The long-term psychological effects associated with the Holocaust are still under debate (for a review, see Bar-On et al., 1998). For example, Krell (1993) showed that most Holocaust survivors have managed to raise families and successfully adapt to their social environments (cf. Leon, Butcher, Kleinman, Goldberg, & Almagor, 1981). At the same time, long-term effects of the Holocaust have been discovered, including chronic anxiety and depression (Niederland, 1968), personality disorders (Dor Shav, 1978), and unsatisfactory marital relationships, which have been called “despair marriages” (Danieli, 1981). Clinicians working with Holocaust survivors describe an even more disturbing picture (Bar-On et al., 1998). In systematic empirical research, however, the contrast between Holocaust survivors and those who did not experience the Holocaust seems to be less clear (Reick & Eitinger, 1983). Clinical case studies may have been based on selected populations of survivors who were in need of professional support. However, empirical studies may have applied instruments that were not sufficiently sensitive to detect more subtle psychological effects.

There is growing evidence from non-Holocaust-related research on traumatic stress suggesting that normal people may cope rather well even after extreme stress but that they may be more vulnerable to future adversity (Parkes, 1991; Raphael, 1986; Silver & Wortman, 1980; Solomon, 1998). For example, in a number of war-related studies in Israel (Solomon, Oppenheimer, Elizur, & Waysman, 1990), it was discovered that even people who have seemingly overcome traumatic experiences might become more vulnerable to crises in the future. Moreover, it has been found that under extreme circumstances, they might even show acute stress responses when exposed to stimuli that symbolize the original traumatic experience (Solomon, Garb, Bleich, & Grupper, 1987). Replications of similar findings can be seen with Vietnam veterans (Frye & Stockton, 1982; Goldstein, Van Kammen, Shelly, Miller, & Van Kammen, 1987), Korean veterans (Thienes-Hontos, Watson, & Kucala, 1982), and prisoners who were kept by the Japanese army during World War II (Goldstein et al., 1987). Similarly, elderly Holocaust survivors were found to have suffered considerable emotional distress during the Persian Gulf War (Solomon & Prager, 1992).
From the perspective of attachment theory (Bowlby, 1980), a number of studies have recently focused on the effects of loss on the individual’s state of mind (i.e., mental representations) with regard to attachment. In particular, parents’ experiences with loss have been related to their attachment relationships with their infants, which have been more frequently characterized by disorganization (Ainsworth & Eichberg, 1991; Main & Hesse, 1990). We propose that the results of such attachment studies are relevant to the study of the Holocaust (Bar-On et al., 1998), especially in the context of attachment experiences that are associated with unresolved loss (Main & Goldwyn, 1998). More specifically, unresolved mourning is described as a condition under which lapses in the monitoring of reasoning are observed when traumatic events from the past are discussed. Several studies have documented the effects of lack of resolution of trauma on parental behavior and on child–parent attachment relationships (for a review, see Van IJzendoorn, 1995).

The term trauma traditionally refers to experiences of intense fear, terror, or helplessness, which threaten the individual with psychological or behavioral disorganization (American Psychiatric Association, 1994). It appears natural to consider the experience of the Holocaust as very profound and traumatic for its survivors. The Holocaust implied the loss of significant others as well as traumatic experiences such as imprisonment, death imprint, the confrontation with a radical reversal of norms and values, disillusionment of returning, and other concomitants of the pre- and postwar period (Kleber, Figely, & Gersons, 1995; Lifton, 1980). It is not surprising that Holocaust survivors faced difficulties in mourning and in resolving their traumatic experiences. Moreover, Keilson (1992) suggested that many Holocaust survivors experienced additional traumas following the Holocaust, which he referred to as sequential traumatization. For example, immigrating to Israel immediately after the war meant the exposure to a new culture and language as well as to new hardships involved in the struggle of Israel for independence. Immigrants were expected to contribute actively to the new nation and to detach themselves from their past Holocaust experiences (Bar-On et al., 1998). Taken together, Holocaust survivors can be seen as individuals experiencing profound and continued trauma.

