



Filial anxiety and sense of obligation among offspring of Holocaust survivors

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ABSTRACT

Objectives: Much is known about adult children caring for their aging parents, yet the potentially unique experience of offspring caring for traumatized parents is underexplored. Therefore, the current studies assessed filial anxiety and sense of obligation among offspring of Holocaust survivors (OHS) in caring for their parents.

Method: In Study 1, we interviewed 10 OHS (mean age = 61.0) in order to extract themes of filial anxiety. Based on Study 1's data, a newly constructed scale of filial anxiety was administered in Study 2 to 59 adult offspring (mean age = 56.4): 28 OHS and 31 comparisons. Study 3 included 143 dyads of parents and offspring (mean age = 55.4 and 81.7, respectively): 86 Holocaust dyads and 57 comparison dyads. Parents reported posttraumatic stress disorder (PTSD) symptoms and offspring reported filial anxiety and sense of obligation.

Results: In Study 1, interviewees referred to concerns about parent experiencing decline alongside caregiving difficulties. In Study 2, OHS reported higher filial anxiety and sense of obligation relative to comparisons. This group difference was mediated by sense of obligation. In Study 3, OHS with parental PTSD reported higher filial anxiety and sense of obligation relative to comparisons. Once more, filial sense of obligation served as a mediator. In Studies 2–3, results remained significant after adjusting for offspring symptoms.

Conclusion: Parental exposure to the Holocaust, and especially parental PTSD, related to higher filial obligation, which in turn was related to higher filial anxiety. These findings bear important implications for practitioners working with survivors' families

ARTICLE HISTORY

Received 19 December 2017
Accepted 20 February 2018

KEYWORDS

Filial anxiety; filial obligation; intergenerational transmission; Holocaust; parental PTSD

When adult children reach midlife, their relationship with their parents often undergo profound changes. The children gradually adopt new responsibilities for parents and may begin to assist them in various ways. Abundant research has been devoted to delineate the dynamics between adults and their aging parents, mainly focusing on relationship quality, caregiving experience and well-being concomitants (for review see Fingerma n & Birditt, 2011). However, much less is known about adult offspring caring for traumatized parents. As elaborated below, massive trauma and its long-term effects may shape familial relationships across the lifespan, and create unique interpersonal qualities. Therefore, the current studies aimed to assess how adult offspring of Holocaust survivors (OHS) experience their relationship with their aging parents in terms of filial anxiety and sense of obligation. All Holocaust survivors (HS) are currently coping with advanced aging processes. In addition, OHS caregivers are typically themselves in midlife and entering old age. Taken together, these characteristics render the latter, unique group suitable for researching filial anxiety and sense of obligation.

Both meta-analyses and literature reviews showed that HS and their offspring manifest general resilience alongside specific vulnerabilities. Vulnerabilities associated with HS and OHS are mainly confined to a heightened psychological distress among survivors (Barel, Van IJzendoorn, Sagi-Schwartz, & Bakermans-Kranenburg, 2010; Kahana, Harel, & Kahana, 2005; Shmotkin, Shrira, & Palgi, 2011b) and low stress tolerance among their offspring (Kellermann, 2009; Shmotkin, Shrira, Goldberg, & Palgi, 2011a; Van IJzendoorn, Bakermans-Kranenburg, & Sagi-Schwartz, 2003).

Despite the impressive resilience levels in survivors' families, OHS may feel that their parents may have transmitted more emotional burden on to them as well as being overinvolved (Kellermann, 2001; Letzter-Pouw, Shrira, Ben-Ezra, & Palgi, 2014). Disruption in parental behaviors may have been especially salient among survivors with unresolved traumatic losses. Consequently, parental behavioral patterns may have elicited in the OHS fear, distress and insecure attachment (Sagi-Schwartz, Koren-Karie, & Joels, 2003). Transmitted burden from parents may create a parent-child role reversal, as the offspring may sacrifice their own needs in order to try to satisfy the needs of their parents (Alexander, 2003).

Early enmeshed parent-child relationship possibly shape late-life interaction. Accordingly, qualitative studies reported that OHS manifested strong filial piety, high caregiving stress and showed reluctance to seek assistance when called upon to assume caregiving roles (Anderson, Fields, & Dobb, 2013; Isserman, Hollander-Goldfein, & Horwitz, 2017). Another quantitative study found that resilience was negatively related to physical and psychological distress among spouse and offspring caregivers for HS (Anderson & Fields, 2013). Nevertheless, as these studies did not assess OHS relative to a comparison group, it is still unclear if adult OHS experience caring for aging parents in a unique manner.

Parental caregiving includes many characteristics. As aforementioned, the current studies focus specifically on two aspects—filial anxiety and sense of obligation associated with parental caregiving. These two aspects may best capture the unique characteristics of OHS in general: increased anxiety in

stressful circumstances and entangled relationships within the family (for review see Shmotkin et al., 2011a).

Filial anxiety refers to a state of worry or concern about the anticipated decline and death of an aging parent, and about one's ability to meet current or anticipated caregiving needs (Cicirelli, 1988). Filial anxiety is embedded in relationship between adult offspring and their aging parents. It supposedly reflects a protective aspect of the attachment between adult offspring and their elderly parents, where the offspring take measures to prevent the loss of the attached figure. However, as the parents' physical decline and death are inevitable, the adult offspring experiences a continuing sense of anxiety regarding parental welfare. Filial anxiety and worries were found to be stronger among offspring who were more attached to the parent, but at the same time felt more ambivalent towards the relationship (Cicirelli, 1988; Hay, Fingerma, & Lefkowitz, 2007). Moreover, offspring who tended to perceive their parent as having poorer emotional health and fewer coping strategies reported higher filial anxiety (Cicirelli, 1988).

