

A Question of Who, Not If: Psychological Disorders in Holocaust Survivors' Children

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Objective: Because findings on the mental health status of Holocaust survivors' offspring have been inconsistent, we aimed to identify factors that place some offspring at greater risk for developing mood or anxiety disorders. **Method:** Using a web-based survey and structured clinical interviews with adult children of survivors, we attempted to predict disorders from offspring's circumstances, perceptions of parents' posttrauma adaptational styles, and self-reported reparative adaptational impacts. Posttrauma adaptational styles encompass intrafamilial and interpersonal psychological, social and behavioral coping, mastery, and defense mechanisms used by each parent. Reparative adaptational impacts reflect the offspring's self-reported insecurity about their own competence, reparative protectiveness, need for control, obsession with the Holocaust, defensive psychosocial constriction, and immature dependency. **Results:** Of the disorders studied, generalized anxiety disorder was most frequent, followed by major depressive episode and posttraumatic stress disorder (PTSD). Only 2 variables independently predicted these disorders: participants' age and reparative adaptational impacts. Parents' styles were correlated with the presence of disorder, but had no effect when the child's reparative impacts were controlled. The age effect was consistent with epidemiologic research showing lower prevalence of psychological disorder in older cohorts. The severity of participants' reparative impacts was unequivocally the most important ($OR = 5.3$) or at least the most proximal precursor to the development of psychological disorders. When reparative impacts were low, frequency of disorder was low (8%); when reparative impacts were high, frequency of disorder was high (46%). **Conclusion:** Reparative adaptational impacts could guide clinicians in treating children of survivors.

Keywords: intergenerational, generalized anxiety, depression, PTSD

The impacts of the Holocaust on succeeding generations have been widely investigated since the 1960s. Some studies have suggested pathological effects; others, no effects. Examples include Solomon's (1998) and Felsen's (1998) reviews of Israeli and

North American studies, respectively; Shmotkin and Barilan's (2002) and Barel, van IJzendoorn, Sagi-Schwartz, & Bakermans-Kranenburg's (2010) reviews of clinical and nonclinical studies, respectively; van IJzendoorn, Bakermans-Kranenburg, and Sagi-Schwartz's (2003) meta-analysis; and Kellerman (2001). Within this literature, only a few studies have employed structured clinical interviews to characterize the psychiatric status of offspring. Schwartz, Dohrenwend, and Levav (1994) used a revised version of the Schedule for Affective Disorders and Schizophrenia (Endicott & Spitzer, 1978) in an Israeli population study. They did not find elevated rates of current psychiatric disorders among Holocaust survivors' offspring, but they did find higher rates of past disorders. In another Israeli population study, Levav, Levinson, Radomislensky, Shemesh, and Kohn (2007) used the World Mental Health Survey Composite International Diagnostic Interview (Robins et al., 1988), a structured diagnostic instrument that assesses several mental disorders. Offspring of Holocaust survivors were compared with offspring of Europe-born parents who did not reside in Nazi-occupied countries. No statistical differences were found. In a representative sample of 172 Holocaust survivors' offspring, Letzter-Pouw, Shrira, Ben-Ezra, and Palgi (2014) found that the emotional burden perceived to be transmitted from both parents was related to more Holocaust-related posttraumatic symp-

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toms, as assessed using the Clinician Administered PTSD Scale (CAPS; Blake et al., 1990). Both maternal and paternal burden were related to symptoms regardless of the other parent being a Holocaust survivor.

Yehuda and her colleagues have also sought to predict psychiatric diagnoses among Holocaust survivors' offspring. Three reports used the CAPS and the Structured Clinical Interview for *DSM-III-R* (SCID; Spitzer, Williams, Gibbon, & First, 1990). In a sample of 22 Holocaust survivors and 22 of their children, Yehuda, Schmeidler, Giller, Siever, and Binder-Brynes (1998) reported that having a parent with PTSD increased the risk of developing PTSD in response to one's own trauma. Parental PTSD predicted offspring PTSD, but not other SCID-defined psychiatric diagnoses. Reanalyzing data from 29 offspring and 15 controls, Yehuda, Halligan, and Bierer (2001) reported that parental PTSD predicted offspring PTSD. Also, parental Holocaust exposure predicted offspring depressive diagnoses. Still later, in a community sample of 211 offspring and 73 controls, Yehuda, Bell, Bierer, and Schmeidler (2008) reported that maternal (not paternal) PTSD predicted offspring PTSD. PTSD in either parent predicted offspring depression, and parental traumatization predicted offspring anxiety disorders.