We propose that the Holocaust experiences might become visible mainly in the domain of inner anxieties and ruminations about the past, without necessarily affecting the domains of more basic strategies of attachment styles and representations, because many Holocaust survivors had developed basic and well-shaped trust in attachment figures before their life became so disastrous because of the Holocaust. Therefore, compared with non-Holocaust controls, we expected Holocaust survivors to show more lapses in the monitoring of posttraumatic events (e.g., feelings of personal responsibility for death) and to exhibit more unusual beliefs regarding causality (e.g., telepathy or precognition). At the same time, we expected the differences between Holocaust survivors and non-Holocaust controls to be independent of the participants’ attachment style and that Holocaust survivors would not exhibit a higher rate of attachment insecurity than non-Holocaust controls.

In two complementary studies, we explored the potential value of attachment theory in detecting subtle differences in thought processes indicative of unresolved mourning that may have gone unnoticed in earlier investigations. In both studies we made comparisons between Holocaust survivors and participants without Holocaust background, focusing on their state of mind with respect to attachment experiences in general as well as their state of mind regarding unresolved loss in particular. Because of the severity of the traumatic experiences of the Holocaust survivors, the current studies also provided a unique opportunity to further validate the Berkeley–Leiden Adult Attachment Questionnaire for Unresolved Loss or Trauma (BLAAQ–U; Main, van IJzendoorn, & Hesse, 1993), a new paper-and-pencil measure for screening unresolved loss or trauma.

Study 1

Method

Participants

Thirty-nine Israeli Holocaust survivors (mean age = 63.5 years) and 42 Israeli individuals who did not experience the Holocaust (mean age = 59.9 years) participated in this pilot study. Half of the participants were male and half were female. Holocaust survivors had spent the war either in concentration/labor camps or in various hideaway shelters (e.g., churches, convents, and private families) and immigrated to Israel immediately after 1945 when World War II ended. Participants in the control group either were Israeli born or were European born who had managed to immigrate to Israel before the war started (before 1939). Respondents came from heterogeneous geographic and socioeconomic backgrounds in Israel. Ten research fellows and graduate students associated with the University of Haifa Center for the Study of Child Development each recruited about 8 participants (half of whom were Holocaust survivors) from their respective neighborhoods. In Israel, about half a million Holocaust survivors reside throughout the country. These

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individuals were children or adolescents during the Holocaust. All participants had experienced one or more losses of important attachment figures.

Procedure

The research fellows who recruited the respondents interviewed them in their homes. They were not related to them personally. The participants read and responded to the measures in the presence of the interviewers. The respondents completed the Relationship Questionnaire on Attachment Styles (Bartholomew & Horowitz, 1991) and the BLAAQ–U, and they provided information on their biographical background.

Measures

The Relationship Questionnaire on Attachment Styles. This measure was designed to assess a person’s attachment style in relating to him- or herself and to significant others. Because a person’s representation of the self could be characterized by one of two orientations, positive or negative, and a person’s representation of the other could also be characterized by a positive or negative orientation, the resulting classificatory system constitutes a matrix of four major self and other attachment styles (Bartholomew & Horowitz, 1991). Of the four descriptions of these basic attachment styles, participants must choose the one they consider most characteristic of themselves. The four prototypes are based on Bowlby’s notion that an attachment representation involves ideas regarding both the self and others (Griffin & Bartholomew, 1994). Along these lines, the secure individual is expected to select the attachment style description that contains a positive view of both the self and significant others; the secure style implies feelings of being comfortable with closeness in relationships without being worried about rejection or loneliness. The person with a preoccupied attachment style is described as being concerned about others not valuing her or him as much as she or he values the others; at the same time, the preoccupied person strives for strong intimacy (negative self, positive others). The person with a dismissing attachment style is described as valuing a strong and independent self (positive self) while dismissing the need for intimacy with others (negative others). The person described as fearful is characterized as fearful of intimacy and as socially avoidant, distrustful, and afraid of being hurt by others, resulting in a negative appraisal of both the self and significant others (Bartholomew & Horowitz, 1991). Psychometric information on the Relationship Questionnaire on Attachment Styles can be found in Scharfe and Bartholomew (1995). Moreover, the measure has been found to be reliable and valid in Israel (Mayseless, Sharabany, & Sagi, 1997).

