disorder, measured, as in the VA study, by reports of behaviors occurring before the age of 15 (Helzer, 1981) (mean = 1.78, SD = 1.89).

Period of Military Service. The veteran's initial experience of the military was documented by (1) age at entry to the military (mean = 20.00, SD = 2.22), and (2) whether the veteran had been reluctant to enter the military (i.e., was drafted or volunteered under pressure) (n = 281, 27.12%). War-zone traumatic experience was assessed (3) by the same scale of exposure to combat used in the VA study (Laufer *et al.,* 1981) (mean = 7.64, SD = 4.37), and by (4) dichotomous determinations of participation in abusive violence (i.e., atrocities) (n = 344, 33.08%) and witnessing abusive violence committed by others (n = 195, 18.7%). Several measures of war-zone exposure was combined to identify veterans exposed to high levels of war-zone stress (Kulka *et al.,* 1990a) (n = 445, 42.8%).

First Year of Postmilitary Readjustment. Three measures assessed immediate postmilitary social experiences. The first is a scale based on questions that addressed the availability of people with whom the veterans could talk about personal matters during the first year after discharge (mean = 24.15, SD = 2.30, alpha = 0.60). The second measure was based on questions concerning the availability of material and emotional support during the year after discharge (mean = 7.46, SD = 1.06, alpha = 0.78). The third is a measure of the degree to which the veteran felt welcomed home or appreciated by the nation he or she had served (mean = 20.21, SD = 5.32, alpha = 0.79).

Subsequent Postmilitary Period. Several features of postmilitary psychiatric adjustment were examined. PTSD was assessed using the Mississippi Scale for Combat-Related PTSD (mean = 72.08, SD = 22.28) (Keane *et al.,* 1988) and demoralization with the Demoralization subscale of the Psychiatric Epidemiological Research Instrument (PERI) (Dohrenwend, Shrout, Egri, & Mendelsohn, 1980) (mean = 76.08, SD = 22.28). Veterans with a Mississippi scale score of 89 or greater were considered to be PTSD cases, as determined by an extensive validation procedure (n = 262, 25.2%) (Kulka *et al.,* 1990b). Survivor guilt was assessed with a single, 3-level severity assessment (mean = 0.07, SD = .35) and past suicidal behavior with a 3-level scale (0 = no attempt or gesture, 1 = gesture, 2 = serious attempt) (mean = 0.05, SD = 0.29). Lifetime psychiatric diagnoses other than substance abuse (n = 212, 20.36%) and a diagnosis of substance abuse (n = 451, 43.36%), based on a diagnoses of either alcohol abuse or dependence (n = 425, 40.9%) or drug abuse or dependence (n = 70, 6.7%) were assessed by the Diagnostic Interview Schedule (DIS) (Robins, Helzer, Croughan, & Ratcliff, 1981).

Postmilitary education (mean = 13.38 years, SD = 2.37), marital status (n = 741 married, 71.28%), personal income (mean = $2,179, SD = $1,017), social support (measured by 10 questions concerning access to assistance of various types) (mean = 19.02, SD = 2.00, Cronbach's alpha = 0.96), and criminal activity (major crimes: mean = 0.14, SD = 0.76; and misdemeanors: mean = 0.04, SD = 0.22) were also evaluated. A 7-item scale was used to assess violent behavior (mean = 7.71, SD = 4.33, Cronbach's alpha = 0.63). Finally, a measure of social alienation assessed the degree to which the veteran felt victimized by societal forces and

by powers that exploited or took advantage of him or her (mean = 25.11, *SD* = 6.06, Cronbach's alpha = 0.74).

Analyses. Potential areas of intergenerational influence were assessed first by comparing veterans whose fathers served in combat with veterans whose fathers did not on all measures using *t* tests for continuous variables and chi-square tests for categorical variables.

In view of our literature review and especially Solomon *et al.*'s (1988) finding of significant differences in severity in the response of second-generation Holocaust survivors who suffered from combat stress reactions, we classified veterans into three trauma/PTSD categories according to their levels of war-zone stress and PTSD (n = 594 with low war-zone stress, 57.17%; n = 175 with high war-zone stress but not meeting the symptom cutoff for PTSD, 16.84%; and n = 270 with PTSD, 25.99%). We then conducted a two-way ANOVA in which we evaluated the interaction of having a father who served in combat within each level of the trauma/PTSD classification. Where the ANOVA showed significant differences, *t* tests were used to compare veterans whose fathers served in combat and those whose fathers did not, within each level of the trauma/PTSD classification.