The purpose of our study was to build on and extend this literature on the mental health of Holocaust survivor offspring by using a combination of contextualized, investigator-derived measures and structured diagnostic instruments, specifically the SCID, which was administered to 191 children of survivors (a volunteer subset of a larger survey sample). To us, the important question was not *if* children of survivors have mental health problems—surely some do and some do not—but rather *who* among them have mental health problems. Thus we aimed to identify the combination of circumstances that place some children of survivors at greater risk for developing mood or anxiety disorders. More specifically, in this paper, we examine (a) the relative frequencies of past-year diagnoses of major depressive episode (MDE), PTSD, generalized anxiety disorder (GAD), and any of the three; and (b) the extent to which these diagnoses are associated with the child's characteristics/background, parents' posttrauma adaptational styles, and child's reparative adaptational impacts.

We anticipated that the most potent risk factor for psychological disorder would be the extent to which children of survivors perceived themselves to be adversely affected by the Holocaust. We refer to the wide range of psychological and social impacts of the Holocaust on offspring as reparative adaptational impacts to indicate the core, perhaps unconscious, motivation of the second generation to undo and repair the past and heal their parents and themselves (Danieli et al., 2015b). Factor analyses of data collected from a web survey of offspring revealed these impacts to be varied and multifaceted, including the potential for offspring to be insecure about their own competence, to feel the need to protect their parents, to feel alienated from their peers, to be obsessed with the Holocaust, to feel the need to always be in control, and to be immaturely dependent. On average, our survey sample reported moderate levels of reparative adaptational impacts, but scores covered almost the entire potential range (1–5). We expected that the frequency of mood and anxiety disorders would be highest among offspring at the higher end of this range.

We also anticipated that adult children of survivors' perceptions of their parents' posttrauma adaptational styles would be related to current psychopathology. Posttrauma adaptational styles encompass those intrafamilial and interpersonal psychological, social and behavioral coping, mastery, and defense mechanisms the victim/survivor adopted as survival strategies during and after the Holocaust. These adaptational styles shape the survivors' family life and, in turn, their children's upbringing, emotional development, identity, and beliefs. In earlier research (Danieli et al., 2015a), we identified clear distinctions among parents' victim style (characterized as being stuck in the trauma rupture, emotional volatility, and overprotectiveness), numb style (emotional detachment, conspiracy of silence within the family, and intolerance of weakness), and fighter style (valuing and maintaining Jewish identity and valuing mastery and justice). The intensities of mother's and father's victim styles were by far the strongest predictors of the child's reparative adaptational impacts (Danieli, Norris, & Engdahl, 2016). Only when the mother and/or father responded to their own traumas with an intense victim style was the child of survivors at risk for severe reparative impacts. However, with regard to predicting psychological disorder, it was not known whether parents' styles would exhibit independent effects or be subsumed by the more proximal effects of participants' reparative adaptational impacts.

Method

Web Survey Participants and Procedures

This was a cross-sectional study involving a web-based survey and a clinical interview with adult children of survivors. Inclusion criteria were that at least one parent had lived in one of the countries occupied by or under the control of the Nazi regime for any period during 1933–1945. The survivor population also includes people who had to leave their habitation because of the Nazi regime (Bogyeski, 2013). Grandchildren were also invited to participate in the web survey, but not in the clinical interview; their data are not included here.

The first author invited Holocaust survivors' children and grandchildren to participate in a study on family adaptation to trauma. Information about the survey was disseminated via the web to/by general Jewish and survivors' and survivors' offspring organizations; these organizations had no knowledge about who participated. They may also have learned about the survey by word of mouth or discovered the website on their own.

The welcome page of the website was visited by 7,222 individuals, including the merely curious as well as those intending to participate. Of those, 2,809 viewed and 789 completed Part I, 712 completed Part II (90%), and 530 (67%) completed all three parts of the survey. There were no personal identifiers for the web-based part of the study.

Data were collected from this convenience sample between June 16 and December 24, 2012. The web survey was programmed using Gravity Forms (<http://www.gravityforms.com>). The welcome page stated in English and Hebrew that the site was being used purely for this research. After completing the informed consent page (for details, see Danieli et al., 2015b), the visitor then answered *yes* or *no* to the question, "Do you agree to participate?" Following their agreement to participate in the survey, participants

answered *yes* or *no* to the question, “Are you interested in being interviewed by a mental health professional?” A subset of the children-of-survivors web survey sample ($n = 191$) agreed to be interviewed.