Filial obligation, the second aspect in focus, refers to the sense of duty, obligation, or responsibility to care for aging parents; consequently, it typically peaks in midlife (Gans & Silverstein, 2006). Filial obligation is a product both of the nature of the parent-child relationship and one's cultural background, as both factors determine the generalized expectations regarding the amount of support offspring should provide to old parents at times of need (Cicirelli, 1993). Filial obligation is predicted by secure attachment and contributes to better caregiver preparedness (Paulson & Bassett, 2016). Accordingly, it also correlated positively with helping behaviors towards elderly parents (Cicirelli, 1983). Still, intense filial obligation may also facilitate guilt and feelings of inadequacy, especially when it is difficult to ideally fulfil the filial responsibility. Consequently, high sense of obligation may exacerbate the caregiving burden (Cicirelli, 1993; Lyonette & Yardley, 2003).

As mentioned, the objective of the current studies was to assess filial anxiety and sense of obligation among OHS. As little is known about filial anxiety among offspring of aging parents who have experienced early life trauma, and specifically OHS, we began with a preliminary small qualitative study. Therefore, in *Study 1* we aimed to extract themes that served as the basis for constructing a new filial anxiety scale. Although a previous scale of filial anxiety is available (Cicirelli, 1988), we believed that there might be additional unique themes of filial anxiety relevant to OHS.

In *Study 2*, we administered our new filial anxiety scale to both OHS and comparisons. We hypothesized that OHS will report higher filial anxiety and filial obligation relative to comparisons. We further hypothesized that filial obligation will mediate the relationship between parental exposure to the Holocaust and filial anxiety. The latter hypothesis was based upon previous findings alluding to the possibility that parental over-involvement catalyzes distress among OHS (Letzter-Pouw et al., 2014; Palgi, Shrira, & Ben-Ezra, 2015).

Finally, in *Study 3*, we interviewed dyads of HS and their offspring alongside dyads of comparison parents and offspring. Parents reported posttraumatic stress disorder (PTSD) symptoms while offspring completed measures of filial anxiety and obligation. We compared three groups; the comparison group, OHS whose parents do not have PTSD and OHS whose parents have PTSD. Following recent studies showing

that intergenerational transmission of trauma is most salient among offspring of posttraumatic HS (Shrira et al., 2017; Yehuda, Bell, Bierer, & Schmeidler, 2008), we hypothesized that relative to comparisons and OHS without posttraumatic parents, filial anxiety and sense of obligation will be highest among offspring of posttraumatic HS. We further hypothesized that filial obligation will mediate the effect of parental PTSD on filial anxiety.

Study 1

Method

As noted above, the purpose of this preliminary qualitative study was to identify thematic content associated with caring for aging parents. Categories extracted from this study will serve as the basis for constructing a quantitative questionnaire of filial anxiety. We sought to answer the following research question: What characteristics, concerns, and feelings are included in the experience of OHS caring for their aging parent?

Participants and procedure

Ten OHS (six men) who take care of their aging parent/s participated in the study. Inclusion criteria were being Hebrew-speaking, Jewish Israeli, family of European origin with at least one living parent who was under Nazi or pro-Nazi occupation or domination in Europe during World War II. Participants' age ranged between 57 to 65. Most participants had academic education and their socio-economic status ranged from middle to upper-middle class.

Study 1 took place in August–October, 2014. Interviewees were recruited through a snowball sampling (Atkinson & Flint, 2001). Participants signed an informed consent form and were assured that all interviews would be kept confidential. The second author (RM) interviewed all participants in their homes or in other places convenient to them. Each interview lasted about one hour. This study received approval from the Bar-Ilan University ethics committee.

Data collection and analysis

Open-ended in-depth interviews were conducted (Cunningham, Felland, Ginsburg, & Pham, 2011) based on the guided interview technique. Participants were asked to describe their experiences as caretakers of their aging parent/s. Content analysis (Strauss & Corbin, 1990) of the transcribed interviews began with a repeated reading of the interview's transcription followed by extraction of meaningful categories. A category was generated if it reappeared among 70% of the interviewees.

Results

Five main categories emerged. The first category deals with statements related to the need for geographic proximity to the parent in order to provide parents with daily care. The second category presents a serious concern regarding parental experience of pain. Many noted that their parents had experienced enough pain during the Holocaust and that it was their duty to ensure they would suffer the least pain possible. The third category dealt with the emotional flooding associated with aging parent's care. Interviewees emphasized the emotional difficulty of caring for parents who experienced the

Table 1. Categories that emerged accompanied by examples: study 1.

Category	Examples
The need to be in a close contact with the parent	- We decided to build our house close to my parents so that we could help them in their old age, we could be there for them and take care of them. We are constantly visiting, handling bureaucratic matters, that's why we live close. - My Mom lives not far from me. In fact, I maintain her house and everything, I shop for her, I am her transportation, I accompany her to medical appointments and take care of everything she needs. I call and go to her every day.
Concern that the parent will suffer from pain	- I do not want my Dad to suffer anymore. I keep worrying that he is suffering. He suffered enough in the Holocaust. - My main concern is that my parents won't suffer from pain. I worry and want them to grow old without experiencing pain. I do everything that I can to protect them from pain.
Emotional flooding	- When I sit with my Mom, I often find myself crying without even noticing. It's hard for me to take care of her. It's not easy. - Mentally, it is very hard for me just to be with my Mom and containing the accompanied feelings. It is very difficult.
Worry about the parent's deterioration	- I'm very worried about her health because she doesn't agree to go to certain doctors, because they were of (Jewish) German origin, because of the war. - When my mother was in the hospital, I was with her all the time. I did not even think about missing workdays. I just told my workplace that I would not be coming in to work until my Mom recovered. It really makes me nervous when she's sick.
Offspring's physical difficulties and consequences	- Physically, it's hard for me, but there's nothing I can do... It's hard for me to bathe her, but I have no choice. That is my situation. - At the time my Mom got sick, I thought I would collapse (from the strain). I did not sleep for a couple of weeks.

events of the Holocaust and are now required to cope with the pains of aging. The fourth category describes concerns about health deterioration in the parent's condition and the length the offspring are willing to go to prevent this deterioration. The last category presents the physical difficulty and physical implications of caring for a parent. Examples of participant responses for each category are depicted in Table 1.