Two-way ANCOVA, in which premilitary variables, and the pre- and postmilitary variables were included as covariates, was used to determine whether significant differences in symptoms and social adjustment between father–combat groups in the first set of ANOVAs could be accounted for by either premilitary family experiences alone or by the addition of postmilitary homecoming experiences.

Finally, in view of our findings from the VA clinical sample, we repeated the comparison of veterans whose fathers served in combat with those whose fathers did not on the subgroup of NVVRS respondents who reported any past use of VA mental health services.

Results from Study 2

Table 3 shows that in the entire national sample, there were few significant differences between veterans whose fathers served in combat and those who did not. As in the VA treatment sample, those whose fathers served in combat were younger and had entered the military at a younger age than other veterans. The only other significant difference, that they were less likely to be black, is most likely due to the smaller number of blacks who served in combat World War II, as compared to Vietnam (4.9% vs. 9.1%)) (Rosenheck & Fontana, 1994). A significant difference was also noted for one postmilitary variable, lifetime alcohol abuse. Because of these differences, age and black ethnicity were included as covariates in subsequent analyses.

Significant interactions (Table 4) showed that among veterans whose symptoms exceeded the cutoff for PTSD, those whose fathers served in combat had poorer relationships with their mothers when they were children, less help at the time of their homecoming, higher Mississippi PTSD Scale scores, more survivor guilt, greater lifetime prevalence of drug abuse, and lower levels of current social support. In contrast, there were no significant differences between veterans whose fathers served in combat and other veterans who had either high or low exposure to war-zone trauma without PTSD.

ANCOVA showed that adjusting for the effect of premilitary family variables (family instability, relationship with mother and father, wanting to be like father, ever were hit in the family, having a parent with psychiatric or substance-abuse problems) had no effect on the results. Significant differences were still observed, among those with PTSD, between veterans whose fathers were in combat and those whose fathers were not, in PTSD symptoms (F = 3.43;

Table 3. Comparison of Male Vietnam Theater Veterans Whose Fathers Served in Combat versus All Others: NVVRS

	Father no combat $N = 772$ 74.3%	Father saw combat $N = 283$ 27.2%	T	Chi-Square	P
Premilitary					
Age	42.62	40.74	5.88		0.000
Race				12.53	0.000
White	47.9%	58.5%			
Black	27.5%	18.1%			
Hispanic	23.4%	21.6%			
Other	1.3%	1.8%			
Family instability	2.65	2.54	0.91		NS
Ever hit in family?	21.5%	20.6%		0.11	NS
Parent had mental illness or substance abuse	21.0%	21.8%		1.12	NS
Relationship with father	3.30	3.20	1.24		NS
Relationship with mother	4.04	3.96	1.45		NS
Wanted to be like father?	3.10	3.24	1.43		NS
Conduct disorder	1.69	1.86	1.27		NS
Military service					
Age at entry to the military	20.09	19.85	1.36		NS
Reluctant to enter service	73.3%	71.4%		0.36	NS
Combat exposure	7.53	7.84	0.99		NS
Participated in atrocities	31.7%	34.8%		0.91	NS
Witnessed atrocities	18.2%	19.5%		0.24	NS
Homecoming					
People to talk with at homecoming	24.24	24.17	0.46		NS
People offered help at homecoming	7.52	7.43	1.18		NS
Felt welcomed and appreciated	20.42	19.96	1.23		NS
Current psychiatric status					
PTSD (Mississippi scale)	75.16	75.83	0.42		NS
Survivor guilt	0.06	0.10	1.45		NS
Demoralization (PERI)	54.81	53.83	0.75		NS
Suicide Attempt Scale	0.04	0.06	0.78		NS
Violence	7.56	7.71	0.54		NS
Any non-PTSD psychiatric diagnosis	19.8%	18.7%		0.16	NS
Depression	6.0%	5.0%		0.38	NS
Manic	0.8%	1.8%		1.97	NS
Dysthymia	6.0%	3.6%		2.38	NS
General anxiety disorder	16.2%	16.7%		0.03	NS
OCD	2.2%	2.5%		0.07	NS
Panic disorder	1.8%	4.3%		5.12	0.024
Substance abuse (lifetime)	41.5%	47.7%		3.17	NS
Alcohol abuse	39.2%	46.3%		4.28	0.039
Drug abuse	6.1%	8.2%		1.44	NS
Current social adjustment					
Married	72.4%	75.6%		1.09	NS
People feels close to	10.86	10.32	1.00		NS
Social support	19.16	18.93	1.60		NS
Major crimes	0.13	0.11	0.36		NS
Misdemeanors	0.04	0.03	1.15		NS
Alienation	25.07	24.87	0.47		NS
Education	13.38	13.53	0.97		NS
Income (monthly)	$2,174	$2,317	1.86		NS

