

EDITORIAL

The psychiatric after-effects of the Holocaust on the second generation¹

Numerous studies conducted in clinical and community settings by researchers from different countries over a period of almost five decades, have conclusively shown protracted and disabling psychiatric effects among World War II Holocaust victims, formerly known as the concentration camp syndrome (e.g. Matussek, 1975; Eitinger & Krell, 1985; Eitinger & Major, 1993; Levav, 1998). The multiple and brutal trauma endured by the survivors during the war years were further compounded by earlier systematic discrimination, and by exhausting socio-political events and pogroms that followed liberation by the Allies. In this latter period survivors had to learn the fate of their spouses, children, parents, other relatives and friends. Hastily contracted post-war marriages were likely intended both to cope with feelings of extreme loneliness and to recreate a social support group that would buttress survival.

Given the above, many observers hypothesized that, among other impaired abilities, survivors would evidence a deficit in their parenting functions. As one author noted 25 years ago: ‘Survivors are now beginning to bring their children to our clinics. In retrospect one should not be surprised at this because of the nature and severity of the psychological effects of the persecution, and because the emotional state of the parents has some bearing on the development of the child...’ (Sigal, 1971). Several mediating mechanisms that affected the survivors’ family as a functioning unit were postulated by the examining clinicians, such as over-involvement, withdrawal, inability to exert control, parental affective unavailability, undue degree of preoccupation with past experiences, and an inability to cope with mourning and bereavement (Klein, 1973; Levine, 1982; Sigal & Weinfeld, 1989). Other imputed mechanisms referred to psychological processes taking place during child development, such as difficulties in the individuation-separation phase (Freyberg, 1980).

These clinical insights on the second generation of Holocaust survivors were made from several vantage points, including psychoanalysis (Kestenberg, 1972, 1980), psychodynamics (Barocas & Barocas, 1979) and family dynamics (Danieli, 1982; Sigal & Weinfeld, 1987). In addition, clinical studies focused on personality characteristics (Lichtman, 1984) and on the presence of psychiatric disorders (Rakoff *et al.* 1966; Trossman, 1968). To an extent, it became an accepted fact that the children of survivors not only bore the responsibility for a historical memory (often contested by neo-Nazis), but also showed the psychopathological effects of the trauma of their parents. The lay literature also contributed to the notion that children of Holocaust survivors show psychopathological wounds and scars (Epstein, 1979).

Clinical studies, such as those noted earlier, however, were found methodologically inadequate due to selectivity, small sample sizes, and absence of adequate controls (Solhoff, 1981, 1992). To confirm those intriguing results, researchers turned to non-clinical samples and to more suitable methods of analyses. There are four key implications to the ascertainment of the increased risk for psychiatric disorders among the children of survivors: clinical, legal, ethical and socio-psychiatric. As for the latter, demonstrating that the second generation may show increased vulnerability for psychiatric disorders, including those affecting the parents, such as ICD-10 F.62.0 ‘enduring personality change after catastrophic experience’ (WHO, 1992), or other related diagnoses, could provide persuasive evidence that the transmission of environmentally induced psychopathology,

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whether learned or due to other mechanisms, does indeed exist. In most circumstances it is difficult to separate out genetic from environmental transmission because they co-occur. In a comparison of the rates among children of survivors and appropriate controls, however, any evidence of excess rates in the offspring must be the result of environmental transmission, as this is the cause of the excess rate in the parents. There is no reason to think that Jews who experienced the Holocaust were more genetically vulnerable to psychiatric disorders than Jews who were not subjected to the same experience. Any excess in the rate, therefore, must be due to environmental transmission, regardless of the genetic contribution to the disorder. Evidence of this kind would be theoretically attractive, since it would stand as the social counterpart to genetic-orientated research that has successfully provided evidence for familial transmission resulting from genetic factors (e.g. Kety *et al.* 1978). Furthermore, the examination of the second generation of survivors would allow the effect of a common environment to be screened out (Schwartz *et al.* 1994), since the children of survivors were not directly exposed to the trauma that caused the excess in their parents. In more usual circumstances, shared environment vies with familial transmission as an alternative explanation for familial aggregation (von Knorring *et al.* 1983).