Clinical Interview Procedures

All 191 adult children of survivors who expressed interest in a subsequent clinical interview by phone were, in fact, interviewed. The clinical interviewers and supervisor were recruited as a group of consultants who were working on a clinical calibration study for the (United States) National Survey on Drug Use and Health (Aldworth et al., 2010). They had used the same data collection procedure (SCID by phone) and had demonstrated excellent inter-rater agreement. All eight interviewers (the 7 above plus 1 in Israel) had clinical doctoral degrees and expertise administering the Structured Clinical Interview for *DSM-IV-TR* Axis I Disorders Nonpatient Edition (SCID-I/NP; First, Spitzer, Gibbon, & Williams, 2002) in a research setting. All attended a 4-hr training session led by the clinical supervisor and the first author. Each interviewer conducted at least two certification interviews with real respondents to demonstrate proficiency.

A number of procedures, including ongoing training and supervision, ensured the safety of clinical interview respondents (for details, see Danieli et al., 2015b). The clinical interviews were conducted between January 27 and March 28, 2013. Clinical interview data were cleared of all identifying information except for respondent identification number before they were forwarded to the data analyst for linking with the survey data.

Measures

Posttrauma Adaptational Styles (Parent Measures, Part I).

The web survey questionnaire had three parts. Part I had 70 items asked separately for each parent—first about the mother and then about the father—for a total of 140 items, each scored on a 5-point Likert scale (*strongly disagree* = 1, *disagree* = 2, *neither way* = 3, *agree* = 4, *strongly agree* = 5). The instructions read,

The statements below describe ways of life in some families. You will be asked to state how much you agree or disagree with the statements as they apply to your family of origin . . . First answer the question as it applies to your mother, then as it applies to your father.

Based on all children of survivors in the full web survey sample (i.e., not only the subset having a clinical interview) and hierarchical exploratory factor analyses of Part I data (conducted for mothers and fathers separately), we derived three posttrauma adaptational style scales (Danieli et al., 2015a): the 30-item Victim Style Scale ($\alpha = .92-.93$) captured being stuck in the loss and trauma rupture, for example, “At times, my mother/father would suddenly look as if she/he were far away”; overprotectiveness, for example, “Family members were overly protective of one another”; and emotional volatility and control, for example, “My mother’s/father’s behavior sometimes terrified me.” The 18-item Numb Style Scale ($\alpha = .89$) encompassed emotional isolation and detachment, for example, “Affection and open expression of love were rare in our home”; conspiracy of silence in the family, for

example, “My mother/father never discussed her/his Holocaust/war experiences”; and intolerance of weakness, including expression of emotions, for example, “Weakness was not tolerated in our home.” The 12-item Fighter Style Scale ($\alpha = .69-.70$) encompassed valuing mastery and justice, for example, “I was taught to fight against injustice”; and valuing and maintaining Jewish (group) identity, e.g., “I was taught to honor and remember the history of my/our people.” English-Hebrew analyses suggested good-to-excellent congruence in factor structure ($\phi = .87-.99$). Scales were scored as the mean of component items, giving each scale a potential range of 1–5.

Reparative Adaptational Impacts (Offspring Measures, Part II). Part II had 58 self-descriptive statements that web survey respondents answered on a 5-point Likert scale (*strongly disagree* = 1, *disagree* = 2, *neither way* = 3, *agree* = 4, *strongly agree* = 5). These questions were generated based on the literature and nearly verbatim statements made by children of survivors about themselves in both clinical and community settings. On the basis of hierarchical factor analyses (Danieli et al., 2015b), we created a single 36-item scale, Reparative Adaptational Impacts, that had excellent internal consistency ($\alpha = .91-.92$) and congruence between English and Hebrew versions ($\phi \geq .95$). The final version of the scale encompassed six factors or subscales: Insecurity about One’s Competence (e.g., “Contentment is a foreign concept to me,” “Even when successful, I feel forlorn,” “My first reaction to a new task is, I can’t,” “I worry that others will look down on me”); Reparative Protectiveness (e.g., “I have sometimes felt a need to make up for my family losses,” “I did my best not to burden my parents with my own problems/issues,” “I feel responsible for my parents’ happiness”); Need for Power or Control (e.g., “It is important to me to be in total control,” “It is important for me to feel powerful”); Obsession with the Holocaust (e.g., “I watch Holocaust/genocide/war-related films and documentaries incessantly,” “I am obsessed with watching and reading everything about my parent’s/s’ experiences,” “I feel drawn to the stories of other children of survivors”); Defensive Psychosocial Constriction (e.g., “I felt cheated when I found out my family’s history from others,” “I am afraid to imagine what led to my parents’ numbness,” “My peers’ concerns often seemed frivolous to me”); and Immature Dependency (e.g., “I have often resorted to alcohol, substance abuse, sex or food to soothe myself,” “I often rely on my parent(s) to rescue me financially”). Scales were scored as the mean of component items, giving them a potential range of 1–5.

