Relationship Between Posttraumatic Stress Disorder Characteristics of Holocaust Survivors and Their Adult Offspring

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Objective: *There is controversy regarding the long-lasting effects of the Holocaust on the adult children of Holocaust survivors. In the present study the authors examined the relationship between posttraumatic stress disorder (PTSD) characteristics of Holocaust survivors and their adult children to determine whether differences in symptom severity or diagnostic status of parents would be associated with similar characteristics in their adult children.* *Method:* *Holocaust survivors (N=22) and their offspring (N=22) were interviewed with several instruments to assess lifetime trauma history, effect of trauma on one's life, level of intrusive and avoidance symptoms in response to reminders of the Holocaust, current and lifetime PTSD, and current and lifetime axis I psychiatric disorder other than PTSD.* *Results:* *There were significant relationships between parents and children regarding the effect of trauma on one's life and level of intrusive, but not avoidance, symptoms in response to reminders of the Holocaust. Offspring with traumatic events were more likely to develop PTSD if their parents had PTSD.* *Conclusions:* *Symptoms in offspring may be related to presence and severity of symptoms in the parent. Furthermore, PTSD in the parent may be a risk factor for PTSD in offspring.*

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A substantial clinical literature indicates that children of Holocaust survivors display an unusually high prevalence of psychiatric problems such as depression, anxiety, maladaptive behavior, and symptoms of personality disorder (1–5). Barocas and Barocas (1) noted that children of Holocaust survivors "present symptomatology and psychiatric features that bear a striking resemblance to the concentration camp survivor syndrome." Rosenheck and Nathan (6) made the similar observation that children of Vietnam combat veterans display posttraumatic stress disorder (PTSD)-like symptoms. Thus, transgenerational responses to extreme trauma are not likely to be limited to offspring of individuals who experienced any one type of traumatic event.

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A landmark study by Solomon et al. (5) reported that Lebanon War veterans who were offspring of Holocaust survivors were more likely than other Israeli soldiers to develop PTSD following their military experiences. That study provided the first empirical demonstration of a greater vulnerability of offspring of Holocaust survivors to their own stressful events. The investigators concluded that "PTSD in the second generation may involve an unmasking of Holocaust-related disturbances or reflect responses [e.g., nightmares] that the children 'learned' from their survivor parents" (5). Although these results imply that severity of symptoms in the parents contributed to the presence of PTSD in the offspring, information about the presence or severity of symptoms in the survivor parents was not obtained.

In contrast to these observations are numerous studies that have failed to note significant or long-lasting impairment in the adult offspring of Holocaust survivors (for review, see reference 7). It has been suggested that demonstrations of impairment in offspring of Holocaust survivors have been made in studies examining clinical samples that may not be representative of the general community of surviving families (7). However, a more compelling explanation for why only some offspring of trauma survivors are impaired may lie in

the heterogeneity of the response to trauma in the parents. It is well known that only a subset of trauma survivors develop chronic PTSD (8). However, most studies have tended to consider Holocaust survivors as part of a homogeneous group on the basis of the experience of the Holocaust without subgrouping survivors into those with and without chronic PTSD.

In the present study we examined the relationship between PTSD characteristics of Holocaust survivors and their adult children in a community-based group to determine whether differences in symptom severity or diagnostic status of parents would be specifically associated with similar characteristics in their adult children.

METHOD

The majority of Holocaust survivors in this study were recruited from publicly available lists of Holocaust survivors provided by the local historical society and local synagogue membership rosters, as previously described (9). All subjects lived in the United States. Five of the subjects were self-referred and came to our research program after hearing about our studies from other survivors or reading about the research in local newspapers. Following the completion of the interview, we requested permission to contact adult children of the subjects. Since most of the survivors had only one or, at most, two children, for each survivor, one child was evaluated, on the basis of availability. In cases in which both parents were study subjects, we selected the same gender parent for analysis.

Survivors and offspring signed written informed consent forms before the clinical evaluation and were evaluated with the same instruments. Cumulative lifetime trauma was measured with the Antonovsky Life Crises Scale (10), as previously described (11). The Civilian Mississippi Scale (12), which correlates with severity of PTSD symptoms, assessed the global effects of stressful events on individuals' lives. The Impact of Event Scale (13) was administered to determine the extent to which all subjects had experienced intrusive or avoidance symptoms specifically about the Holocaust or Holocaust-related material over the last 7 days. Presence and severity of current and lifetime PTSD were determined with the Clinician-Administered PTSD Scale (14) by raters with established interrater reliability (R.Y., E.L.G., K.B.-B.). For Holocaust survivors, the focal trauma was an event or events during the Holocaust. For children of survivors, the focal trauma was a markedly distressing traumatic event that had been identified on the Antonovsky Life Crises Scale. In cases in which no traumatic event was present (N=4), the Clinician-Administered PTSD Scale was scored as zero. Current and lifetime axis I disorders were determined by the Structured Clinical Interview for DSM-III-R (15).

