Combat-Related Posttraumatic Stress Disorder Among Second-Generation Holocaust Survivors: Preliminary Findings

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The authors assessed the impact of the Nazi Holocaust on the course and symptoms of posttraumatic stress disorder (PTSD) among Israeli combat stress reaction casualties. They examined a sample of 96 such casualties of the 1982 Lebanon War whose parents had gone through the Nazi Holocaust and compared them to casualties who did not have such family history for 3 consecutive years beginning 1 year after their participation in the war. Results showed that 2 and 3 years after their participation in the 1982 Lebanon War, the children of Holocaust survivors, i.e., "second-generation" casualties, had higher rates of PTSD than did the control subjects, as well as a somewhat different clinical picture. Clinical and methodological implications of the findings are discussed.

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Participation in combat has been found to have pathogenic effects (1, 2). During battle, the stress of war may result in combat stress reaction, also known as "battle shock," which is defined as a breakdown in a soldier's ability to function according to prescribed military procedures. At the end of the Lebanon War, the most common psychiatric disorder among Israeli soldiers with combat stress reaction was posttraumatic stress disorder (PTSD) (3). The characteristic symptoms of PTSD involve reexperiencing the traumatic event, numbing of responsiveness to or reduced involvement with the external world, and a variety of autonomic, dysphoric, or cognitive symptoms.

Numerous factors may affect the perpetuation of PTSD in combat stress reaction casualties; among them are prior experiences that may render an individual more susceptible to the detrimental impact of such an episode. One such prior experience may be having parents or family members who survived the Nazi Holocaust.

Psychiatric literature (4–7) argues that the Holocaust has had a long enduring detrimental impact on the survivors and their children. Research has shown that Holocaust survivors suffer from PTSD as a result of their experience and that their children suffer from similar symptoms at a lower intensity. The transgenerational effects observed in children of survivors can be regarded as "secondary traumatization," a term coined by Rosenheck and Nathan (8) to describe similar effects they observed in children of fathers with combat-related PTSD.

Danieli (6) reports that Holocaust survivors' children often react with severe psychopathological responses (i.e., anxiety) when exposed to stress. According to Barocas and Barocas (9), children of survivors suffer from high vulnerability, a condition that undermines narcissistic defenses; Shaw (10, 11) has pointed out that such defenses shield combatants from feelings of helplessness and fear of death, which are among the main causes of PTSD.

One of the most salient characteristics of Holocaust survivors and their offspring is the feeling of survival guilt—the feeling that they do not quite have the right to live when so many others were killed (4). The conflict between the desire to live and the guilt-ridden approbation of that desire then experienced by the Holocaust survivors' offspring who are later engaged in combat would exacerbate survival guilt—also one of the main symptoms of PTSD (2).

Conflicts about the expression of aggression have also been found to be strong in children of survivors. On the one hand, aggression by their children is encouraged by Holocaust survivors, who often vent their anger on their offspring (12) or unconsciously push them to act out the aggression that they themselves had not been able to express (13); on the other hand, survivors and their children have a profound fear of being aggressors and a great need to justify any aggression as temporary and purely defensive (14). The tension in combat between the opportunity for the release of aggression and the internalized prohibition against killing is common to all soldiers and would seem to be intensified in Holocaust survivors' offspring because it

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duplicates a tension that has been present in their upbringing.

Some studies (15) contend that Holocaust survivors and their children do not manifest serious psychological impairments. One of the many difficulties in arriving at a clear assessment is that almost all of the studies to date have been based on clinical impressions of a limited number of individuals in treatment. To our knowledge, few researchers have examined an adequate control group, and none have used a longitudinal design.

In the present study, we focused on the course of PTSD among second-generation Holocaust survivors and control subjects, employing a longitudinal design and assessing a relatively large sample of individuals who, until the 1982 Lebanon War, had not shown any overt manifestations of psychological disorder. We predicted that among combatants with an antecedent combat stress reaction syndrome, those whose parents survived the Holocaust would exhibit higher rates of combat-related PTSD than comparable combatants without such a family history.

METHOD

The subjects were obtained from the population of soldiers who fought on the front line during the Lebanon War (1982) and who were identified by Israel Defense Forces mental health personnel as combat stress reaction casualties. For the purpose of this study, we define combat stress reaction as the behavior of a soldier which indicates that the soldier has ceased to function as a combatant.

Our subjects showed neither indications of serious physical injury nor indications of other combat-related disorders, such as brief reactive psychosis or factitious disorders. In addition, since the research examined the impact of parents' experiences in Nazi concentration camps in Europe during World War II, only subjects whose parents were of European descent were included in the study.

Ninety-six soldiers participated in the study at three points in time. The subjects were divided into two groups according to whether at least one of their parents was a Holocaust survivor; 44 subjects were offspring of survivors (second generation) and 52 were not (not second generation).

Of the 96 subjects, 60 (62.5%) ranged in age from 18 to 33 years, and 36 (37.5%) were above age 33 (median age, 27 years). Seventy-nine (82.3%) were married. Eleven (11.5%) of the subjects had completed eighth grade, 23 (24.0%) had had at least some high school, 34 (35.4%) had completed high school, and 28 (29.2%) had studied beyond high school; 33 (34.4%) were draftees doing their 3 years of mandatory military service, and 63 (65.6%) were reserve soldiers.