The BLAAQ–U. The BLAAQ–U (Main et al., 1993) consists of 58 Likert-type items rated on a 7-point scale ranging from strongly disagree (−3) to strongly agree (3). The items are divided into two scales: the Unresolved State of Mind (USM) scale and the Unusual Beliefs (UB) scale (Main et al., 1993). The USM scale consists of 41 items covering the following domains: responsibility for death and other tragedy, (“If not for me someone probably would not have died”), possession (“Sometimes I feel as though I am possessed by a person in my family who died and that this person is taking over my body, my voice, or my actions”), confused/disoriented (“I kind of lose control of the ability to form my thoughts when I think of bad things that have happened”), shame (“Some of the things that have happened to me have been so bad that I feel unable to tell anyone about them”), memories lost (“There is a long period of my life, for which I have lost all memory due to trauma”), uncontrolable memories (“There are some terrible memories which I wish to forget but cannot prevent from entering my waking or sleeping state”), and frightened reactions (“I never know what will remind me of the things that frightened me in the past. Sometimes some things even remotely connected will make me feel frightened again”). Two items were not applicable to the current sample, and they were deleted from the item pool (Items 47 and 55; Main et al., 1993).

The UB scale consists of 17 items representing the following areas: astrology (“When I meet someone who might be a potential good friend or partner, I worry whether their astrological sign is right for me”), spiritualism (“I don’t doubt for a minute that some people have made direct contact with the dead”), precognition (“I have had accurate premonitions about deaths which could not have been foretold by normal means”), mind reading (“I am able to ‘read’ other people’s minds even when they are far away from me”).

In three student samples at Berkeley, California, and Leiden, the Netherlands (Main et al., 1993), the BLAAQ–U was found to be internally consistent (alphas ranging from .79 to .89), to be test–retest reliable (correlations ranging from .74 to .92), and to converge with the outcome of the Adult Attachment Interview (AAI; George, Kaplan, & Main, 1996), an empirically well-established interview for assessing adult state of mind with regard to attachment (Van IJzendoorn, 1995). Because the BLAAQ–U has been validated not only in the United States but also in the Netherlands and because Israel also represents a Western democratic society with a somewhat similar value system, we had good reason to rely on similar underlying assumptions associated with this measure. The BLAAQ–U is meant to serve as a screening device that cannot replace the original interview assessment (Main et al., 1993). In the current study, the alpha reliability was .92 for the USM scale and .90 for the UB scale. Because of skewness of the distribution of the scores, all items were inverted (1/raw score) before the items were summed; the total scores for the UB and USM scales were reflected so that higher scores represented higher levels of unusual beliefs and disoriented state of mind. This reflection was based on the computation of the theoretically maximum and minimum scores of each scale. That is, for the UB scale, we added the theoretical minimum score of 1/7 * 17 = 2.43 to the maximum score of 1/1 * 17 = 17, and we subtracted the inverted score from 19.43. For the USM scale, the minimum score of 1/7 * 39 = 5.57 was added to the maximum score of 1/1 * 39 = 39, and the inverted score was subtracted from the resulting sum (39 + 5.57 = 44.57).
**Biographical information.** Participants provided information about age, education, gender, residence, number of significant losses, earliest loss of an attachment figure, and Holocaust experiences.

**Results and Discussion**

**Preliminary Analyses**

Preliminary analyses did not show any association between gender and the two BLAAQ–U scales. Therefore, males and females were combined into one sample for further statistical analyses. Holocaust survivors and controls differed significantly, t(79) = -2.80, p = < .006, in number of years of education, with the Holocaust group having on average 13.0 years of education (SD = 2.5) and the control group having on average 14.8 years of education (SD = 3.3). It should be noted that the average participant reached an education level beyond high school. Because the survivors were experiencing the Holocaust during childhood or adolescence, their schooling was necessarily interrupted. Because education level was also significantly associated with one of the BLAAQ–U scales (for UB, r = -.19, p = .09; for USM, r = -.22, p = .05), in further analyses we controlled for differences in education level when comparing the two groups for USM.

Moreover, regardless of group membership all participants had experienced major losses, including the loss of parental attachment figures. This is not surprising, considering the age of the participants and the likelihood of experiencing loss at their stage of life. At the same time, the Holocaust group experienced significantly more losses (M = 3.6) than did the control participants (M = 2.1). t(79) = 5.0, p = .001. Furthermore, the Holocaust survivors more often experienced their earliest losses before the age of 15 (n = 21; 54%) as compared with the control group (n = 7; 17%). This difference was significant, χ²(1, N = 81) = 12.76, p < .001. However, the two BLAAQ–U scales were not found to be significantly associated with whether losses occurred before age 15 (for UB, M = 7.1, SD = 2.9, and M = 6.4, SD = 3.2, respectively, for Holocaust survivors and controls; for USM, M = 20.2, SD = 5.7, and M = 18.2, SD = 5.6, respectively, for Holocaust survivors and controls). Following these analyses, it was not necessary to control for time of losses.