Correlational analyses were performed to determine the relationship between scores of parents and their children on the Civilian Mississippi Scale and the Impact of Event Scale intrusive and avoidance subscales. Fisher's exact tests or unmatched sample t tests were used to determine the significance of relationships between 1) parents' current PTSD status and children's past or current diagnoses of PTSD and 2) parents' current PTSD and children's past or current psychiatric diagnosis other than PTSD. McNemar's test was used to compare parents' psychiatric diagnosis status for disorders other than PTSD and their children's past or current psychiatric diagnoses other than PTSD.

RESULTS

Twenty-two Holocaust survivors (11 men and 11 women; mean age=67.91 years, SD=4.62, range=58–75) and 22 offspring (nine men and 13 women; mean age=37.68 years, SD=4.20, range=31–45) were studied. The gender distribution of the parents and children was as follows: for the 11 male survivors, six of the offspring were men and five were women; for the 11 female survivors, three offspring were men and eight were women. Given the small group sizes, potential gender differences were not evaluated.

Eleven of the Holocaust survivors (four men and seven women) met criteria for current PTSD, and 11 did not; of the latter subjects, three met diagnostic criteria for past PTSD. Four survivors had current major depression (two with, two without PTSD), one (with PTSD) had dysthymia, three (two with, one without PTSD) had current generalized anxiety disorder, and three met criteria for past major depression. Psychiatric diagnoses were distributed evenly across gender.

There was a significant correlation between parents' and children's scores on the Civilian Mississippi Scale ($r=0.44$, $N=22$, $p<0.04$). There was a significant correlation between parents' and children's scores on the intrusive ($r=0.85$, $N=13$, $p=0.0003$), but not the avoidance ($r=0.11$, $N=13$), subscale of the Impact of Event Scale.

Five (one man and four women) of 22 offspring met criteria for current or past PTSD. There was a significant relationship between PTSD diagnoses of parents and children ($p=0.02$). All five offspring with PTSD had parents with PTSD, but only six (three men and three women) of the 17 offspring without PTSD had parents with PTSD. Notably, however, there was no significant difference in Antonovsky Life Crises Scale scores between the five offspring with PTSD (mean=3.6, SD=2.7) and the 17 offspring without PTSD (mean=3.1, SD=2.3) ($t=0.38$, $N=22$). The relationship between parents' PTSD and children's other psychiatric diagnoses was not significant. Of the offspring who had axis I diagnoses other than PTSD (depression, panic disorder, generalized anxiety disorder, or substance abuse), four had parents with PTSD and three had parents without PTSD. There was no significant relationship between parents' and children's diagnostic status.

DISCUSSION

The findings show that PTSD characteristics in both Holocaust survivors and offspring are diverse; this agrees with observations of clinical heterogeneity in these groups (for review, see reference 3). The data also demonstrate that there are wide-ranging associations between characteristics of trauma survivors and their children. In particular, there was a very strong correlation between the intensity of intrusive thoughts about the Holocaust in both survivors and their adult offspring, as measured by the Impact of Event Scale, and a smaller but still significant correlation between parents and offspring on the Civilian Mississippi Scale, which is thought to reflect the impact of trauma on an individual's life.

Offspring of Holocaust survivors were significantly more likely to develop PTSD in response to their own

traumatic events if their parent had chronic PTSD. This suggests that having a parent with PTSD may be a risk factor for the development of PTSD in response to one's own trauma. Having a parent with PTSD or other psychiatric diagnoses did not appear to be a risk factor for the development of other (non-PTSD) psychiatric diagnoses in the offspring. The current findings extend the observations of Solomon et al. (5) and Rosenheck and Nathan (6) by clarifying that it is not the fact of trauma exposure per se that is associated with secondary traumatization or intergenerational responses to traumatic event, but, rather, the posttraumatic symptoms of the parents that may be relevant.

The findings supplement studies exploring biological concomitants of PTSD by raising the possibility of a genetically linked risk factor for PTSD. It is clear, however, that the "transmission" of PTSD-like characteristics may also be related to environmental factors. The Holocaust survivor poet Paul Celan wrote that children of survivors "suckled the black milk" of trauma (16). More formal explanations for secondary traumatization, which also focus on the tangible, although unwitting, transmission by the parent and the unavoidable absorption of trauma-related sequelae by the child, have included such models as transposition (4) and learning theory (5). The particular methodology used in the present study does not address the etiology of the relationships observed, and this may be an important area for future research. Regardless of whether these findings ultimately are shown to reflect genetic or other types of transmission, they imply that chronic PTSD not only affects trauma survivors for decades, but also can affect offspring of trauma survivors. This substantially increases the public health impact of chronic PTSD.

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