Study 2

Method

Participants and procedure

Study 2 examined a convenience sample of 59 community-dwelling, Hebrew-speaking, Jewish Israelis from families of European origin with at least one living parent. Twenty-eight respondents were OHS who had at least one parent with a Holocaust background whereas 31 participants were matched comparisons, whose parents were not directly exposed to the Holocaust. To determine Holocaust background, respondents were queried whether one or two of their parents were under Nazi or pro-Nazi occupation or domination in Europe during World War II.

Among the OHS group the mean age was 56.51 years ($SD = 7.31$); 85.2% were women; 78.6% had academic education; 75.0% were married; 66.7% rated their economic status as good or very good, and 69.2% rated their health status as good or very good. Among the comparison group the mean age was 56.64 years ($SD = 6.69$); 76.9% were women; 46.4% had academic education; 64.3% were married; 60.0% rated their economic status as good or very good, and 58.1% rated their health status as good or very good. As noted, groups were matched, i.e. they did not significantly differ on any background characteristics (p ranged 0.17–0.94), except for education level which was slightly higher among OHS ($t[54] = -2.17, p = 0.03$).

OHS reported the experiences their parents underwent during the Holocaust. Almost half of the OHS group (42.9%) reported that at least one of their parents was in a concentration camp, 64.3% reported that at least one parent was in a work camp, 39.3% in a ghetto, 39.3% in hiding, 14.3% used false papers, 7.1% reported being with partisans, 21.4% reported being in constant escape, and 25.0% managed to escape to areas outside of Nazi/pro-Nazi control.

Study 2 took place in January–May 2015. The interviewer (RM) was instructed to recruit Israelis born after 1945 (with parents born before 1945), who were from families of

European origin and who had at least one living parent. The interviewer approached potential participants available to her (e.g. neighborhood, workplace) and asked them to take part in the study. Participants signed informed consent and completed an online questionnaire. Participants' confidentiality was guaranteed by anonymous responses. The study received approval from the Bar-Ilan University ethics committee.

Measures

Filial anxiety was measured by a 12-item scale constructed specifically for the current study. The items are presented in Table 2. The items referred to offspring anxieties regarding their elderly parents, and were constructed following categories that emerged in Study 1 (items #1, #3–7, #9, and #11). We further added two items adapted from a previous scale of filial anxiety (Cicirelli, 1988; items #8 and #12) yielding 10 items. Finally, two additional items referring to important themes of filial anxiety (e.g. fear of parent becoming a victim of abuse or neglect, and fear of parent's death, items #2 and #10). Respondents were asked to refer to their living parent/s and to indicate, on a scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*), to what extent they agreed with each statement.

The items were subjected to a principal axis factor analysis with oblique, direct oblimin rotation. We chose principal axis factor analysis over principal components analysis, because the latter introduces more spurious common variance into solutions, assumes perfect measurement, and is more appropriate for data reduction than latent variable identification (Floyd & Widaman, 1995). Scree-plot analysis indicated that three factors could be present in the data, with eigenvalues of 5.57, 1.18 and 0.76, but strongly suggested the existence of one dominant factor on which most items loaded. We therefore constrained the analysis to one factor, which produced an eigenvalue of 5.43, explaining 49.45% of the variance. The items showed strong loadings on the factor (coefficient range: 0.44–0.82, for more details see Table 2). An average score was computed, with higher values indicating higher filial anxiety. Cronbach's alpha was 0.90.

Filial obligation was measured with the 7-item Filial Obligation Scale (Cicirelli, 1993). Respondents were asked to refer to their living parent/s and to indicate, on a scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*), to what extent they agreed with each statement. An average score was computed with higher values indicating greater sense of obligation. Three judges agreed upon the Hebrew adaptation of this

Table 2. The new filial anxiety scale: items and loadings.

	Study 2: exploratory analysis	Study 3: confirmatory analysis
1. I am so worried that it is hard for me to leave my parent even for a short while	0.59	0.70
2. I am worried about the possibility that my parent will be abused or neglected.	0.66	0.63
3. I am frequently overwhelmed by worrying for my parent, to the extent, that it makes it difficult for me to care for her/him	0.77	0.56
4. Mostly I succeed in absolve myself from the worries and anxieties I have with regard to my parent's fate (reversed-coded)	-0.44	-0.79
5. I am so worried about my parent's condition, that it affects me physically	0.75	0.73
6. I am worried that my parent's suffering will remind her/him of difficult events from the past	0.82	0.77
7. I am very worried that my parent will suffer pain or insult	0.79	0.71
8. I am worried that I will not be strong enough to care for my parent	0.70	0.70
9. Mostly, I succeed in detaching myself from concerns about the deterioration in my parent's condition (reversed-coded)	-0.46	-0.54
10. I am anxious about my parent dying	0.68	0.78
11. I am worried that my parent will spend the last part of his/her life in a disrespectful and humiliating way	0.67	0.80
12. I am worried that I will not have sufficient financial resources to care for my parent	0.61	0.71

Note. Values for Study 2 ($N = 59$) refer to loadings taken from a principal axis factor analysis with oblique, direct oblimin rotation. Values for Study 3 ($N=143$ offspring) refer to standardized regression weights taken from a confirmatory factor analysis.

measure after examining a translation from English into Hebrew, as well as an independent reverse translation. Cronbach's alpha was 0.77.

Because we wanted to assess filial anxiety net of general anxiety, the main analyses further adjusted for offspring scores on the Generalized Anxiety Disorder-7 (GAD-7; Spitzer, Kroenke, Williams, & Löwe, 2006). Respondents rated the frequency of seven anxiety symptoms during the last two weeks on a scale ranging from 0 (*not at all*) to 3 (*almost every day*). Items were summed; a cut-off score of 10 or greater representing probable generalized anxiety disorder. The Hebrew version of this scale was previously used (Neria, Besser, Kiper, & Westphal, 2010). Cronbach's alpha was 0.89.

Background characteristics included age, gender, education, marital status, subjective economic status and subjective health. Education was rated as 0 (*no formal education*), 1 (*elementary education*), 2 (*incomplete high-school education*), 3 (*complete high school education*), 4 (*above high school education, but not academic education*), and 5 (*academic education*). Subjective economic status and health were assessed with a single question ('As a whole, how do you rate your economic status/health?'), on which respondents answered using Likert scale, ranging from 1 (*not good at all*) to 5 (*very good*).