On the Relationship Questionnaire on Attachment Styles, the Holocaust group (M = 4.8, SD = 2.0) differed significantly from the control group (M = 4.0, SD = 1.9) only on the self-reported dismissing attachment style, t(79) = 1.88, p < .04, suggesting that the Holocaust group expressed more comfort with having no close emotional ties and that they also emphasized the importance of independence and self-sufficiency. The associations of dismissing attachment style with UB and USM were not significant (r = .14 and r = .09, respectively). This was the reason attachment style was not included as a covariate in further analyses.

**Main Analyses**

Because of possible multicollinearity effects, we decided to examine the main hypotheses by using a separate analysis for each of the two outcome variables, namely, unresolved state of mind and unusual beliefs, which were strongly correlated with each other (r = .68, p < .001). Given the differences between the Holocaust and control groups on education level and the association between education level and USM, we performed an analysis of covariance on the BLAAQ–U with education as a covariate and group (Holocaust vs. control) as a main factor. The effect of education as a covariate was not significant, F(1, 78) = 1.25, p = .27. The main effect for the Holocaust factor was found to be significant, F(1, 78) = 8.17, p < .005. For the USM scale, Holocaust survivors (M = 21.0, SD = 6.0) more often than control participants (M = 17.0, SD = 5.7) expressed confusion and dis-orientation about loss and other trauma, implying uncontrollable memories, frightened reactions, and feelings of being possessed. For the analysis of the UB scale, we did not have to include control variables in the model. Thus, a t test revealed that Holocaust survivors differed significantly from the control group on the UB scale, t(79) = 1.82, p < .04. Holocaust survivors favored unusual beliefs somewhat more (M = 7.3, SD = 3.1) than did the control participants (M = 6.1, SD = 3.0), for example, the belief in their ability to read other people’s minds.

Despite the fact that this was only a pilot study with a semiconvenience sample of Holocaust survivors and controls, we found evidence for the impact of traumatic Holocaust experiences even after more than half a century. Study 1 set the ground for Study 2, in which we more carefully and systematically recruited and matched the Holocaust child survivors and their controls. Furthermore, in the second sample the traumatic Holocaust experiences were more profound in that they consisted of at least the loss of both parents during childhood; therefore, for Study 2 we use the term Holocaust child survivors (rather than Holocaust survivors, as in Study 1). Last, in Study 2 we
used a more robust measure for assessing adult attachment representations and disorganized reasoning about loss or other trauma (i.e., the AAI; George et al., 1996).

**Study 2**

**Method**

**Participants**

To avoid recruitment of participants through convenience samples, as in our pilot study (as well as in many previous Holocaust studies in which samples have been obtained through mental health clinics, various Holocaust organizations, and advertisements), in Study 2 we used more systematic and time-consuming methods, with the goal of obtaining an unbiased sample, consistent with the standards set in our research agenda. Upon testing various options, we came to the conclusion that methodologically, the most appropriate mechanism was to use demographic information provided by the Ministry of Interior. Regulations associated with the Israeli law concerning invasion of privacy allowed us only to receive lists of names with date of birth and year of immigration from Europe to Israel, some before the outbreak of the war (1939) and some after the war had ended (1945). Our working assumption was that any Jew residing in Europe during the war had experienced the Holocaust in one way or another and with various degrees of severity and therefore might be a potential participant in the study according to our inclusion criteria (described below). Also, we assumed that Jews who resided in Europe but left their country of origin with their intact family before the beginning of the war had not experienced the Holocaust directly. Such a comparison group is of methodological importance because the participants had a similar cultural background. Because the information at hand was very limited, we had to design a complicated telephone survey to gain the necessary information for the final sampling through initial telephone screening interviews. This sampling phase was critical to the project. We developed a standard protocol for the telephone interview, the flow of which enabled us to curtail it whenever necessary and whenever the additional information suggested that the interviewee did not meet all sampling criteria. At the same time, the protocol enabled us to complete the interview with those who appeared to meet the entire set of recruitment criteria. The protocol is available on request from Abraham Sagi.