Community-based studies on the second generation enjoy obvious methodological advantages over clinical observations regarding the data source. Yet, in turn, many of them have been handicapped by problems of sample design and low response rates. Studies using non-clinical samples originating in Australia (Halik *et al.* 1990), Canada (Russell, 1980) and the United States (Weiss *et al.* 1986), generally relied on population lists provided by Jewish organizations that failed to include all the potential respondents. The Canadian study by Sigal & Weinfeld (1987), which did use an acceptable research population, like studies conducted in Israel (Nadler *et al.* 1985), shared only in part such methodological shortcomings. Furthermore, many of these studies had limited completion rates in both the index and control groups; the potential risk of result modification due to the effect of the non-respondents can thus not be ruled out.

Solkoff (1981, 1992) and Eitinger & Major (1993) have provided detailed reviews of the studies on the second generation of Holocaust survivors. An additional review is thus redundant, except to note that, save for a relatively recent investigation by Schwartz *et al.* (1994) and earlier work by Solomon *et al.* (1987, 1988), all studies conducted in the community used scales that measured psychological symptoms, personality characteristics, or events, such as psychiatric intervention. Solomon *et al.*'s work focused on the specific vulnerability to post-traumatic stress disorder (PTSD) of the second generation of Holocaust survivors among Israeli soldiers exposed to a war situation, while Schwartz *et al.* (1994) explored a wide spectrum of psychiatric disorders.

These controlled studies, including those reviewed by Solkoff (1981, 1992) and Eitinger & Major (1993), unlike the clinic-based observations that primarily focused on children, examined older subjects. In contrast with the latter research strategy, the studies conducted in the community have not shown consistent evidence indicating that the offspring of concentration camp survivors exhibit more psychopathology than controls. More precisely, some studies showed that the second generation respondents differed from the controls in reference to family-based behaviours and attitudes (Last & Klein, 1984; Podietz *et al.* 1984) and in the capacity to externalize aggression (Nadler *et al.* 1985), yet none of these characteristics were clinically significant. Lichtman (1984) found that children of survivors scored higher in the MMPI anxiety scales, but methodological problems related to sample selection seriously undermined these results. It is possible to conclude by now that part of the lack of congruity between the results of the two types of studies may conceivably be due to the different life cycles investigated. As it is almost always the case during childhood, the offspring's contact with the survivor-parent was more intense and continuous precisely when the latter may have been more impaired by psychopathology, given the relative recency of the trauma.

More recently, Schwartz *et al.* (1994) reported on the intergenerational effect of the Holocaust, relying on standard psychiatric diagnosis while examining a broad spectrum of disorders. Conducted in Israel, this cohort study used a two-stage procedure for case identification and diagnosis, an unbiased population source to extract its sample, and adequate statistical methods for

analysis; in addition, it benefited from a high response rate (Levav *et al.* 1993). The sample comprised young native-born adults ages 25 to 34, including 291 second generation survivors in the screening and 147 in the diagnostic stages, respectively. Second generation survivors were those who reported that both their parents had experienced concentration or labour camp internment. They were compared with a group of controls, 957 children in the screening stage and 476 in the diagnostic stage, also native born, whose Europe-originated parents had not been in World War II. Diagnoses were made blind to Holocaust status by psychiatrists using the Schedule for Affective Disorders and Schizophrenia – Israel Life Version (SADS-I) linked to the Research Diagnostic Criteria (RDC) in the diagnostic stage (Levav *et al.* 1993). The findings showed that 1-year prevalence rates for the group of diagnoses studied by the SADS-I/RDC, including depressive and anxiety disorders, did not differ between both groups of respondents, thus confirming the results obtained in earlier community-based studies. Interestingly, the second generation respondents were not found at a heightened risk for war stressors compared to controls, based on two measures of PTSD that were administered in the screening stage to those who had been in combat after the age of 18 in the different Israel-Arab wars (Skodol *et al.* 1996). Unlike these findings, Solomon *et al.* (1987, 1988) had elicited higher rates of PTSD among Israeli offspring of Holocaust survivors who fought in the 1982 War in Lebanon. Lately, Yehuda *et al.* (1998*a, b*), working from a biological perspective and basing their samples on a clinical design, confirmed Solomon *et al.*'s conclusion that the second generation of survivors is at heightened risk for PTSD. Additionally, Yehuda *et al.* identified 'statistically significant relationships between parents ($N = 22$) and children ($N = 22$) regarding the effect of trauma on one's life and level of intrusive, but not avoidance symptoms to reminders of the Holocaust'.