We also assessed parental health by asking offspring to report whether their parents were diagnosed with chronic medical conditions from a list of nine conditions (e.g. heart disease, stroke, diabetes, chronic lung disease, cancer). We further asked offspring to report whether they have siblings, the duration of help provided to parents (less than a year, between one to five years and more than five years), and whether their parents receive any help from others (i.e. a family relative, a friend, a non-professional or professional home care worker). Offspring also reported the help they give to their parents with a 5-item scale adapted from Cicirelli (1983). The items referred to help in daily activities, instrumental activities, providing bureaucratic mediation, financial support and emotional support. The items were rated on a scale ranging from 1 (*not helping at all*) to 5 (*helping all the time*). An average score for both parents was computed, with higher values indicating providing more help. Cronbach's alpha was .77 and .81 for items referring to father and mother, respectively.

Finally, the 24-item Multidimensional Caregiver Burden Inventory (Novak & Guest, 1989) was distributed to the participants to obtain evidence of convergent validity for our filial anxiety scale. This inventory included five subscales (time-

dependence burden, developmental, physical, social and emotional burden). Respondents rated their feelings regarding caregiving on a scale ranging from 0 (*never*) to 4 (*almost always*). An average score was computed for each subscale, with higher values indicating greater burden. The Hebrew version of this inventory was previously used (Ben-Arzi, Solomon, & Dekel, 2000). Cronbach's alpha ranged from 0.72 to 0.91.

Results

Higher filial anxiety was related to higher filial obligation ($r = .54, p < .0001$), and more symptoms of generalized anxiety ($r = .39, p = .002$). The positive relationships between filial anxiety and the five subscales of caregiving burden are evidence for convergent validity (r ranged 0.36–0.66, p ranged .005–<.0001). Filial anxiety did not significantly relate with any of the offspring background characteristics. As for caregiving-related variables, filial anxiety did not significantly relate with amount of help given, yet filial anxiety showed a marginally significant relationship with the number of parental chronic conditions ($r = 0.24, p = 0.06$).

Prior to the main analyses, we examined group differences in caregiving-related variables. Relative to comparisons, OHS reported significantly more parental medical conditions ($M = 1.41, SD = 0.76$ vs. $M = 2.53, SD = 1.64, t[57] = -3.39, p = 0.001$), but the groups did not differ in number/order of siblings in their family, $\chi^2(1) = 0.001, p = 0.97$, in the duration of help provided to their parents, $\chi^2(2) = 0.77, p = 0.68$, in whether their parents receive additional help, $\chi^2(1) = 3.18, p = 0.08$, or in the amount of help given to parents ($t[56] = 1.27, p = 0.20$). As OHS participants had higher education levels and reported more parental medical conditions, these variables were adjusted for in the main analyses.

Table 3 presents the results of the multivariate analyses of covariance assessing group difference in filial anxiety and sense of obligation. As can be seen, relative to comparisons, OHS reported significantly higher filial anxiety and sense of obligation. These differences remained significant even after adjusting for general anxiety symptoms.

Finally, the PROCESS macro (Hayes, 2013) was applied to test the second hypothesis regarding the mediational analyses. Group (OHS vs. comparisons) was the independent variable. Filial obligation was the mediator. Filial anxiety was the dependent variable. PROCESS examines mediation through an indirect effect analysis using a bias-corrected bootstrap

Table 3. Results of multivariate analyses of variance comparing groups on filial anxiety and obligation: study 2.

Variable	OHS <i>M (SD)</i>	Comparisons <i>M (SD)</i>	Controlling for offspring education level and parental medical conditions			Controlling for offspring general anxiety, education level and parental medical conditions		
			<i>F</i>	<i>p</i>	η^2	<i>F</i>	<i>p</i>	η^2
Filial anxiety	3.07 (0.81)	2.10 (0.80)	13.71	.001	.209	9.23	.004	.153
Filial obligation	4.59 (0.44)	4.05 (0.58)	11.32	.001	.179	9.10	.004	.152

Note. In both analyses, n is 28 for both OHS and comparison groups. Wilks' λ (2,51) = 0.74, $p < .0001$, for analysis controlling for offspring education level and parental medical conditions. Wilks' λ (2,50) = 0.79, $p = .003$, for analysis controlling for offspring general anxiety, education level and parental medical conditions.

with 5000 resamples. Through the application of bootstrapped confidence intervals, it is possible to avoid power problems introduced by asymmetric and other non-normal sampling distributions of an indirect effect (MacKinnon, Lockwood, & Williams, 2004).

As hypothesized, sense of obligation mediated the effect of group on filial anxiety. Indeed, when predicting filial anxiety with both variables (group and sense of obligation), the coefficient of group predicting filial anxiety decreased from $B = 0.92$, $p = .0005$ to $B = 0.60$, $p = .023$. The indirect effect was 0.32, bootstrapped 95% CIs [0.09, 0.80], indicating the effect was significant (below the .05 level). When adjusting for general anxiety, the coefficient of group predicting filial anxiety decreased from its previous value, $B = 0.75$, $p = .0037$, to $B = 0.47$, $p = 0.06$. The indirect effect was 0.28, bootstrapped 95% CIs [0.06, 0.72]. Figure 1 presents the mediation model.

To summarize thus far, the novel filial anxiety scale (developed based on Study 1) showed good reliability and validity. Study 2 further found that OHS reported higher filial anxiety and sense of obligation, and that sense of obligation mediated the relationship between having a Holocaust background and higher filial anxiety. As aforementioned, the goal of Study 3 was to extend our exploration of filial obligation and anxiety among OHS with a larger sample that includes dyads of parents and offspring. Moreover, Study 3 aimed to investigate whether psychological distress reported by HS parents with PTSD, related to increased filial obligation and filial anxiety among offspring relative to HS parents without PTSD and the comparison groups comprising matching offspring whose parents did not have a Holocaust background.