Thus, as part of a larger research project, we conducted approximately 30,000 telephone calls that yielded two main nonclinical groups: Israeli women with and without Holocaust experience who had lived in Israel during the past 50 years or so. Fortunately, there was a high level of agreement to cooperate; we experienced very few refusals. Because the vast majority of the interviewees did not meet the entire set of our stringent recruitment criteria, we had to make approximately 300 telephone interviews to find one eligible participant; thus, 30,000 telephone calls led to a total of 98 participants in the final sample. This procedure guaranteed a well-selected sample of participants in the Holocaust child survivors group \( n = 48 \) and in the control group \( n = 50 \), who had immigrated to Israel from Europe either after or before World War II, respectively.

The comparable European childhood background and similar macro life events and stresses in Israel (e.g., wars and terrorist attacks) in both groups were crucial for our design. The unfortunate and tragic experiences of the Holocaust child survivors group, who at a minimum lost both parents during their Holocaust childhood years, supplemented this quasi-experimental design. In Holocaust research, this type of controlled design has never been used before. It should be noted that the Holocaust experiences of the child survivors varied from being imprisoned in concentration camps, hiding in places such as convents, being “adopted” by gentile families, or using a combination of escape and survival strategies. From the perspective of attachment theory, perhaps the most distinctive feature of all of these participants was the loss of both parents during childhood or adolescence, which is conceived as a critical developmental experience. In addition, for biological reasons, this time period represents one of the last opportunities to carry out a controlled study more than half a century after the Holocaust.

The mean age of the Holocaust child survivors was 65.5 years \( (SD = 2.6) \); the mean age of the control group was 64.7 years \( (SD = 2.6) \). It should be also noted that despite the importance of the father’s role in child development (e.g., Lamb, 1997), research on attachment has often focused on females, who usually are considered to be responsible for child rearing (for a review, see Van IJzendoorn, 1995). Thus, because Study 2 was rather complex, it consisted of only female participants for both methodological and logistic reasons.

**Procedure**

The respondents were interviewed at the University of Haifa by well-trained interviewers who had not engaged in the recruitment process. As in the pilot study, the participants read and responded to the measures in the presence of the interviewers. Here, too, despite their age, the participants did not seem to experience difficulty comprehending and responding to the measures. The respondents completed the AAI and the BLAAQ–U, and they provided information on their biographical background.

**Measures**

**BLAAQ–U.** For a full description of this measure, see Study 1. In Study 2, the alpha reliabilities of the UB and USM scales were .86 and .90 respectively.

**AAI.** This semistructured interview seeks both descriptions and evaluations of important attachment-related experiences and their effects on the participant’s development (George et al., 1996). In essence, the questions present the
participant with the task of simultaneously (a) producing and reflecting on memories related to attachment (sample question: “I’d like you to choose five adjectives that reflect your childhood relationship with your mother. This might take some time, and then I’m going to ask you why you chose them.”) and (b) maintaining coherent discourse with the interviewer (“You said that your mother was . . . in her relationship with you; please give me an example about your mother being . . .”). Assessment of the verbatim transcripts of this interview permits categorization of participants into one of four main states of mind with respect to attachment (Main & Goldwyn, 1998). Three of these, regarded as reflecting relatively consistent patterns of mental organization, are termed secure–autonomous (F), insecure–dismissing (Ds), and insecure–preoccupied (E). Transcripts unclassifiable within the above categories because of failures in the maintenance of a consistent pattern are assigned to a fourth (rare) category, currently termed insecure–cannot classify (Hesse, 1996, 1999).

Insecure–dismissing participants often present a very positive global evaluation of their attachment experiences, without being able to illustrate it with concrete events. They often tell the interviewer that they are unable to remember much of their childhood experiences. When they acknowledge negative aspects of their childhood, they insist that they have remained unaffected or even that they have profited from those experiences. Insecure–dismissing participants seem to minimize or deactivate their attachment concerns. Secure–autonomous participants are able to describe attachment-related experiences coherently, whether these experiences were negative or positive. They present a coherent and balanced picture without idealizations and other contradictions. Insecure–preoccupied adults are still overwhelmed by their past attachment experiences; they feel mistreated by their parents and are not able to tell a coherent story. They express involved anger when they discuss their past and present relationship with their parents. They are said to maximize or hypertacitize their attachment concerns (Main, 1990).