Family History and Context (Four-Generation Sociodemographic Description, Part III). Part III of the survey consisted of a series of questions organized into Pre-Holocaust Family Measures (e.g., parents’ place and year of birth, parents’ history of anti-Semitic incidents, parents’ and parents’ parents’ religious affiliation and practice); Holocaust and Post-Holocaust Family Measures (e.g., experiences during the Holocaust, surviving immediate and extended family, parents’ marriage date, parents’ education before and after the Holocaust, affiliations with survivor and general Jewish organizations); and Self Measures (e.g., place and year of birth, siblings and birth order, religious affiliation and practice, education, marriage and family, affiliations with children of survivor and general Jewish organizations). Many of the questions were open-ended and subsequently coded by the investigator

and two research assistants working together. Discrepancies were decided by consensus.

Clinical Interview Measures

In this study, we used the past-year measures (scored 0 if absent, 1 if present) of *DSM-IV* MDE, PTSD, and GAD provided by the SCID (Aldworth et al., 2010). For assessing PTSD, the interviewer asked,

Sometimes things happen to people that are extremely upsetting—things like being in a life threatening situation like a major disaster, very serious accident or fire; being physically assaulted or raped; seeing another person killed or dead, or badly hurt, or hearing about something horrible that has happened to someone you are close to. At any time during your life, have any of these kinds of things happened to you?

If any events were named, the interviewer then asked,

Sometimes traumatic experiences like [traumas listed by interviewee, e.g., parents' Holocaust experiences/stories, life threatening illness/accident, loss of loved ones, terror attacks, physical/sexual abuse] keep coming back in nightmares, flashbacks, or thoughts that you can't get rid of. Has that ever happened to you?

and "What about being very upset when you were in a situation that reminded you of one of these terrible things?" If one or both questions were answered "yes," the interviewer continued with the remaining PTSD questions. If both were answered "no," the interviewer coded PTSD as absent and skipped to the next section.

We also created a combined measure of any anxiety or mood disorder that was scored 1 if MDE, PTSD, and/or GAD was present and 0 if none of the three disorders was present.

Data Analysis

After conducting preliminary analyses to describe the clinical interview sample, we tested bivariate associations between survey-based measures and the SCID outcome measures by using contingency analysis (chi-square) and *t*-tests, depending upon the nature (categorical or continuous) of the predictor. We then tested multivariate associations between a subset of the survey-based measures and psychological disorder by using conditional logistic regression, the statistical approach best suited to dichotomous dependent variables. Any mood or anxiety disorder (0, 1) was the dependent variable in this model, and those survey-based measures that had shown significant bivariate associations with the outcome were specified as potential predictors. Because the potential predictors were substantially correlated, we used a conditional, empirical criterion for variable entry into the equation. In this procedure, the variable that explains the most variance in the dependent variable enters first; thereafter, variables that explain additional, independent variance enter the equation sequentially. We then conducted various supplementary analyses to elaborate on the meaning of key findings.

Results

Sample Description

Table 1 provides a full description of the 190 adult children of survivors who participated in the clinical interview. One male was

excluded because he did not complete Part I. Table 1 also shows characteristics of the 287 children of survivors who completed Parts I and II but did not volunteer for the clinical interview. As shown, like the other web survey participants, clinical interviewees were predominantly English-speaking (76%), female (76%), and born of two survivor parents (80%). While there were relatively few differences between groups, the clinical interview sample was younger, more likely to have been born in Israel or North America (compared with Europe and other places), more likely to work in a helping profession, and less likely to report complete continuity in cross-generational religious affiliation/practice. They also had significantly higher reparative adaptational impacts, but the effect size of this difference was small ($d = 0.23$).

A total of 55 interviewees (28.9%) met SCID *DSM-IV* criteria for past-year MDE, PTSD, or GAD (any mood or anxiety disorder). Of the three disorders considered, GAD had the highest past-year frequency (18.4%), followed by MDE (13.7%) and PTSD (7.4%).

Bivariate Associations With Mood and Anxiety Disorders

Tests of associations between the various categorical demographic measures shown in Table 1 and the three mood or anxiety disorders were either not valid due to low expected cell-frequencies (predominantly PTSD) or not statistically significant, with one exception: the interviewee's year of birth was significantly related to any mood or anxiety disorder, $\chi^2(N = 164) = 9.60, p < .01$. Thirty-nine percent of interviewees born in 1951 or later met criterion for one or more disorders, compared with 16% of interviewees born in 1950 or before.