Table 4. Comparison of Male Veterans Whose Fathers Served in Combat versus All Others by War-Zone Stress and PTSD Status (ANCOVA)[a,b]

		Served in VN		War-zone Stress		PTSD		ANCOVA Interaction Term	
		No Warzone Stress		No PTSD					
		No Father in combat	Father in combat	No Father in combat	Father in combat	No Father in combat	Father in combat	Father in combat	Trauma
	N	*N* = 438 42.2%	*N* = 156 15.0%	*N* = 127 12.2%	*N* = 48 46.%	*N* = 196 18.9%	*N* = 74 7.1%F	F	P
Premilitary									
Family instability	1,039	2.41	2.19	2.39	2.29	3.36	3.45	0.50	NS
Ever hit in family?	1,037	0.16	0.16	0.22	0.17	0.33	0.28	0.32	NS
Parent had mental illness or substance abuse	1,035	0.19	0.21	0.19	0.19	0.28	0.36	0.90	NS
Relationship with father	1,039	3.30	3.33	3.42	3.29	3.22	2.94	2.53	NS
Relationship with mother	1,033	4.07	4.09	4.18	4.01	3.91	3.64*a*	3.25	0.0391
Wanted to be like father?	1,014	3.06	3.25	3.23	3.36	3.25	3.20	0.17	NS
Conduct disorder	1,039	1.46	1.56	1.51	1.79	2.32	2.61	0.46	NS
Military service									
Age at entry to the military	1,039	20.21	20.20	20.07	19.77	19.89	19.22	2.15	NS
Reluctant to enter service	999	0.73	0.68	0.71	0.75	0.76	0.76	0.31	NS
Combat exposure	1,039	5.34	55.8	11.36	11.81	10.06	10.04	0.18	NS
Participated in atrocities	1,038	0.12	0.13	0.56	0.65	0.59	0.61	0.52	NS
Witnessed atrocities	1,037	0.14	0.19	0.32	0.25	0.19	0.18	1.47	NS
Homecoming									
People to talk with at homecoming	1,039	24.70	24.81	24.42	24.45	23.14	22.71	1.47	NS
People offered help at homecoming	1,039	7.74	7.84	7.63	7.65	7.01	6.43*b*	10.45	0.0001
Felt welcomed and appreciated by nation	1,039	21.95	21.90	20.38	20.05	17.08	15.97	0.77	NS

Current psychiatric status									
PTSD (Mississippi scale)	1,039	63.59	62.35	70.60	69.52	104.06	108.54*a*	4.49	0.0114
Survivor guilt	1,031	0.02	0.01	0.01	0.00	0.20	0.35*b*	5.71	0.0034
Demoralization (PERI)	1,039	47.78	46.55	49.30	48.16	74.30	73.40	0.04	NS
Suicide Attempt Scale	1,033	0.01	0.04	0.03	0.04	0.13	0.12	0.23	NS
Violence	1,039	6.38	6.75	7.02	6.90	10.48	10.35	0.24	NS
Any non-PTSD psychiatric diagnosis	1,039	0.09	0.11	0.18	0.06	0.46	0.43	1.95	NS
Depression	1,039	0.01	0.00	0.01	0.00	0.20	0.19	0.01	NS
Manic	1,039	0.00	0.00	0.00	0.00	0.03	0.07	2.66	NS
Dysthymia	1,039	0.01	0.01	0.02	0.00	0.19	0.12	1.48	NS
General anxiety disorder	1,039	0.08	0.10	0.16	0.06	0.35	0.36	1.55	NS
OCD	1,039	0.00	0.00	0.01	0.00	0.08	0.09	0.32	NS
Panic disorder	1,039	0.01	0.01	0.01	0.00	0.04	0.15*b*	11.15	0.0001
Substance abuse (lifetime)	1,034	0.36	0.39	0.36	0.38	0.58	0.72	1.22	NS
Alcohol abuse	1,037	0.35	0.38	0.33	0.38	0.54	0.69	1.36	NS
Drug abuse	1,033	0.03	0.03	0.06	0.00	0.14	0.25*b*	5.51	0.0042
Current social adjustment									
Married	1,039	0.77	0.81	0.75	0.83	0.61	0.61	0.26	NS
People feels close to	1,038	11.86	11.64	12.10	11.83	7.83	6.85	0.35	NS
Social support	1,038	19.50	19.53	19.52	19.47	18.14	17.32*b*	4.03	0.0181
Major crimes	1,021	0.02	0.02	0.16	0.09	0.34	0.32	0.08	NS
Misdemeanors	1,021	0.03	0.01	0.02	0.01	0.10	0.07	0.33	NS
Alienation	1,038	23.91	23.25	24.19	23.63	28.16	19.17	1.67	NS
Education	1,038	13.66	13.74	13.20	13.67	12.92	12.93	0.37	NS
Income (monthly)	1,011	$2,395	$2,535	$2,319	$2,575	$1,581	$1,672	0.18	NS