Two questions within the AAI protocol focus specifically on the speaker’s recollections of past and present responses to potentially traumatic experiences, including (a) loss of loved persons through death and (b) threatening or frightening events such as physical or sexual abuse. Participants who show substantial lapses in the monitoring of reasoning or discourse during such discussions are assigned to a fifth category, insecure–unresolved/disorganized (hereafter, unresolved). Lapses in the monitoring of reasoning include, for example, indications of disbelief that a person is dead and ideas of being causal in a death where no material cause is present. Lapses in the monitoring of discourse are made manifest in, for example, prolonged inappropriate silences, odd associations, failure to finish sentences, eulogistic speech, and extreme attention to detail. Participants completed two 9-point scales concerning loss and trauma, respectively: Lack of Resolution of Mourning and Lack of Resolution of Trauma. Scores above 5 on one or both of these scales led to placement in the unresolved category. Because of the unique nature of the present study, in which all participants from the Holocaust child survivors group experienced both loss and other sources of potential trauma, we combined the two unresolved scales into one aggregated scale called Lack of Resolution of Mourning/Lack of Resolution of Trauma (LRM/LRT), representing the highest score on either one of the unresolved scales. In our statistical analyses we used the combined continuous scale rather than the categorical unresolved classification. All AAI coders were trained by Mary Main and Erik Hesse and, upon successful completion of the interrater reliability test, were certified by them to code the AAI. All were experienced coders already engaged in other prior projects. Inter-rater reliability for the AAI using a four-way classification system (cannot classify or unresolved in one group, F, Ds, E) reached an agreement of 86% (kappa = .76); reliability of the scales for unresolved loss and trauma was .89. It should be noted that in previous studies in Holland, Israel, and the United States, the psychometric characteristics of the AAI have proven to be excellent (Bakermans-Kranenburg & Van IJzendoorn, 1993; Crowell et al., 1996; Sagi, Van IJzendoorn, Scharf, Koren-Karie, Joels, & Mayseless, 1994; Van IJzendoorn, 1995). The distribution of the main classifications for the AAI (secure–autonomous, insecure–dismissing, insecure–preoccupied, and insecure–cannot classify) for the Holocaust and the control groups, respectively, was as follows: secure–autonomous, 16 (33%) versus 23 (46%); insecure–dismissing, 21 (44%) versus 23 (46%); insecure–preoccupied, 4 (8%) versus 2 (4%); and insecure–cannot classify, 7 (15%) versus 2 (4%). Because 4 cells (50%) had an expected count of less than 5, we combined all main insecure classifications into one insecure group for purpose of later comparison with the secure group.

Biographical information. Participants provided information about age, education, gender, residence, number of significant losses, earliest loss of an attachment figure, and Holocaust experiences.

Results and Discussion

The mean education level of the Holocaust child survivors was 9.4 years (SD = 2.7); the mean education level of the control group was much higher, 13.8 years (SD = 3.0). The difference between the two groups was significant, t(96) = 7.7, p < .001. As in the pilot study, the Holocaust experience naturally appears to have hampered the educational career of the child survivors in this sample. The education level of the control group was concordant with the general norm for this generation in Israel. Education level was not significantly associated with any of the BLAAQ–U scales (for UB, r = -.13, ns; for USM, r = -.15, ns), so in further analyses there was no need to control for differences in education level when comparing the two groups for the BLAAQ–U. All participants had experienced major losses, including the loss of parental attachment figures. By design,
the Holocaust child survivors group experienced more significant losses during their earlier phases of life, but significant differences remained even during their elder years ($M = 4.9$, $SD = 1.7$; for the Holocaust child survivors group; $M = 4.1$, $SD = 1.3$, for the control group), $t(96) = 2.8$, $p < .003$. At the same time, number of losses was not found to be associated with either of the two BLAAQ–U scales. Furthermore, the Holocaust child survivors experienced their earliest losses before the age of 15 ($n = 43$; 90%) more often than did the controls ($n = 14$; 28%). This difference was significant, $\chi^2(1, N = 98) = 41.90$, $p < .001$. However, the two BLAAQ–U scales were not found to be significantly associated with whether losses occurred before age 15 (for UB, $M = 6.2$, $SD = 2.9$, and $M = 5.9$, $SD = 2.8$, respectively, for Holocaust child survivors and controls; for USM, $M = 20.2$, $SD = 6.2$, and $M = 18.9$, $SD = 5.9$, respectively, for Holocaust child survivors and controls).