Data retrieved from official military records indicate that this sample did not differ significantly from our original sample of 382 Israeli soldiers who had combat stress reaction during the Lebanon War (3) with respect to their sociodemographic and military backgrounds. Chi-square tests indicated that the two groups did not differ significantly with respect to any sociodemographic or military variable.

The PTSD inventory (given to subjects 1, 2, and 3 years after participation in the war) consists of 13 statements describing the *DSM-III* symptoms of PTSD as adapted for war trauma (3). The respondent was asked to indicate whether he had experienced each of the symptoms within the past month. The 13 statements were divided into three categories of symptoms corresponding to the following three *DSM-III* criteria for the diagnosis of PTSD: 1) reexperiencing of the trauma (three statements), 2) numbing of responsiveness to or reduced involvement with the external world (three statements), and 3) additional symptoms not present before the trauma (seven statements). A soldier was considered to suffer from PTSD when he reported at least one of the symptoms in each of categories 1 and 2 and at least two symptoms from category 3. (For detailed information about reliability and concurrent validity of the PTSD inventory, see Solomon et al. [3].)

Since differences in PTSD between the two groups of soldiers may be due to prewar differences, we assessed the soldiers' premilitary adjustment. This index was a composite score of intelligence, social performance, and personality features used by the Israel Defense Forces for assignment of soldiers to military units and prediction of subsequent functioning. The scores were obtained by a structured interview conducted by a specially trained interviewer when soldiers were first drafted at age 18.

Approximately 1, 2, and 3 years after their participation in the war, the subjects were asked to report to the headquarters of the Surgeon General of the Israel Defense Forces. The subjects received a personal letter explaining that they had been randomly selected to participate in a routine, periodical health assessment conducted as part of the Medical Corps' concern for the well-being of its regular and reserve soldiers. The soldiers were assured that the data would remain confidential and would in no way affect their status in military or civilian life. The subjects were seated in groups of seven to 19, where they individually filled out the battery of questionnaires.

Although secondary gain considerations may have led subjects to overly endorse emotional reactions, they were clearly informed that no military health profile would be changed on the basis of their reports. Moreover, subjects were aware that a different administrative unit was responsible for claims for physical or mental injuries.

RESULTS

A two-way analysis of variance (ANOVA) for categorical data performed on the rate of PTSD diagnosis by study group and time of measurement (as a re-

TABLE 1. PTSD Symptoms Among Soldiers With Combat Stress Reaction Who Were or Were Not Offspring of Holocaust Survivors

Group and Time After Lebanon War	Rate of PTSD (%)	Number of Symptoms		PTSD Inventory Scores[a]									
				Intrusiveness		Emotional Numbing		Hyper-alertness		Cognitive Impairment		Guilt Feelings	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Second-generation soldiers (N=44)													
First year	70	7.59	3.03	0.73	0.30	0.48	0.36	0.71	0.38	0.64	0.48	0.23	0.33
Second year	73	7.00	3.02	0.69	0.33	0.44	0.31	0.67	0.41	0.52	0.51	0.18	0.29
Third year	64	6.59	3.93	0.61	0.36	0.41	0.35	0.60	0.42	0.57	0.50	0.23	0.33
Not-second-generation soldiers (N=52)													
First year	60	6.07	3.92	0.57	0.40	0.42	0.37	0.55	0.39	0.51	0.50	0.17	0.31
Second year	52	5.83	3.80	0.55	0.40	0.40	0.37	0.56	0.40	0.47	0.50	0.16	0.32
Third year	39	4.04	3.86	0.39	0.40	0.26	0.35	0.35	0.38	0.34	0.48	0.15	0.33

[a]Scores ranged from 0 to 1.

peated factor) yielded significant main effects for time ($\chi^2=14.94$, df=2, $p<0.01$) and study group ($\chi^2=6.70$, df=1, $p<0.05$). As can be seen in table 1, the percent of soldiers diagnosed as having PTSD decreased over time. Additionally, a higher PTSD rate was found among second-generation than among not-second-generation subjects.

Although the ANOVA yielded a nonsignificant interaction between time and second generation, the decrease in the PTSD rate over time was steeper among not-second-generation than among second-generation casualties (table 1). The higher rate of PTSD among second-generation casualties was more salient at 3 years than at 1 year after the war.

A two-way ANOVA for group and time (as a repeated measure) performed on the number of symptoms reported as present yielded significant main effects for time ($F=12.87$, df=2, 180, $p<0.01$) and study group ($F=6.99$, df=1, 90, $p<0.05$). A post hoc Scheffe test for repeated measures ($\alpha=0.05$) revealed that the mean±SD number of symptoms reported as present was higher 1 and 2 years after the war (6.74±3.62 and 6.35±3.51, respectively) than at 3 years after the war (5.16±4.08). In addition, second-generation casualties reported more mean±SD PTSD symptoms (7.06±3.36) than not-second-generation casualties (5.31±3.94).