In contrast to the results obtained for 1-year prevalence rates during young adulthood, the lifetime RDC prevalence rates found in Schwartz *et al.* (1994) were higher in the second generation group. This elevation was accounted for by two diagnoses, generalized anxiety disorder and minor depression, whose rates seem to be significantly higher for children of survivors prior to age 25. The finding, therefore, suggests that disorders may have been present when the respondents were younger and living in the parental home at the time when, as hypothesized above, parental psychopathology may have been more conspicuous. No differences were found between the two groups for suicide attempts and ideations, adolescent adjustment, or social functioning.

Another recent publication, based on research conducted in Norway, reinforces Schwartz *et al.*'s findings (Major, 1996). Unavoidably limited by an extremely small number of parent survivors ($N = 7$), this study included all those Norwegian Jews who returned alive from Nazi Germany and had children. The controls were children of Norwegian Jews that had successfully fled to Sweden during a daring rescue operation. Major found that when the index offspring ($N = 19$) were adolescents, they exhibited more 'behavior (school) problems' and 'depressive periods' than the controls ($N = 37$), but did not differ regarding nine other symptoms and characteristics, e.g. aggression, nervousness, eating disorders. No differences, however, were identified during adulthood regarding 'optimism' and 'suspiciousness' at the time of the interview.

Based on the two preceding surveys, and with the additional support from Sigal & Weinfeld's study (1989) on demoralization, we may conclude that methodological issues that marred previous research and that prompted Solkoff (1992) to state, 'findings on the transgenerational effects of the Holocaust-related trauma [are] at best problematic', may now be approaching partial resolution. Admittedly, conclusions based on both the Schwartz *et al.* (1994) and Major (1996) studies have considerable limitations. The former did not report on the possible diagnoses of childhood disorders among the second generation of survivors, as the psychiatric instrument used in their study was not designed to reliably elicit them. DSM-III childhood pathology, such as conduct, separation, and over-anxious disorders were collected during the study, but were not published because they had been obtained during the course of the non-structured section of the psychiatric interview of SADS. An analysis of these data, however, demonstrated no elevation of the rates of these disorders in children of Holocaust survivors. As for Major's study (1996), the author relied on the respondent's retrospective report, a method that risks accuracy and reliability (Bromet *et al.* 1986). The positive

findings from these two studies, the higher-life time rates in Schwartz *et al.*'s study and the two positive items in Major's study, are not exempt from recall bias, survivors' children may have been more cognizant of their own emotional difficulties as their parents were more likely to have psychological problems.

To summarize this complex set of results, clinical studies were quick to recognize a transgenerational effect of the Holocaust, while community studies were more sober in their conclusions. It is apparent today that by the time the second generation reaches young adulthood, it does not seem to differ in its mental health condition from suitable controls. Doubts, however, linger regarding the effect on younger ages; Schwartz *et al.*'s (1994) and Major's (1996) studies suggest that psychopathological wounds may have been present during earlier developmental stages.

While important research questions have yet to reach closure, new ones were opened by the aforementioned studies. First, will replication studies confirm this dichotomy between childhood pathology and the lack of pathology in adulthood among the second generation survivors? A direct and methodologically sound enquiry of the youngest population is still needed, since the current evidence of the community-based studies relies on retrospective information. If such a dichotomy does indeed exist, at what stage does it occur and what are the factors that account for the passage from a state of disorder to one that is disorder-free?

Future studies should also focus on the preservation of health in subjects whose environments may have been impregnated by the trauma and the losses suffered by their parents. Antonovsky *et al.* (1971), in a study of women survivors, were struck by the fact that it was only a minority of subjects who showed emotional disorders. The 'hardening effect' of the trauma in the survivors also had been noted earlier by Shual (1957–1958) in another context. Years later, Davidson (1979) posited the protective effects of social support in survival during internment, and Fenig & Levav (1991) were able to ascertain its role in later life in regards to emotional disorders. Similar health-rather than disease-orientated research is needed in reference to the second generation.

How parents managed to protect their children from their existential nightmare remains an issue of speculation rather than of confirmed knowledge. Information based on retrospective accounts has been collected on the emotional climate prevailing in the families. Keinan *et al.* (1988) noted that the second generation rated its parents as 'more tense than the controls, but also as more attractive'. Sigal & Weinfeld (1989) found that second generation respondents view their parents to be warmer and psychologically better adjusted than did control children; only a minority (28%) reported negative personal or familial effects. Zlotogorski (1983) did not find any pattern of family functioning among survivors that would preclude the fulfilment of the normal parenting role.