As for attachment data, the Holocaust child survivors group did not differ from the controls, $\chi^2(1, N = 98) = 1.65$, $p = .20$. Also, no significant differences were found between the main AAI classifications when either the UB scale or the USM scale of the BLAAQ–U was used as an outcome variable. Consistent with the data analysis strategy applied in the pilot study regarding the Holocaust child survivors’ inclination to more often report a dismissing attachment style, we adopted a similar strategy and subsequently examined whether those participants who were classified as dismissing differed on the BLAAQ–U scales from those classified otherwise. No differences were found between the groups. Following this set of analyses, it was not necessary to control for time of losses and for attachment main classifications in further analyses.

In Study 2 we also had to avoid possible multicollinearity effects because the USM and UB scales were again strongly correlated with each other ($r = .61$, $p < .001$). Therefore, we decided to examine the main hypotheses by using a separate analysis for each of the UB and USM scales. To examine whether the Holocaust child survivors group differed from the control group on these scales, we carried out two separate $t$ tests.

Holocaust child survivors differed significantly from the control group on the USM scale, $t(96) = 2.47$, $p < .01$, but not on the UB scale, $t(96) = 0.95$, ns. On the USM scale, Holocaust child survivors expressed confusion and disorientation about loss and other trauma, implying uncontrollable memories, frightened reactions, and feelings of being possessed ($M = 20.9$, $SD = 6.54$), more often than the control group ($M = 18.0$, $SD = 5.3$). They also favored unusual beliefs somewhat more ($M = 6.4$, $SD = 2.9$) than did the controls ($M = 5.8$, $SD = 2.8$), but this difference was not statistically significant. The UB and the USM scales were also found to be significantly and highly correlated with the combined LRM/LRT scale that was derived from the AAI ($r = .63$, $p = .001$, and $r = .71$, $p = .001$, respectively). Because the LRM/LRT scores are generated by independent professional coders and because the AAI has been proven to be a robust measure for assessing states of mind with regard to loss and traumatic experiences, these correlations provide strong external validation for the self-report BLAAQ–U measure.

These results provide even stronger support for our hypotheses than the pilot study. Recall that the current study was well controlled by carefully recruiting Holocaust child survivors and their matched controls. The Holocaust child survivors in this study were not drawn from clinically diagnosed populations or from organizations affiliated with post-Holocaust-related activities. Therefore, this is not a biased group or a convenience sample, as has often been the case with previous Holocaust investigations. In fact, the findings may represent the larger Holocaust child survivors group, in particular those who lost both parents during childhood and, as such, perhaps were exposed to the worst Holocaust experiences (Bar-On et al., 1998).

**General Discussion**

Even after more than 50 years, Holocaust child survivors still show signs of unresolved mourning. Whereas this finding generalized to both men and women in Study 1, it was restricted to women in Study 2. This finding is rather telling given the non-clinical nature of our sample. In clinical case studies, long-term psychiatric sequelae of the Holocaust experiences are observed frequently. In fact, from the perspective of attachment theory, we were able to detect more subtle but similar traces of disorientation in otherwise normally adapted participants who were strongly traumatized as a result of the Holocaust. Unresolved state of mind with regard to loss or other trauma may not necessarily interfere with successful adaptation and coping under normal circumstances, but it may become a risk factor when one is faced with accumulation of strains and stresses or with acute crises (Solomon et al., 1990).

The equivalence of the Holocaust and the control groups is essential for the validity of our conclusions.
Therefore, in the pilot study, we recruited participants from comparable communities in various parts of Israel. They had all experienced the hardships and threats that have characterized Israel ever since its foundation. All had experienced loss of close attachment figures. In Study 2 we recruited participants using information that was made available to us by the Israel State Registrar Office, hence making it possible to recruit a nonconvenience sample and to carefully match Holocaust child survivors who immigrated to Israel from Europe after the end of the war (1945) with individuals who came from the same cultural background (Europe) before the war (1939) along with their intact families and without experiencing the Holocaust.

At the same time, in both studies, the groups differed on the age at which they experienced earliest losses. Obviously, Holocaust survivors are more likely to have suffered important losses at an earlier stage in their life. Nevertheless, the Holocaust survivors showed more signs of unresolved loss regardless of the timing of the earliest loss experience. Neither number of losses nor timing of losses was a critical factor in the development of unresolved mourning. We suggest that the extreme context and nature of the traumatic loss experiences during the Holocaust may trigger disoriented thought processes that are resistant to change for more than five decades.