In contrast, tests of associations between participants' perceptions of their parents and themselves and the three mood or anxiety disorders revealed several significant effects. As shown in Table 2, the presence versus absence of disorder was significantly associated with the (intensity of) mother's victim style, mother's numb style, father's victim style, and the (severity of) participant's reparative adaptational impacts. More specifically, MDE was significantly associated with mother's victim style, $t(182) = 2.91, p < .01$, father's victim style, $t(188) = 2.22, p < .05$, and reparative adaptational impacts, $t(187) = 2.91, p < .05$; PTSD was significantly associated with mother's numb style, $t(178) = 2.95, p < .01$, and reparative adaptational impacts, $t(188) = 2.29, p < .05$; and GAD was significantly associated with mother's victim style, $t(182) = 3.24, p < .001$, father's victim style, $t(188) = 3.10, p < .01$, and reparative adaptational impacts, $t(187) = 5.13, p < .001$. In all cases, interviewees with disorders reported more intense parent styles and more severe child impacts than did interviewees not meeting criteria for these disorders.

Multivariate Prediction of Any Mood or Anxiety Disorder

On the basis of the preceding results, four variables were specified as candidates for the multivariate prediction of any mood or anxiety disorder in the conditional logistic regression analysis: participant's birth year (1950 or before vs. 1951 or later) and continuous measures of mother's victim style, mother's numb style, father's victim style, and reparative adaptational impacts. Reparative adaptational impacts entered the equation first, final $B = 1.66 (SE B = 0.37), OR = 5.25, p < .001$, and participant's

Table 1
Sample Characteristics

Categorical measures	Clinical interview sample (<i>n</i> = 190)		Not in clinical interview sample (<i>n</i> = 287)		χ^2 (<i>df</i> , <i>N</i>)
	<i>N</i>	%	<i>N</i>	%	
Language					<1 (1, 477)
English	145	76	225	78	
Hebrew	45	24	62	22	
Parental status					<1 (1, 447)
One survivor	36	20	54	20	
Both survivors	141	80	216	80	
Gender					2.80 (1, 450)
Female	141	76	183	69	
Male	44	24	82	31	
Year of birth					27.46 (2, 402)***
1944 or before	5	3	43	18	
1945–1950	51	31	80	34	
1951 or after	108	66	115	48	
Place of birth					13.83 (2, 441)***
Palestine/Israel	39	22	37	14	
North America	86	48	101	39	
Europe and other	54	30	124	47	
Whom named after					1.53 (2, 408)
Not family member	27	16	39	16	
Nonmurdered family member	42	25	71	30	
Murdered family member	101	59	128	54	
Birth order					4.16 (3, 465)
Only child	23	13	37	13	
First born with siblings	73	41	134	47	
Middle child	37	21	39	14	
Last born with siblings	47	26	75	26	
Highest education					6.21 (2, 438)
< college degree	12	7	36	14	
College degree	65	36	81	31	
Graduate degree	102	57	142	55	
Socioeconomic status, parental					<1 (1, 477)
Low/lower middle class	105	65	126	63	
Upper middle or high class	56	35	75	37	
Occupation					4.78 (1, 432)*
Helping profession	56	32	56	22	
Other profession	122	69	198	78	
Marital status					<1 (1, 435)
Married or partnered	139	79	195	76	
Not married	38	21	63	24	
Religious affiliation/practice					<1 (2, 372)
Not Jewish	19	12	29	13	
Jewish, secular	92	60	137	63	
Jewish, observant	42	28	53	24	
Family continuity in religious affiliation/practice					6.12 (2, 271)*
None	39	31	36	25	
Some	37	30	31	21	
Complete	49	39	79	54	
Continuous measures	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>t</i> (474)
Mother's victim style intensity	2.88	0.83	2.80	0.80	<1
Mother's numb style intensity	2.82	0.88	2.77	0.90	<1
Mother's fighter style intensity	3.59	0.68	3.56	0.66	<1
Father's victim style intensity	2.63	0.78	2.69	0.80	<1
Father's numb style intensity	2.88	0.96	2.89	0.82	<1
Father's fighter style intensity	3.58	0.69	3.53	0.67	<1
Reparative adaptational impacts	3.08	0.64	2.93	0.67	2.60***
Broken generational linkages	2.69	1.25	2.70	1.18	<1

* $p < .05$. *** $p < .001$.