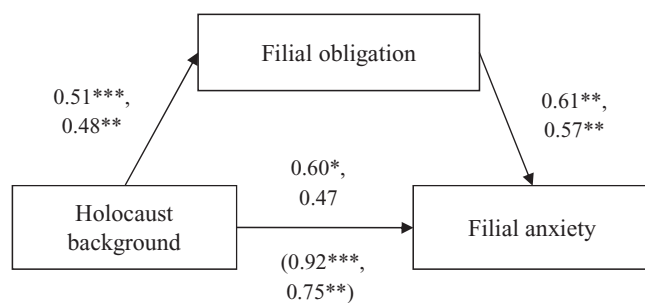


Figure 1. Unstandardized regression coefficients for the pathways among Holocaust background (1 = Comparisons; 2 = Offspring of Holocaust survivors), filial obligation and filial anxiety (Study 2). Upper coefficients refer to analyses controlling offspring education level and parental medical conditions. Lower coefficients refer to analyses controlling for offspring general anxiety, education level and parental medical conditions. Coefficients in parentheses refer to the effect of Holocaust background on filial anxiety without including filial obligation in the model. * $p < .05$, ** $p < .01$, *** $p < .001$.

Study 3

Method

Participants and procedure

Study 3 examined a convenience sample of 286 community-dwelling participants, who consisted 143 dyads of parents and adult offspring. All parents were Jewish of European origin born before 1945. Offspring were born after 1945 and had two parents who were alive during World War II. Eighty-six dyads included HS and OHS, and 57 dyads included comparison parents without a Holocaust background and their offspring. Holocaust background was determined by parents' presence under Nazi or pro-Nazi occupation or domination during World War II. Thirteen percent of parent-offspring dyads were father-son dyads, 21.0% were father-daughter dyads, 23.1% were mother-son dyads, and 42.7% were mother-daughter dyads. The ratio of the HS-OHS dyad types did not significantly differ from the comparison dyad types, $\chi^2(3) = 0.79$, $p = 0.85$.

Table 4 presents the background characteristics of the study groups. HS had a significantly lower education level and they rated their economic and health status as significantly lower than comparison parents did. However, groups were statistically matched for age, gender and marital status. The offspring groups were matched in all background characteristics.

Study 3 took place in January–April 2017. Undergraduate student research assistants approached potential participants available in their surroundings (e.g. neighborhoods, large workplaces) and asked them to take part in the study. In cases where one part of the dyad declined to participate (due to various reasons, such as lack of interest, lack of time, poor health etc.), both potential participants were excluded from the study. Participants read and signed an informed consent form, which also noted that the questionnaire includes queries regarding aging, various difficult life events and the Holocaust. Following that, participants, mostly offspring, accessed an online questionnaire via a link sent to them. The research assistants interviewed participants, mostly parents, who could not complete the online questionnaire themselves. Participants were interviewed in their homes or other places convenient to them. The participants' confidentiality was guaranteed, as their names were not noted on the questionnaire. The study received approval by the Bar-Ilan University ethic committee.

Measures

Parents completed the DSM-5 20-item PTSD Checklist (Weathers et al., 2013). In rating their symptoms, HS were asked to refer to the Holocaust, whereas comparison parents were asked to refer to the most traumatic event they experienced,

Table 4. Background characteristics of the study groups: study 3.

<i>n</i>	Survivor families		Comparison families		Comparison tests	
	Parents	Offspring	Parents	Offspring	Parents	Offspring
Age					$t(141) = -1.70, p = .09$	$t(141) = -1.26, p = .206$
<i>M</i>	82.40	55.94	80.85	54.63		
<i>SD</i>	5.22	6.24	5.46	5.72		
Gender (%)					$\chi^2(1) = 0.03, p = .848$	$\chi^2(1) = 0.06, p = .796$
Woman	65.1	62.8	66.7	64.9		
Man	34.9	37.2	33.3	35.1		
Education (%)					$\chi^2(2) = 17.12, p < .0001$	$\chi^2(2) = 0.29, p = .864$
Below high-school	44.2	2.3	16.1	3.5		
Full high-school	30.2	25.6	26.8	22.8		
Above high-school	25.6	72.1	57.1	73.7		
Marital status (%)					$\chi^2(4) = 2.58, p = .629$	$\chi^2(4) = 5.24, p = .263$
Married	50.0	81.2	57.9	85.7		
Widowed	41.9	0.0	38.6	3.6		
Divorced	4.7	14.1	3.5	8.9		
Single	2.3	2.4	0.0	1.8		
Partner	1.2	2.4	0.0	0.0		
Self-rated economic status					$t(139) = 2.07, p = .040$	$t(141) = 0.15, p = .878$
<i>M</i>	3.42	3.83	3.71	3.85		
<i>SD</i>	0.80	0.82	0.82	0.89		
Self-rated health					$t(140) = 2.76, p = .006$	$t(141) = 0.86, p = .390$
<i>M</i>	2.87	3.97	3.30	4.10		
<i>SD</i>	0.93	0.88	0.87	0.85		

Note. *N* = 286.

which is also known to their offspring. When reporting their most traumatic event, close to a third of the comparison parents (28.3%) referred to the sudden loss of a loved one, 13.2% referred to a life-threatening event that occurred to a loved one, 11.3% referred to exposure to warfare, 7.5% referred to physical assault, 5.7% referred to a serious accident, and 3.8% referred to life-threatening illness. Close to another third (30.2%) referred to exposure to other life-threatening events, such as a natural disaster, physical assault, and physical or sexual abuse. Respondents were asked to rate how much they were bothered by each symptom in the last month on a scale ranging from 0 (*not at all*) to 4 (*extremely*). The PTSD items were summed, with higher values indicating higher PTSD symptom level. Previous studies have used the Hebrew version of the PTSD Checklist for DSM-5 (e.g. Shrira et al., 2017). Cronbach's α was .91.