[a]Age and race (black vs. other) are included as covariates in all analyses.
[b]Key: $a = p < .01$; $b = p < 0001$

$df = 13, 990$; $p < .03$), survivor guilt ($F = 7.45$, $df = 2, 982$; $p < .0006$), help at the time of homecoming ($F = 8.93$; $df = 2, 990$; $p < .0001$), lifetime panic disorder ($F = 7.28$; $df = 2, 990$; $p < .0007$), lifetime drug abuse ($F = 6.00$; $df = 2, 984$; $p < .0026$), and current social support ($F = 3.42$; $df = 2, 989$; $p < .04$).

ANCOVA showed that adjusting additionally for the effect of homecoming variables (someone to talk with after the war, help adjusting after the war, and feeling welcomed home) eliminated the significant differences in PTSD symptoms and current social support, but not in lifetime panic disorder ($F = 6.21$; $df = 16, 987$; $p < .02$), survivor guilt ($F = 6.96$; $df = 16, 979$; $p < .002$), or drug abuse ($F = 4.96$; $df = 16, 981$; $p < .008$). These analyses suggest that the lack of support at the time of homecoming is significantly related to the greater level of PTSD symptoms and current social support, but not to survivor guilt, panic disorder, or drug abuse, which appear to be related to other, unmeasured factors.

Finally, in a replication of the VA study presented (Study 1), using NVVRS data, we found a significant difference between veteran subgroups who had used VA mental health services: Veterans whose fathers had served in combat had higher scores on the Mississippi PTSD Scale than others ($t = 2.47$; $df = 42$; $p < .02$).

Discussion

The data presented here largely confirm findings of previous studies of the multigenerational impact of trauma. In addition, they help to integrate what previously appeared to be conflicting and contradictory findings. Before reviewing the findings, it is important to emphasize that we focused exclusively on the intergenerational effect of trauma rather than on the effect of PTSD, since no data were available on PTSD among the fathers of the veterans in either of our samples. In this respect, our study parallels previous studies of children of survivors of the Holocaust. This, we contend, is the appropriate focus of intergenerational studies. In studies that focus on the effect of PTSD on children, the effect of trauma is confounded by the many other factors that contribute to the genesis of PTSD (Fontana & Rosenheck, 1993; Fontana & Rosenheck, 1994a).

Our examination of the community sample of Vietnam theater veterans surveyed in the NVVRS, consistent with the majority of community studies of the children of Holocaust survivors, found very limited evidence of greater psychopathology, demoralization, or maladjustment among veterans whose fathers served in combat. The only differences were in age, race, and lifetime alcohol abuse.

Unlike some studies of second-generation Holocaust survivors, however, we failed to find evidence of differences in childhood family relationships or in alienation from authorities. This may reflect the fact that most of the combat veteran fathers of Vietnam veterans served in World War II. Although many of these fathers experienced severe trauma, they fought for a popular cause that succeeded in its objectives and were publicly praised and honored when they returned home. Their children, although aware of the honor of their fathers' service, typically had little idea of the horror of war (Kovic, 1977; Puller, 1993; Rosenheck, 1986). For Holocaust survivors, in contrast, there were no victories, and no proud celebrations—only survival and continued endurance of unspeakable grief and loss (Danieli, 1981, 1988).

The picture changed substantially when we considered specific subgroups of veterans. Most striking is the observation that among veterans who met the diagnostic threshold for PTSD, veterans whose fathers served in combat had more severe PTSD symptoms, more survivor guilt, less current social support, and were more likely to meet criteria for lifetime panic disorder and drug abuse. Curiously, these clinical differences are associated with only limited

evidence of more severe problems with parental relationships in childhood or with family instability. Rather, they were associated with reports of less help from family and friends at the time of homecoming. Furthermore, when the effect of the homecoming experience was controlled through multivariate techniques, the differences between groups in PTSD symptoms and social support were no longer significant, suggesting that the observed differences in symptom levels may have been partially attributable to differences in homecoming experience.