Table 2
Scale Score Means by Absence/Presence of Any Mood or Anxiety Disorder

Measures	Mood or anxiety disorder absent (n = 135)		Mood or anxiety disorder present (n = 55)		t(188)
	M	SD	M	SD	
Mother's victim style intensity	2.75	0.82	3.19	0.78	3.37***
Mother's numb style intensity	2.72	0.87	3.03	0.86	2.18*
Mother's fighter style intensity	3.57	0.69	3.56	0.66	<1
Father's victim style intensity	2.57	0.79	2.98	0.66	3.38***
Father's numb style intensity	2.86	0.93	2.90	1.02	<1
Father's fighter style intensity	3.59	0.71	3.56	0.66	<1
Reparative adaptational impacts	2.94	0.64	3.45	0.47	5.35***
Broken generational linkages	2.69	1.24	2.80	1.29	<1

* p < .05. *** p < .001.

birth year entered second, $B = 1.26$ ($SE B = 0.46$), $OR = 3.55$, $p < .001$. Thus, more severe reparative adaptational impacts and birth year >1950 independently increased the odds of any mood or anxiety disorder in the past year. Mother's victim style, mother's numb style, and father's victim style did not enter into the equation, indicating that they did not explain the likelihood of any mood or anxiety disorder once reparative adaptational impacts and participant's birth cohort were accounted for.

To elaborate on these findings, Table 3 shows the frequencies of disorders for three groups of interviewees with low ($n = 63$), medium ($n = 64$), and high ($n = 63$) reparative impacts. The past year frequency of any disorder was only 8% within the group reporting low reparative impacts but was 46% within the group reporting high reparative impacts. Linear associations were significant ($p < .05$) for any disorder, MDE, and GAD. Tests were not valid for PTSD because of low cell frequencies. Results for GAD

were most striking: only 2% of the low-impact group met criteria for past-year GAD, compared with 33% of the high-impact group.

To explore the meaning of these results further, we tested associations between any disorder and each of the six factors/subscales of reparative adaptational impacts. Significant bivariate relationships emerged for Insecurity about One's Competence, $t(188) = 5.54$, $p < .001$, Reparative Protectiveness, $t(188) = 3.02$, $p < .01$, Defensive Psychosocial Constriction, $t(188) = 3.34$, $p < .001$, and Immature Dependence, $t(188) = 3.08$, $p < .01$. The effect was marginal for Need for Power and Control, $t(188) = 1.86$, $p = .065$, and absent for Holocaust Obsession, $t < 1$. In a conditional logistic regression analysis, Insecurity about One's Competence entered in Step 1, $B = 1.11$ ($SE B = 0.27$), $OR = 3.40$, $p < .001$, but no other factors entered into the equation once participant's severity of insecurity was taken into account. When the interview sample was divided into three equal groups on the basis of their scores on this factor, the frequency of any mood or anxiety disorder was 9% within the low impact group, 36% within the medium impact group, and 45% within the high impact group, linear $\chi^2(N = 190) = 26.39$, $p < .001$. Of the specific disorders, the effect was again most striking for GAD, which had frequencies of 3%, 21%, and 34% in the low-, medium-, and high-impact groups, respectively, linear $\chi^2(N = 190) = 24.85$, $p < .001$.

Table 3
Past Year Frequency of DSM-IV Mood and Anxiety Disorders in Total Clinical Interview Sample (n = 190) by Severity of Reparative Adaptational Impacts

Measures	N	% of sample or group
Any mood or anxiety disorder, total sample	55	28.9
Within low reparative impacts	5	7.9
Within medium reparative impacts	21	32.8
Within high reparative impacts	29	46.0
Major depressive disorder, total sample	26	13.7
Within low reparative impacts	4	6.3
Within medium reparative impacts	10	15.6
Within high reparative impacts	12	19.0
Posttraumatic stress disorder	14	7.4
Within low reparative impacts	1	1.6
Within medium reparative impacts	7	10.9
Within high reparative impacts	6	9.5
Generalized anxiety disorder, total sample	35	18.4
Within low reparative impacts	1	1.6
Within medium reparative impacts	13	20.3
Within high reparative impacts	21	33.3

Note. Cut points of 2.79 and 3.40 created groups representing low ($n = 63$), medium ($n = 64$) and high ($n = 63$) reparative impacts. Linear associations were significant ($p < .05$) for any disorder, major depressive episode, and generalized anxiety disorder. Tests were not valid for PTSD.