Offspring were asked to refer to the parent who participated in the study, and completed the new filial anxiety scale (Cronbach's $\alpha = 0.79$) and the Filial Obligation Scale (Cicirelli, 1993; Cronbach's $\alpha = 0.86$). Confirmatory factor analysis was performed with the new filial anxiety scale items (using AMOS, Version 23.0), which showed that the one-construct model fit the data well, $\chi^2(39) = 48.47, p = 0.14$; goodness-of-fit index = 0.95; adjusted goodness-of-fit index = .90; normed fit index = .96; comparative fit index = 0.99; standardized root mean square residual = 0.03 (for more details see Table 2). All goodness-of-fit indices of the one-construct model were within the acceptable range (Browne & Cudeck, 1993; Finch & West, 1997).

Offspring also rated their own anxiety symptoms using the relevant subscale from the Brief Symptom Inventory-18 (BSI-18; Derogates, 2001). The items were rated on a scale ranging from 0 (*not at all*) to 4 (*very much*). An average score was computed, with higher values indicating higher anxiety. The Hebrew version of this inventory was previously used (Shrira, Bodner, & Palgi, 2014). Cronbach's α was .86. As parental PTSD is related to offspring PTSD (Yehuda et al., 2008), we further adjusted for the latter. Therefore, offspring were asked to refer to the most traumatic event they underwent and to rate

their own PTSD symptoms in the last month using the 20-item PTSD Checklist for DSM-5 (Weathers et al., 2013). Cronbach's α was 0.93. When reporting their most traumatic event, close to a quarter of the offspring (23.0%) referred to the sudden loss of a loved one, 19.5% referred to a life-threatening event that occurred to a loved one, 11.4% referred to exposure to warfare, 9.2% referred to a serious accident, and 4.6% referred to life-threatening illness. Close to another third (32.1%) referred to exposure to other life-threatening events, such as physical assault, and physical or sexual abuse. Probable PTSD was determined by a cut-off score of 33 or higher (cf. Bovin et al., 2016) which was evident on 9.2% of the offspring.

Background characteristics were identical to Study 2, and similarly to Study 2, offspring reported whether they have siblings, the time they invest in providing help to their parent, whether their parent receives any help from others, and the type of help they give to the parent with the adapted scale taken from Cicirelli (1983; Cronbach's $\alpha = 0.83$).

Results

Higher filial anxiety was related to a stronger sense of obligation ($r = 0.38, p < 0.0001$), to more general anxiety symptoms ($r = 0.43, p < .0001$), higher PTSD in offspring ($r = 0.24, p = 0.006$), and providing more help to the parent ($r = 0.55, p < 0.0001$). Higher filial anxiety was also evident among older offspring ($r = 0.16, p = 0.04$), among daughters ($t[139] = -2.90, p = .004$), among offspring who reported lower self-rated health ($r = -0.41, p < 0.0001$), those with parents who had a lower education level ($r = -0.32, p < 0.0001$), and with parents who reported lower self-rated health ($r = -0.36, p < 0.0001$).

We next divided our dyads according to probable parental PTSD that was determined as present for scores at the cut-off of 33 or higher (cf. Bovin et al., 2016). There were 21 Holocaust dyads with a parent suffering from probable PTSD, 65 Holocaust dyads with a parent without probable PTSD, and 57 comparison dyads (all of them with parents without probable PTSD).

The three groups significantly differed in parental education ($\chi^2[4] = 23.64, p < .0001$), economic status ($F[2,137] = 7.10, p = 0.001$) and health status ($F[2,137] = 4.64, p = 0.011$). Parents with probable PTSD had lower education level, rated their economic status as lower than both other groups, and rated their health as lower relative to the comparison group. The groups did not significantly differ in parental age ($F[2,137] = 1.96, p = 0.14$), gender ($\chi^2[2] = 0.82, p = 0.66$), or marital status ($\chi^2[8] = 6.76, p = 0.56$). The groups did not differ in offspring age ($F[2,140] = 0.80, p = .44$), gender ($\chi^2[2] = 2.22, p = .32$), education ($\chi^2[4] = 1.09, p = .89$), marital status ($\chi^2[8] = 7.12, p = 0.52$), economic status ($F[2,140] = 0.11, p = 0.88$), or health status ($F[2,140] = 2.16, p = .11$). As parental education level, economic and health status significantly differed between the groups, we controlled for these variables alongside offspring's anxiety and offspring level of PTSD symptoms.

Holocaust-related experiences (e.g. being in concentration camp, work camp, ghetto, hiding, living with partisans, having been exposed to hunger, extreme weather conditions and extreme physical abuse) were documented among Holocaust survivors. We found that compared to survivors without probable PTSD, a significantly greater number of survivors with probable PTSD were in concentration camps (23.8% vs. 7.7%, $\chi^2[1] = 4.01, p = 0.04$), were exposed to hunger (66.7% vs. 40.0%, $\chi^2[1] = 4.53, p = 0.03$), and to extreme weather conditions (61.9% vs. 33.8%, $\chi^2[1] = 5.17, p = 0.02$). Significantly more survivors without probable PTSD reported to have been in hiding than survivors with probable PTSD (60.0% vs. 23.8%, $\chi^2[1] = 8.32, p = 0.004$).

When examining group differences in caregiving-related variables, we found that the three groups significantly differed from each other in the amount of help given to the parents ($F[2,137] = 11.44, p < 0.0001$). OHS with parental PTSD reported helping their parents more ($M = 1.93, SD = 1.14$) than OHS without parental PTSD ($M = 1.28, SD = 0.95$), and comparisons reported helping their parents less than both OHS groups ($M = 0.81, SD = 0.82$). The groups did not significantly differ in the number/order of siblings in their family, $\chi^2(2) = 5.43, p = 0.07$, in the amount of time they provided help to their parent, $\chi^2(4) = 7.53, p = 0.11$, and in whether their parent receives additional help, $\chi^2(2) = 3.48, p = 0.17$.