The ANOVA indicated that the time interaction approached significance ($F=2.45$, df=2, 180, $p<0.10$). A test for simple main effects (16) revealed that second-generation casualties reported more PTSD symptoms than not-second-generation casualties only at 3 years after the war. Additionally, the number of reported symptoms decreased over time only among not-second-generation subjects.

Analysis of covariance indicated that the difference between second-generation and not-second-generation groups on the number of PTSD symptoms reached significance after controlling for age, education, family status, and prewar adjustment. An additional ANOVA yielded no significant differences in prewar adjustment between the two study groups. These findings imply that group differences in PTSD do not depend on sociodemographic variables or on prewar adjustment.

Adopting Laufer et al.'s (17) four criteria for PTSD, we assigned the 13 statements from the PTSD inventory to each criteria: 1) intrusiveness (three statements); 2) emotional numbing (three statements); 3) hyperalertness (three statements); and 4) cognitive impairment (two statements). The two remaining statements related to guilt feelings.

The two-way ANOVAs yielded a significantly higher reported occurrence of intrusiveness ($F=7.26$, df=1, 90, $p<0.01$) and hyperalertness ($F=6.02$, df=1, 90, $p<0.05$) among second-generation than not-second-generation subjects (table 1). The analyses also revealed a significant decrease over time in the reported occurrence of intrusiveness ($F=8.76$, df=2, 180, $p<0.01$), hyperalertness ($F=11.53$, df=2, 180, $p<0.01$), and emotional numbing ($F=5.07$, df=2, 180, $p<0.05$).

DISCUSSION

Our results indicate that 1, 2, and 3 years after their participation in the 1982 Lebanon War, Israeli combat stress reaction casualties whose parents were Holocaust survivors had higher rates of PTSD and reported a larger average number of PTSD symptoms than their counterparts without such family history. The decrease in PTSD severity over time was steeper among not-second-generation than second-generation veterans. These findings point to retarded recovery from PTSD among children of Holocaust survivors.

Numerous factors may contribute to these differences. One is the heightened vulnerability of children of survivors to stress (6, 9). Although this study was based on a sample that was healthy before the war (i.e., they had all passed the physical and psychological tests for Israel Defense Forces recruitment as front-line soldiers), their exposure to combat seems to have unmasked a latent vulnerability that was not activated by less stressful life events.

The PTSD of the second generation may in effect be a reactivation of a latent posttraumatic syndrome deriving from their parents' Holocaust experience. An earlier study by our group (18, 19) showed that reactivated PTSD among soldiers who had had a combat stress reaction before the one in the Lebanon War was more intense and enduring than first time PTSD. We seem to be witnessing a similar phenomenon here, with the antecedent event not a previous combat stress reaction but the parents' Holocaust experience.

Another impediment to recovery may be related to the particular meaning that the combat stress reaction has for children of survivors. Almost every combat stress reaction casualty feels that he has failed, and most suffer agonies of shame and reduced self-esteem; however, among the second generation the sense of failure cuts deeper. Children of Holocaust survivors see themselves as guardians and protectors of their parents (4). In a very real sense, the second generation was raised to undo the damage that the Holocaust had brought to their parents' lives. The magnitude of this expectation probably intensifies both the stress on the battlefield and the failure implicit in a combat stress reaction.

Last, the survivor family itself may undermine recovery. As a result of their accentuated fear of loss, parents who are Holocaust survivors tend to have a greater difficulty than others with the real hardship of parting with their children (4). Recovery might be impeded by the excess of secondary gains to be had from the survivor parents' well-documented overprotectiveness (4). Also, survivor parents may have unconsciously discouraged the recovery of their children with combat stress reaction to avert the very real danger of their being sent back to the front and perhaps killed.

The clinical picture of the second generation is highly reminiscent of that of their survivor parents. Like their parents, they suffer from a relatively large amount of intrusive symptoms and hyperalertness. The PTSD in the second generation may involve an unmasking of Holocaust-related disturbances or reflect responses that the children "learned" from their survivor parents. For example, the second-generation PTSD casualty may have more war-related nightmares than his control group peers because he had seen and heard his parents venting their emotions.

The contribution of this study lies in its large sample size of subjects who were deemed physically and psychologically healthy before their participation in the 1982 Lebanon War and also in its prospective design. Nonetheless, numerous questions remain unanswered. We have no specific knowledge of the sociodemographic background and mental and physical status of our subjects' parents. We do not know whether they were in hiding, fought in the partisans, or were imprisoned in concentration camps; we know nothing about the magnitude of their losses, nor do we know which of the subjects' parents were actually in the Holocaust. As for the subjects, we have no knowledge of their birth order, their relationships with their parents, or their attitudes toward war, heroism, and aggression, nor do we fully understand the exact nature of the connection between the parents' Holocaust experience and their children's secondary traumatization. We suggest that future multivariate research, based on interviews rather than questionnaires, assess the specific nature of the Holocaust experience and identify the means by which the Holocaust trauma is transmitted from the survivors to their children.

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