Discussion

Because research on the mental health of Holocaust survivors' offspring has been fraught with substantive and methodological inconsistencies we chose to ask not if children of survivors have mental health problems, but rather who among them have mental health problems. We thus aimed to identify the factors that place some offspring at greater risk for developing mood or anxiety disorders. We sought to predict SCID-defined past-year diagnoses (MDE, GAD, and PTSD) from offspring's circumstances, perceptions of their parents' posttrauma adaptational styles, and their self-reported reparative adaptational impacts. In the final analysis, only two variables significantly and independently predicted mood or anxiety disorders: participants' age/birth cohort and reparative adaptational impacts.

The predictive value of age was strong ($OR = 3.6$): 39% of participants born after 1950 met criterion for one or more disorders, while 16% of participants born in 1950 or before did. None-

theless, this age difference appeared unrelated to the Holocaust context of this study: First, participant's age was not statistically related to any variable studied here; second, the finding is consistent with epidemiologic research showing that past-year prevalence of psychological disorders is lower in older age cohorts (Kessler et al., 2008). Moreover, we assessed only past-year disorder, and it is possible that problems experienced by older participants earlier in life had been mastered or lessened in intensity by the time of the interview. For example, Schwartz et al. (1994) did not find elevated rates of current psychiatric disorders among Holocaust survivors' offspring in Israel, but they did find higher rates of past disorders.

In contrast, our measure of participants' reparative adaptational impacts was conceptually imbedded in the lives of Holocaust survivors' offspring. As expected, the severity of these impacts was unequivocally the most important ($OR = 5.3$) or at least the most proximal precursor to the development of psychological disorders. When reparative impacts were low, frequency of mood or anxiety disorder was low (8%) as well. When reparative impacts were high, frequency of mood or anxiety disorder was extraordinarily high (46%). Are children of survivors at risk for psychological disorders? The answer cannot be a simple "yes" or "no;" it is and must be, "it depends." Some are and some are not; they can be distinguished by their family experiences and the extent to which they believe their own lives have been shaped adversely by the Holocaust.

Reparative adaptational impacts is a complex, factorial construct, consisting of insecurity about one's competence, reparative protectiveness, need for power or control, obsession with the Holocaust, defensive psychosocial constriction, and immature dependency. Of these factors, insecurity about one's competence, with content reflecting lostness, loneliness, social anxiety, and anhedonia (see Measures section), most strongly predicted a clinical diagnosis. As our data indicate, the scale as a whole and especially this factor are tied to both personality and psychopathology, providing data that can be clinically useful (Rodriguez-Seijas, Eaton, & Krueger, 2015) and pointing to needed future research. Because reparative adaptational impacts predict MDE, GAD and PTSD, they also share variance with the internalizing dimension of psychopathology (Wolf et al., 2010). Indeed, they reflect the essence of internalizing disorders (depressive and anxiety disorders) which can be defined as excessive distress turned inward. At lower intensity levels, reparative adaptational impacts could be characterized by personality descriptions such as "worriesome" and "anxious." In our bivariate tests, psychological disorders were also predicted by the factors of Reparative Protectiveness and Defensive Psychosocial Constriction. The content of these two factors seems to most explicitly reflect concerns specific to children of survivors (see measures). Offspring's trait anxiety may emerge from a lifetime of experiencing these contextualized feelings and thoughts.

Given that past research has documented an association between parental PTSD and offspring PTSD (Leen-Feldner et al., 2013), it is noteworthy that no independent effect of parents' posttrauma adaptational styles emerged in the final multivariate analysis. While parents' posttrauma adaptational styles failed to predict disorder once reparative impacts were taken into account, we previously found (Danieli et al., 2016) that the intensities of mother's and father's victim styles were by far the strongest

predictors of the child's reparative adaptational impacts. Only when the mother and/or father responded to their own traumas with an intense victim style was the child of survivors at risk for severe reparative impacts. Now we have shown that it is only when the child of survivors perceived severe reparative impacts that he or she was at elevated risk for psychological disorder. Together these findings suggest the presence of a causal chain in which the influence of parents' styles occurs earlier in the sequence: Family history/milieu (Holocaust/post-Holocaust) → Parents' posttrauma adaptational styles → Child's reparative adaptational impacts → Psychological disorder.

The frequencies of the psychological disorders under study, relative both to one another and to their prevalence in the general population, call for comment. In this sample, GAD had the highest past-year frequency (18.4%), followed by MDE (13.7%) and PTSD (7.4%). Past-year prevalences for GAD, MDE, and PTSD are 3.1%, 6.7%, and 3.5%, respectively, in the United States (Kessler et al., 2008) and 1.8%, 5.9%, and 0.5% in Israel (Levinson, Lerner, Zilber, Levav, & Polakiewicz, 2008). Thus the frequency of past-year GAD in our interview sample was approximately 6–10 times greater than found in the adult populations of the United States and Israel; the frequency of past-year MDE was approximately 2 times greater; and the frequency of PTSD was 2–15 times greater, the wide range reflecting the very low past-year prevalence of PTSD in Israel. While these findings must be interpreted with caution because of the nonrepresentative nature and modest size ($n = 190$) of our sample, they do raise a question about whether attention has been disproportionately focused on PTSD as opposed to GAD.