The more negative homecoming experience among Vietnam veterans with combat veteran fathers is not hard to understand. Vietnam veterans with severe, disabling PTSD (Rosenheck, 1985a, 1985b), as well as others such as Ron Kovic (1977) and Lewis Puller (1993), report serious conflicts or misunderstanding with their World War II veteran fathers after the war. There were vast differences between military service in these two eras: in the nature of the fighting (Rosenheck & Fontana, 1994; Fontana & Rosenheck, 1994b); in the outcome of the fighting; and in public attitudes toward the war. Never in our history have warrior fathers and warrior sons had such diametrically opposed experiences of service to their country. We have suggested previously (Fontana & Rosenheck, 1994a) that the lack of a supportive reception after the Vietnam War may have impeded the resolution of PTSD symptoms for many veterans. This seems to have been an especially important factor for those who served in Vietnam and found themselves contending, on their return, with fathers whose wartime experience was in "The Good War."

Our findings on this subgroup of veterans with PTSD are also consistent with those of Solomon *et al.* (1988) among veterans of the Lebanon War. Our findings, in particular, suggest that the greater severity of PTSD symptoms among second-generation trauma survivors may also have less to do with pretrauma vulnerability for PTSD, and more with greater difficulties with coping and recovery at the time of homecoming.

The central finding in our sample of VA patients with PTSD (that those whose fathers served in combat had more severe PTSD symptoms than other veterans) was replicated in our examination of the subgroup of veterans in the NVVRS community sample who had used VA mental health services. To determine whether this finding was specific to users of VA mental health services, or whether it applied equally to those who had sought mental health treatment from non-VA providers, we repeated these comparisons on the subgroup of veterans who had used non-VA mental health services. In this subgroup, there were no significant differences between veterans whose fathers had served in combat and veterans whose fathers did not. We have shown elsewhere that Vietnam veterans with PTSD are more likely to use VA than non-VA mental health services (Rosenheck & Fontana, 1995), and we believe that observed VA-related effects are due to the greater proportion of veterans with PTSD in those samples. The more dramatic results in the VA clinical sample, as compared to the NVVRS subgroup, most likely reflect the fact that all of these veterans were seeking services for PTSD. The NVVRS sample of VA mental health service users had sought help for diverse emotional or family problems, not just for PTSD.

Our interpretation that intergenerational effects are strongest among those who are exposed to trauma and suffer resulting ill effects may also help to account for the diverse conclusions of studies of the second generation of Holocaust survivors. Several commentators have suggested that differences between children of Holocaust survivors and comparison groups are most robust in studies that rely on small samples drawn from religious or other groups with a special interest in the Holocaust, whose subjects have strong identities as children of survivors, or in studies biased by poor response rates (Schwartz *et al.*, 1994; Sigal & Weinfeld, 1989). These samples are likely to include greater proportions of help-seeking offspring with emotional problems or secondary posttraumatic conditions (Rosenheck & Nathan,

1985) and those with strong identifications with their parents (Epstein, 1979). Our examination of data from several veteran subgroups, therefore, suggests that it is among the most troubled segments of the population that second-generation effects are strongest.

The good news of intergenerational studies of trauma is that, in most cases, the horrors of the parents are not visited on the children, at least as long as there is not further exposure to trauma. This does not mean, of course, that these children are indifferent to or uninterested in the suffering of their parents. As Erikson (1968, p. 29) put it almost 50 years ago, the core issue for all people, "identity . . . is a generational issue." But although the children of Holocaust survivors and war veterans may be interested, concerned, or even preoccupied with the experiences of their parents, they are not generally made ill by them.

It does appear, however, that some members of the next generation, should they be exposed to their own traumatic experiences and suffer from PTSD, may have a more difficult time recovering from those experiences than those whose parents did not experience trauma. This may be either because they cannot easily obtain needed support directly from their families of origin during the recovery period, or because they did not fully develop internalized self-healing capacities when they were young, perhaps because, as suggested by Krystal (1988), the healing capacities of their parents were so thoroughly overwhelmed.

ACKNOWLEDGMENTS: We would like to thank Yael Danieli and Paul Errera for their suggestions and assistance in the preparation of this chapter.

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