Table 5 presents the results of the multivariate analyses of covariance assessing group difference in filial anxiety and sense of obligation. As can be seen, OHS with parental PTSD reported higher filial anxiety compared to both other groups. Moreover, OHS with parental PTSD reported a stronger sense of obligation relative to the comparison group. OHS without

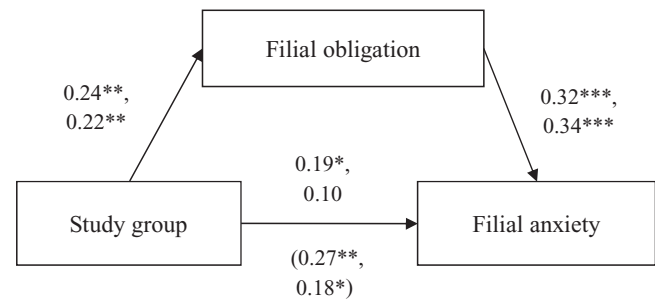


Figure 2. Unstandardized regression coefficients for the pathways among study group (1 = Comparisons; 2 = Offspring of Holocaust survivors without parental PTSD; 3 = Offspring of Holocaust survivors with parental PTSD), filial obligation and filial anxiety (Study 3). Upper coefficients refer to analyses controlling for parental education, and economic and health status. Lower coefficients refer to analyses controlling for offspring general anxiety, offspring PTSD, and parental education, and economic and health status. Coefficients in parentheses refer to the effect of study group on filial anxiety without including filial obligation in the model. * $p < .05$, ** $p < .01$, *** $p < 0.001$.

parental PTSD did not significantly differ from the other groups in sense of obligation. Adjusting for offspring anxiety and PTSD symptoms yielded similar results, namely OHS with parental PTSD reported significantly higher filial anxiety and sense of obligation relative to the comparison group, while OHS without parental PTSD did not significantly differ from the other groups.

When assessing the mediation model, sense of obligation mediated the effect of the study groups on filial anxiety. When predicting filial anxiety with both variables (groups and sense of obligation), the coefficient of groups predicting filial anxiety decreased from $B = 0.27, p = 0.0017$ to $B = 0.19, p = 0.022$. The indirect effect was 0.08, bootstrapped 95% CIs [0.02, 0.16]. When adjusting for offspring general anxiety and PTSD, the coefficient of groups predicting filial anxiety decreased from $B = 0.18, p = 0.03$, to a non-significant effect, $B = 0.10, p = 0.19$. The indirect effect was 0.07, bootstrapped 95% CIs [0.02, 0.18]. Figure 2 presents the mediation model.

To recapitulate, Study 3 showed that the higher filial anxiety associated with parental Holocaust exposure was mainly a factor of parental PTSD and not of Holocaust exposure per se. Moreover, as in Study 2, sense of obligation mediated the relationship between study groups and filial anxiety.

Discussion

In an attempt to assess the experience of offspring caring for traumatized aging parents, we investigated filial anxiety and

Table 5. Results of multivariate analysis of variance comparing groups on filial anxiety and obligation: study 3.

Variable	OHS with parental PTSD <i>M (SD)</i>	OHS without parental PTSD <i>M (SD)</i>	Comparisons without parental PTSD <i>M (SD)</i>	Controlling for parental education, and economic and health status			Controlling for offspring general anxiety, offspring PTSD, and parental education, and economic and health status		
				<i>F</i>	<i>p</i>	η^2	<i>F</i>	<i>p</i>	η^2
Filial anxiety	3.24 (0.73) ^a	2.65 (0.69) ^b	2.45 (0.70) ^b	6.77	0.002	0.093	3.40	0.036	0.055
Filial obligation	4.47 (0.66) ^a	4.23 (0.58) ^{a,b}	3.97 (0.73) ^b	4.66	0.011	0.066	5.04	0.008	0.079

Note. In the two analyses, *n* is 21, 62 and 55/54 for OHS with parental PTSD, OHS without parental PTSD and comparisons, respectively. Wilks' $\lambda(4,262) = 0.87, p = 0.002$, for analysis controlling for parental education, and economic and health status. Wilks' $\lambda(4,234) = 0.91, p = 0.01$, for analysis controlling for offspring general anxiety, offspring PTSD, parental education, and economic and health status. Means that do not share letters significantly differ from each other in a post-hoc Bonferroni test (post-hoc comparisons refer to the MANCOVA controlling for parental education, and economic and health status. When controlling for offspring anxiety, offspring PTSD, post-hoc comparisons were similar for filial obligation, but differences in filial anxiety were significant only when comparing OHS with parental PTSD and comparisons only).

sense of obligation among OHS. Beginning with a qualitative study (Study 1), we found that OHS expressed concerns that their parents will experience decline and pain, and referred to caregiving difficulties. Based on the categories extracted in Study 1, we constructed a new filial anxiety scale, which we believe is sensitive to unique concerns of offspring caring for traumatized aging parents. In Study 2, the scale showed good reliability and validity. Moreover, confirming our hypotheses, we found that OHS reported higher filial anxiety and sense of obligation, and that sense of obligation mediated the effect of having a Holocaust survivor parent on filial anxiety. Finally, in Study 3, we further found that OHS with posttraumatic parents reported higher filial anxiety and sense of obligation than matched comparisons. Critically, OHS without posttraumatic parents did not significantly differ from comparisons. Once again, sense of obligation served as a mediator, this time in the positive relationship between parental PTSD and filial anxiety. Below we discuss these findings and their implications in greater depth.

Some thematic categories extracted in Study 1 were noted in previous works on filial anxiety. For example, worries resulting from being far away from the parent and fear that the parent might suffer on the one hand, as well as fear that one's resources will be depleted leading to collapse due to caregiving burden (Cicirelli, 1988; Hay et al., 2007). However, several issues seem to be distinctively Holocaust related. For example, offspring were concerned that their parents' current suffering will add up to the Holocaust suffering, and were determined to protect the parents from any additional pain. Offspring also mentioned that some parental behaviors relate to the traumatic past and further complicate caregiving tasks. Similar features were reported in previous qualitative studies on adult offspring who care for aging Holocaust survivors (Anderson et al., 2013; Isserman et al., 2017).

The new filial anxiety scale used in Studies 2 and 3 showed good internal reliability and convergent validity with positive correlations with caregiving burden scales and general anxiety symptoms. Moreover, the robustness of its factor structure was demonstrated by replicating it across both studies.