That GAD was more frequent than PTSD among these children of survivors makes clinical sense. The parents were directly traumatized by their Holocaust and post-Holocaust experiences; the children were exposed not to the traumas themselves but to their parents' stories and their aftermath including, among others, the message that the world is a dangerous place where the children must be on guard against threats, big and small. Similarly, Yehuda and colleagues (2008) found rates of anxiety disorders (32.5%) and mood disorders (45.5%) to exceed PTSD rates (19.0%) among offspring. And on the basis of their review, Leen-Feldner et al. (2013) concluded that survivors' PTSD symptoms are predictive of more general internalizing-type problems (i.e., anxiety and depression) in offspring, reflecting genetic and epigenetic effects, as well as parenting behaviors.

Moreover, while clinical diagnoses are useful for objectively defining the mental health status of survivors and their children, it must be recognized that they capture only the most severe, enduring, and criteria-conforming expressions of psychiatric distress. Approximately half of our interviewees who acknowledged high reparative impacts did not meet criteria for a mood or anxiety disorder. Focusing solely on clinical diagnoses as the outcomes of interest lessens our chances of comprehending the entirety and lifelong meanings of offspring's problems, concerns, and world views. In contrast, our measure of reparative adaptational impacts that emerged from *Trauma and the Continuity of Self, A Multidimensional, Multidisciplinary, Integrative Framework* (Danieli, 1998), was designed to comprehensively assess the range of psychological and social consequences experienced by adult offspring of Holocaust survivors. Its focus on capturing functional dimensions of thoughts, feelings, and behaviors is in keeping with recent

developments in the field of public mental health (Kozak & Cuthbert, 2016) that advocate for investigating not only psychopathology but multiple dimensions of behavior, symptoms, and adaptation that cross diagnostic categories.

There are several limitations to this study. Importantly, the SCID version used (Aldworth et al., 2010) provided past 12-month, not lifetime, diagnoses. This may have led to underestimating associations between predictor variables and the diagnoses studied. Additionally, the use of the *DSM-IV*-based SCID does not consider the revisions in *DSM-5*.

The study relied on participants' retrospective recall and a self-selected sample. There were no objective measures of the parents; parents' posttrauma adaptational styles were assessed through the eyes of their children. Survey participants with greater reparative adaptational impacts were more likely to participate in the clinical interview, which would inflate observed frequencies of disorders. However, while statistically significant, the mean difference between clinical interviewees and other participants was small in size ($d = 0.23$), and the bias should have had minimal influence on the relative frequencies emphasized in this study more so than absolute frequencies.

Study strengths include the importance and timeliness of research on intergenerational effects of trauma, obtaining a community sample for the web survey and a sizable subsample for clinical interviews, the retention of interest by the clinical subsample despite a few months' wait between completing the web survey and the clinical interview, having both English- and Hebrew-speaking participants, and using the SCID to provide valid diagnostic interview data, together with the contextualized measures that resulted from our systematic approach of analyzing the data from the three-part web survey (Danieli et al., 2015a, 2015b).

For future research, we need to look beyond psychopathology to the nature of life after massive trauma and its legacies, including the traumatogenic, dynamic meaning of behaviors, feelings, and beliefs. Our opinion, supported at least indirectly by our findings, is that the most relevant question about psychopathology among Holocaust survivors' children is not *if*, but *who* and perhaps also *when*. Our cross-sectional data clearly tell us *who*, but we assessed the presence of disorder only within a short past-year window. Longitudinal research in more recently traumatized populations would likely reveal variations in predictors and disorders among offspring over time. Such research would also inform theories of posttraumatic growth and resilience in offspring, as these processes are inherently developmental.

Our results also have implications for clinical practice with survivors' offspring. While accurate diagnosis is important for good practice, systematic exploration of the reparative adaptational impacts underlying psychiatric distress and dysfunction might better serve to guide treatment plans. For example, from a cognitive-behavioral perspective alone, many of the statements in our scale could be characterized as maladaptive thoughts ("My first reaction to a new task is, I can't," "I worry that others will look down on me,") that are amenable to cognitive restructuring techniques. But more broadly, our findings highlight once more the need for clinicians who work with this population to identify and explore the historical meanings and roots of how their patients experience their lives.

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