Most second generation individuals report that their parents shrouded the past in silence. Did this communication pattern become protective, rather than the seed of a pathogenic family secret? Clinical insights (Robinson & Winnik, 1981; Bergmann & Jucovy, 1982; Lichtman, 1984) are divided as to the benefits of disclosure. More recent studies on denial (Edelstein *et al.* 1989), however, make this a worthwhile path of enquiry. Klein & Kogan (1989) have noted that 'The second generation was seen by the survivors as confirmation of life and denial of their losses'.

Later in life, it is plausible that the widely accepted role of the second generation in bearing a historical memory aids the offspring to recast in a more positive light the emotional experiences of the parental home. This reformulation may occur through the enhancement of the salutogenic sense of coherence that brings order out of chaos (Antonovsky, 1993, 1996) and by affiliation to a non-stigmatized community of likes. Pilcz (1979), among others, has noted the 'positive dimensions of the Holocaust legacy' among the second generation.

In conclusion, despite much progress, there still remains a need for a more comprehensive research agenda on the psychiatric after-effects of the Holocaust on the second generation. Offspring born before and after the final settlement of the parents in the countries where they were absorbed need to be differentiated in future research, since conception, birth and early experiences were considerably different for the index and control groups (Danieli, 1997). The work to be done should encompass both the risk for psychopathology – including the investigation of

biological parameters (cf. Yehuda *et al.* 1998*a, b*) – as well as the capacity for resilience. The urgency for such an agenda arises from a continuing interest in the psychological scars of World War II and, sadly, from a never-ending chain of contemporary traumatic experiences (Mollica & Caspi-Yavin, 1991; Basoglu, 1993; Weine *et al.* 1995).