For many survivors, discrepancies exist between the time of the losses and the time the survivors were informed of them. Also, in this context, for many survivors the exact date and location of the death and burial of loved ones remained unknown (Dasberg, 1987). Often, the separation occurred after the children had witnessed their parents no longer being capable of providing financial security, physical protection, or even psychological support (Kestenberg, 1980; Wardi, 1990). Being left by a close attachment figure aroused feelings of anger in particular when the cause of the separation was unknown. Even after they were informed of the definite loss of their parents, many survivors seemed to remain angry toward their parents because they felt they were left alone. Moreover, many child survivors had experienced a series of simultaneous traumatic events besides the loss of their parents, including separation from their homes and from their social network, and they often witnessed incomprehensible cruelties. This accumulation of traumatic stresses prevented a balanced reflection on and mourning of the losses (Klein, 1973).

In Study 1 we found that Holocaust survivors preferred the dismissing attachment style, not only vis-à-vis the control group but also when compared with their preference of other attachment styles. More specifically, the Holocaust group felt less comfortable without close relationships; they emphasized the importance of being self-reliant and of not being dependent on others. As a group, they even preferred the dismissing style over the secure attachment style. This finding is of unique importance because in most studies on attachment styles (Hazan & Shaver, 1987; Scharf & Bartholomew, 1995) the respondents predominantly select the secure alternative. We suggest that the accumulated traumatic experiences coupled with disrupted attachment relationships might have stimulated the Holocaust survivors to adopt the dismissing attachment style as a defensive strategy, to protect themselves from entering into potentially disappointing relationships in the future. However, this finding is not consistent with the outcome of Study 2, in which we used the AAI. In Study 2, the Holocaust survivors were not classified as dismissing more often than the controls. In accordance with our hypothesis, the distributions of the main attachment classifications did not differ between the two groups.

Regardless of attachment styles (Study 1) or attachment representations (Study 2), we found elevated signs of disoriented thought processes in the Holocaust survivors. As all participants had experienced the loss of at least one important attachment figure in Study 1 and at least both parents during their childhood in Study 2, these outcomes confirm once again the Ainsworth and Eichberg (1991) finding that loss per se is an insufficient condition for the occurrence of unresolved mourning. The traumatic concomitants of the losses experienced during the Holocaust lay the ground for unresolved state of mind. Holocaust survivors more often are confused and disoriented about loss and other trauma, they report lack of control of bad memories and of frightened reactions, and they are even more inclined to endorse statements about feelings of being possessed. Finally, they seem somewhat more likely to have unusual beliefs unrelated to traumatic experiences, in particular the belief in the possibility of mind reading. Although the differences in unusual beliefs between the Holocaust and control groups were significant in Study 1 but failed to reach statistical significance in Study 2, we propose that this issue deserves further careful examination. Bowlby (1980) and Main and Morgan (1996) conjectured that lapses in the monitoring of reasoning and discourse on loss suggest the presence of dissociated indicators of unresolved mourning. The BLAAQ–U was designed precisely to capture some of these lapses indirectly (Main et al., 1993).
The BLAAQ–U did uncover significant differences in indicators of unresolved mourning, but the instrument might not be sufficiently sensitive to detect signs of unusual beliefs as even more subtle indicators of unresolved mourning.

The findings of Study 1 were based on self-report assessments of complicated phenomena, in particular, attachment and unresolved mourning. For both constructs, alternative measures are available in which the final evaluation of the participant’s state of mind is based on external trained judges. In Study 2, a more comprehensive and in-depth replication, the AAI (Main & Goldwyn, 1998), was included as one of the major assessments of (unresolved) state of mind. In this study, too, we were able to show the discriminant and convergent validity of the BLAAQ–U. This self-report measure for unresolved loss or trauma was not related to the main attachment classifications (dismissing, secure, or preoccupied representations), which indicates its discriminant validity. The BLAAQ–U, however, appeared to be associated with the LRM/LRT scale as assessed by independent coders in the context of the AAI. This finding supports its convergent validity.

In sum, in two studies we showed from an attachment perspective that Holocaust survivors more often show disorganized reasoning about their losses and other potentially traumatic experiences when contrasted with a carefully matched control group. Disorganized reasoning is indicative of a lack of resolution of mourning. Unresolved loss or other trauma may not necessarily hamper successful adaptation and coping under normal life circumstances, but it may become a risk factor in the face of an accumulation of strains and stresses or acute crises. Even after 50 years, traumatic traces of the Holocaust experience exist in the generation of survivors.

References


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