The heightened filial anxiety reported by OHS (Study 2) and by OHS with parental PTSD (Study 3) was mediated by their increased sense of obligation. These findings may reflect the continuation of early parent-child dynamics that were typical of some HS families. Such dynamics were characterized by over-involvement on both sides. HS were found to overprotect their offspring and were closely engaged with them (Kellermann, 2001; Letzter-Pouw et al., 2014). Offspring, on their side, feeling an enormous devotion towards their parents, tended to shield them from additional suffering and to compensate for their past losses (Kellermann, 2009; Palgi et al., 2015). In such families, it seems that striving toward independence and autonomy is likely to be experienced by both generations as desertion or betrayal.

Caring for the aging HS may accentuate past, as well as existing, intergenerational conflicts. Issues such as interdependence, institutionalization, separation and loneliness put the core relationship between survivors and their offspring to test (Shmotkin et al., 2011a). Under these circumstances, both generations focus on tackling lingering issues that may resonate Holocaust-related memories and themes, including the legacy of survival, shame and guilt about being weak and dependent, compassion in conditions of agony, and attitudes toward dying and death (Shmotkin et al., 2011b; Shrira, 2016).

Study 3 further showed that amplified sense of obligation and filial anxiety are restricted to OHS with parental PTSD. It seems that additional challenges rise in late-life parent-child relationship due to persistent parental anxiety and hypervigilance (Anderson et al., 2013). First, over-involvement between parents and offspring can be higher when HS suffer from posttraumatic distress (Yehuda & Bierer, 2008). Moreover, although some studies found increased physical morbidity among HS in general (Iecovich & Carmel, 2010), it is known that HS with PTSD manifest more physical and cognitive health problems compared to those without PTSD (Brodaty, Joffe, Luscombe, & Thompson, 2004). Indeed, we have controlled for parents' physical health in both Study 2 and 3, yet it is still possible that other aspects of increased physical and cognitive morbidity not fully captured in these studies explained the heightened filial obligation and anxiety among OHS with parental PTSD.

It is important to note that in Study 2, our findings remained significant after adjusting for general anxiety symptoms, and in Study 3, the findings remained significant after adjusting for both general anxiety and PTSD among offspring. This indicates that the relationship between parental Holocaust exposure, and more specifically parental PTSD, to higher filial anxiety cannot be solely explained by a tendency towards higher general anxiety or PTSD among the offspring. Therefore, although filial anxiety was previously found to be related to trait anxiety (Murray et al., 1996), it seems that a heightened filial anxiety is a unique feature that characterizes offspring of traumatized parents.

Aside from the negative effects of parental PTSD, Study 3 further showed that OHS without parental PTSD did not differ from the other groups in filial anxiety. This indicates that filial anxiety is not an inevitable consequence of the parents' traumatic past, but rather an outcome of parents' difficulties in coping with the trauma and its aftereffects. Although there are many HS who suffer from PTSD symptoms, many others do not suffer from a clinical diagnosis of PTSD (Kellermann, 2009; Shmotkin et al., 2011b). Recent studies showed that while HS memories are frequently saturated with traumatic content, they can simultaneously reminisce in ways that manifest resilience and generativity (O'Rourke, Bachner, Cappeliez, Chaudhury, & Carmel, 2015; O'Rourke, Canham, et al., 2015). Hence, it is plausible that many OHS admire and respect their parents (Isserman et al., 2017), and caring for these parents may also make them proud and increase their feelings of competence and closeness to their parents. These positive care effects may reduce the negative effects of caregiving on health outcomes (Kramer, 1997; López, López-Arrieta, & Crespo, 2005; Piquart & Sörensen, 2003a).

Our findings should be interpreted in light of the studies' limitations. First, our samples relied on convenience sampling, which was probably biased toward high-educated persons and high socioeconomic status. However, Studies 2 and 3 did not specifically select participants from Holocaust-related organizations, and the studies were presented to participants as relating to difficult or traumatic life events. This latter point of sample selection is of high importance, as studies targeting participants from Holocaust-related organizations are biased to produce larger Holocaust effects (Shmotkin & Lomranz, 1998) as well as increased intergenerational transmission (Van IJzendoorn et al., 2003). Nevertheless, future studies should focus on high-risk groups, such as OHS who serve as caregivers to parents suffering from intense physical morbidity

and dementia, as it would be important to examine if the traumatic background may further increase the already elevated negative effects of caring for parents suffering from degenerative conditions (Pinquart & Sörensen, 2003b). Relatedly, future investigations should assess parental physical and cognitive status in more detail than conducted in the current studies.

Second, the sample in Study 3 was not large enough to enable comparisons of paternal and maternal PTSD. Previous studies indicated greater mental distress among female Holocaust survivors (Carmel, King, O'Rourke, & Bachner, 2017), and further showed that maternal PTSD may have stronger effects on offspring (Yehuda et al., 2008); although others found paternal effects as well (Letzter-Pouw et al., 2014). Therefore, gender-based differences should be assessed in future studies using larger samples.

Aside from their limitations, the current studies show that early life traumatic experiences of aging parents may foreshadow the experience of adult offspring caring for them. The current findings have some important practical implications for practitioners helping OHS who care for their parents. In their interventions, practitioners should refer to intergenerational relationships and help both sides to process negative emotions, resolve conflictual and problematic relationships, and improve their relationships. This point is of critical importance, as the quality of the parent-child relationship is strongly related to caregiving burden or satisfaction (Iecovich, 2011). Moreover, it is known that complicated behaviors of the care recipient are associated with caregiving burden and depression, even to a larger degree than the physical and cognitive impairment of the care recipient (Pinquart & Sörensen, 2003a). Therefore, as some OHS need to handle complications resulting from the behavior of their aging parents, practitioners should facilitate offspring comprehension and empathy towards these behaviors. Finally, practitioners may encourage OHS to express their needs, and suggest the utilization of formal services such as respite and adult day care (Anderson et al., 2013).

Disclosure statement

No potential conflict of interest was reported by the authors.

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