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REFERENCES

- Antonovsky, A. (1993). The structure and properties of the sense of coherence scale. *Social Science and Medicine* **36**, 725–733.
- Antonovsky, A. (1996). The sense of coherence. A historical and future perspective. *Israel Journal of Medical Sciences* **32**, 170–178.
- Antonovsky, A., Maoz, B., Dowty, N. & Wijsenbeck, H. (1971). Twenty-five years later: A limited study of the sequelae of the concentration camp. *Social Psychiatry* **6**, 186–193.
- Barocas, H. A. & Barocas, C. A. (1979). Wounds of the fathers: the next generation of Holocaust victims. *International Review of Psychoanalysis* **6**, 331–340.
- Basoglu, M. (1993). Prevention of torture and care of survivors. An integrated approach. *Journal of the American Medical Association* **270**, 606–611.
- Bergmann, M. S. & Jucovey, M. E. (1982). Prelude: The second generation. In *Generations of the Holocaust* (ed. M. S. Bergmann and M. E. Jucovey), pp. 18–29. Basic Books: New York.
- Bromet, E. J., Dunn, L. O., Connell, M. M., Dew, M. A. & Schulberg, H. C. (1986). Long-term reliability of diagnosis of lifetime major depression in a community sample. *Archives of General Psychiatry* **43**, 435–440.
- Danieli, Y. (1982). Families of survivors of the Nazi Holocaust. In *Stress and Anxiety*, vol. 8 (ed. C. D. Spielberger and I. G. Sarason), pp. 405–421. Hemisphere Publishing Co.: New York.
- Danieli, Y. (1997). Personal communication.
- Davidson, S. H. (1979). Massive psychic traumatization and social support. *Journal of Psychosomatic Research* **233**, 395–402.
- Edelstein, E. L., Nathanson, D. L., Stone, A. M. (eds.) (1989). *Denial: A Clarification of Concepts and Research*. Plenum: New York.
- Eitinger, L. & Krell, R. (1985). *The Psychological and Medical Effects of Concentration Camps and Related Persecutions on Survivors of the Holocaust*. University of British Columbia Press: Vancouver.
- Eitinger, L. & Major, E. F. (1993). Stress of the Holocaust. In *Handbook of Stress. Theoretical and Clinical Aspects*, 2nd edn (ed. L. Golberger and S. Breznitz), pp. 617–635. The Free Press: New York.
- Epstein, H. (1979). *Children of the Holocaust*. Bantam Books: New York.
- Fenig, S. & Levav, I. (1991). Demoralization and social supports among Holocaust survivors. *Journal of Nervous and Mental Disease* **179**, 167–172.
- Freyberg, J. T. (1980). Difficulties in separation-individuation as experienced by offspring of Nazi Holocaust survivors. *American Journal of Orthopsychiatry* **50**, 87–95.
- Halik, V., Rosenthal, D. A. & Pattison, P. E. (1990). Intergenerational effects of the Holocaust: patterns of engagement in the mother-daughter relationship. *Family Process* **29**, 325–339.
- Keinan, G., Mikulincer, M. & Ribnicki, A. (1988). Perception of self and parents by second-generation Holocaust survivors. *Behavioral Medicine* **14**, 6–11.
- Kestenberg, J. S. (1972). Psychoanalytic contributions to the problem of children of survivors from Nazi persecution. *Israel Journal of Psychiatry and Related Sciences* **10**, 211–325.
- Kestenberg, J. S. (1980). Psychoanalysis of children of survivors from the Holocaust. Case presentations and assessment. *Journal of the American Psychoanalytic Association* **28**, 775–804.
- Kety, S. S., Wender, P. H. & Rosenthal, D. (1978). Genetic relationships within the schizophrenia spectrum: evidence from adoption studies. In *Critical Issues in Psychiatric Diagnosis* (ed. R. L. Spitzer and D. F. Klein), pp. 213–223. Raven Press: New York.
- Klein, H. (1973). Children of the Holocaust: mourning and bereavement. In *The Child in His Family: The Impact of Disease and Death* (ed. J. E. Anthony and C. Koupernik), pp. 393–409. Wiley and Sons: New York.
- Klein, H. & Kogan, I. (1989). Some observations on denial and avoidance in Jewish Holocaust and post-Holocaust experience. In *Denial: A Clarification of Concepts and Research* (ed. E. L. Edelstein, D. L. Nathanson and A. M. Stone), pp. 299–308. Plenum: New York.
- Last, U. & Klein, H. (1984). Impact of parental Holocaust traumatization on offsprings' reports of parental child-rearing practices. *Journal of Youth and Adolescence* **13**, 267–283.
- Levav, I. (1998). Individuals under conditions of maximum adversity: the Holocaust. In *Adversity, Stress, and Psychopathology* (ed. B. P. Dohrenwend). Oxford University Press: Oxford.
- Levav, I., Kohn, R., Dohrenwend, B. P., Shrout, P. E., Skodol, A. E., Schwartz, S., Link, B. G. & Naveh, G. (1993). An epidemiologic study of mental disorders in a 10 year cohort of young adults in Israel. *Psychological Medicine* **23**, 691–707.
- Levine, H. R. (1982). Toward a psychoanalytic understanding of children of survivors of the Holocaust. *Psychoanalytic Quarterly* **51**, 70–92.
- Lichtman, H. (1984). Parental communication of Holocaust experience and personality characteristics among second-generation survivors. *Journal of Clinical Psychology* **40**, 914–924.
- Major, E. F. (1996). The impact of the Holocaust on the second generation: Norwegian Jewish Holocaust survivors and their children. *Journal of Traumatic Stress* **9**, 441–452.
- Matussek, P. (1975). *Internment in Concentration Camps and its Consequences*. Springer-Verlag: New York.
- Mollica, R. & Caspi-Yavin, Y. (1991). Measuring torture and torture-related symptoms. *Psychological Assessment* **3**, 1–6.
- Nadler, A., Kav-Venaki, S. & Gleitman, B. (1985). Transgenerational effects of the Holocaust: externalization of aggression in second generation Holocaust survivors. *Journal of Clinical and Consulting Psychology* **53**, 365–369.
- Pilcz, M. (1979). Understanding the survivor family: an acknowledgment of the positive dimensions of the Holocaust legacy. In *Living After the Holocaust: Reflections by Children of Survivors in America* (ed. L. Y. Steinitz and D. M. Szonyi), pp. 157–167. Bloch Publishing Co.: New York.
- Podietz, L., Zwerling, I., Fisher, I., Belmont, H., Eisenstein, T., Shapiro, M. & Levick, M. (1984). Engagement in families of Holocaust survivors. *Journal of Marital and Family Therapy* **10**, 43–51.
- Rakoff, V., Sigal, J. J. & Epstein, N. B. (1966). Children and families of concentration camp survivors. *Canada's Mental Health* **14**, 24–26.
- Robinson, S. & Winnik, H. Z. (1981). Second generation of the Holocaust. Holocaust survivors communication of experience to their children, and its effect. *Israel Journal of Psychiatry and Related Sciences* **18**, 99–107.

- Russell, A. (1980). Late effects—influence on the children of the concentration camp survivors. In *Survivors, Victims and Perpetrators* (ed. J. E. Dimsdale), pp. 175–203. Hemisphere: Washington, DC.
- Schwartz, S., Dohrenwend, B. P. & Levav, I. (1994). Non-genetic familial transmission of psychiatric disorders? Evidence from the children of the Holocaust. *Journal of Health and Social Behaviour* **35**, 385–402.
- Shuval, J. (1957–1958). Some persistent effects of trauma: five years after the Nazi concentration camps. *Social Problems* **5**, 230–243.
- Sigal, J. J. (1971). Second-generation effects of massive trauma. In *Psychic Traumatization: Aftershocks in Individuals and Communities. International Psychiatry Clinics*, vol. 8 (ed. H. Krystal and G. H. Niederland), pp. 55–65. Little, Brown and Co.: Boston.
- Sigal, J. J. & Weinfeld, M. (1987). Mutual involvement and alienation in families of Holocaust survivors. *Psychiatry* **50**, 280–288.
- Sigal, J. J. & Weinfeld, M. (1989). *Trauma and Rebirth, Intergenerational Effects of the Holocaust*. Praeger: New York.
- Skodol, A. E., Schwartz, S., Dohrenwend, B. P., Levav, I., Shrout, P. E. & Reiff, M. (1996). PTSD symptoms and comorbid mental disorders in Israeli war veterans. *British Journal of Psychiatry* **169**, 717–725.
- Solkoff, N. (1981). Children of survivors of the Nazi Holocaust. A critical review of the literature. *American Journal of Orthopsychiatry* **51**, 29–42.
- Solkoff, N. (1992). Children of survivors of the Nazi Holocaust. A critical review of the literature. *American Journal of Orthopsychiatry* **62**, 342–358.
- Solomon, Z., Weisenberg, M., Schwerzwald, J. & Mikulincer, M. (1987). Posttraumatic stress disorders among frontline soldiers with combat stress reaction: the 1982 Israeli experience. *American Journal of Psychiatry* **144**, 448–454.
- Solomon, Z., Kotler, M. & Mikulincer, M. (1988). Combat-related post-traumatic stress disorder among second-generation Holocaust survivors: preliminary findings. *American Journal of Psychiatry* **145**, 865–868.
- Trossman, B. (1968). Adolescent children of concentration camp survivors. *Canadian Psychiatric Association Journal* **13**, 121–123.
- Von Knorring, A. L., Cloninger, R., Behemena, M. & Sigvardsson, S. (1983). An adoption study of depressive disorders and substance abuse. *Archives of General Psychiatry* **40**, 943–950.
- Weine, S., Becker, D. F., McGlashan, T. H., Vojvoda, D., Hartman, S. & Robbins, J. P. (1995). Adolescent survivors of 'ethnic cleansing' observations on the first year in America. *Journal of the Academy of Child and Adolescent Psychiatry* **34**, 1153–1159.
- Weiss, E., O'Connell, A. N. & Siites, R. (1986). Comparison of second-generation Holocaust survivors, immigrants and non-immigrants on measures of mental health. *Journal of Personality and Social Psychology* **4**, 828–831.
- World Health Organization (1992). *The ICD-10 Classification of Mental and Behavioural Disorders, Clinical Descriptions and Diagnostic Guidelines*. World Health Organization: Geneva.
- Yehuda, R., Schmeidler, J., Giller Jr., E. L., Siever, L. J. & Binder-Brynes, K. (1998a). Relationship between PTSD characteristics of Holocaust survivors and their adult offspring. *American Journal of Psychiatry* **155**, 841–843.
- Yehuda, R., Schmeidler, J., Elkin, A., Houshmand, E., Siever, L., Binder-Brynes, K., Wainberg, M., Aferiot, D., Lehman, A., Guo, L. S. & Yang, R. K. (1998b). Phenomenology and psychobiology of the intergenerational response to trauma. In *An Intergenerational Handbook: Multigenerational Legacies of Trauma* (ed. Y. Danieli), pp. 639–655. Plenum New York.
- Zlotogorski, Z. (1983). Offspring of concentration camp survivors: the relationship of perceptions of family cohesion and adaptability to levels of ego functioning. *Comprehensive Psychiatry* **24**, 345–354.