

Predicting Depression Among Spouses of Ex-POWs: The Contribution of Exposure to Violence, Trauma, and Stress Through the Life Cycle

Journal of Interpersonal Violence

2023, Vol. 38(5-6) 4832–4851

© The Author(s) 2022

Article reuse guidelines:

sagepub.com/journals-permissions

DOI: 10.1177/08862605221119523

journals.sagepub.com/home/jiv



Dayan Hava¹ , Zahava Solomon²
and Rachel Dekel³

Abstract

The current longitudinal study focused on predicting depression among spouses of former Israeli war veterans (combat veterans or ex-prisoners of war [ex-POWs]). The research examined the direct and moderating role of secondary trauma related to their husbands' war-related experiences, stress related to being exposed to intimate partner violence in their relationship, being a second-generation Holocaust (SGH) survivor, and the effects of additional stressful life events (SLEs) since the end of the war. Wives of ex-POWs and combat veterans ($N = 129$) participated in two time measurements. Spouses of ex-POWs were found to be at higher risk of depression and psychological violence. Psychological violence was a risk factor for depression. The three-way interaction among psychological violence, being a SGH survivor, and experiencing SLEs was significant. In addition, experiencing earlier stressful events had a protective effect. The findings suggest that the association between early exposure and additive

¹University of Haifa, Israel

²University of Tel-Aviv, Israel

³Bar-Ilan University, Ramat Gan, Israel

Corresponding Author:

Dayan Hava, Faculty of Social Science, University of Haifa, Aba Houshi 99, Haifa 31905, Israel.

Email: havadayan64@gmail.com

exposure through life is a complex iteration of factors and does not necessarily follow the vulnerability perspective.

Keywords

intimate partner violence, Holocaust survivor, spouses, stressful life events, depression, ex-POWS

Introduction

Studies on the effect of stressful events in the military have substantiated the related negative repercussions on veterans' significant others, particularly spouses, and the unique burden spouses of ex-prisoners of war (POWs) face alongside prolonged exposure to their traumatized husbands (Greene et al., 2014; Solomon, 1988). Such prolonged exposure can result in a chronic state of heightened arousal, putting considerable tension on intimate relationships because partners feel the need to "walk on eggshells" out of fear of upsetting the veteran (e.g., Dekel & Solomon, 2006). In particular, war captivity seems to be an extreme interpersonal traumatic experience that includes systematic humiliation, deprivation, and torture (Herman, 2015) and may have lingering effects. Such burdens may be related to the negative effect of the caregiver role (Greene et al., 2014) and ex-POWs' spouses' increased responsibility for household and family maintenance in terms of earning money, raising and supporting children, and taking on other familial tasks (Lahav et al., 2019). Coupled with a decrease in marital quality (e.g., Renshaw & Caska, 2012) and the fact that research suggests that women may be more susceptible to heightened secondary traumatization than men (Baum et al., 2014), spouses of war veterans and ex-POWs face stressful demands from diverse and multiple converging sources.

These observations suggest the need for comprehensive studies on war veterans' spouses (both combat veterans and ex-POWs). Such research is all the more needed given observations of the higher frequency of intimate partner violence (IPV) inflicted on war veterans' spouses. Focusing on war veterans' spouses, this research endeavored to add to the current literature with observations of risk and protective factors pertaining spouses' emotional and mental well-being. Focusing on both combat veterans and POWs, this research examined the combined effect and moderations of spouses' emotional well-being stemming from their exposure to their husband's Yom Kippur War-related events, experiences of IPV, status as second-generation Holocaust (SGH) survivors (raised by parents who survived the Jewish

genocide during World War II), and experiences of additional stressful life events (SLEs) such as losing a loved one or facing severe illness.

The reason for including the emotional and mental effects of both the Holocaust and the Yom Kippur War stems from the fact that both events were nation-based traumatic events that left survivors and their families scarred for life. The Holocaust is probably the most traumatic event Jewish people faced, having occurred when Nazi Germany executed genocide and systematically killed 6 million Jews across Europe (Bloxham, 2009). Accompanied by horrifying systematic persecution and unspeakable atrocities inflicted on Jewish people, the Holocaust's pathogenic effects have lingered among SGH and even third-generation Holocaust survivors (Gangi et al., 2009; Zimmermann & Forstmeier, 2020).

The second traumatic event included in this study pertains the Yom Kippur War that occurred in 1973 when a coalition of Arab states launched a surprise attack against Israel. The war inflicted severe casualties on the Israelis, with about 3,000 dead soldiers, about 9,000 wounded soldiers, and almost 300 soldiers captured and held as POWs. The shock from the surprise attack and the numerous casualties represented a nation-based trauma (Rabinovich, 2004), inflicting a terrible psychological blow to Israelis soldiers, ex-POWs, families, and society at large. The two traumatic events, the Holocaust and the Yom Kippur War, coincided in this study, because part of the Yom Kippur War cohort were SGH survivors.

In addition to the inclusion of these two macro-level, nation-based traumatic events, we examined the effects of meso-level stressful events on war veterans' spouses. Among meso-level stressful events, we examined IPV and the effects of SLEs. SLEs are pathogenically significant experiences that an individual interprets as physically, socially, or psychologically threatening, such as a serious illness, loss of a job or intimate relationship, or death of a loved one (Cohen et al., 2019).

In light of this evidence, the current longitudinal study focused on predicting depression among spouses of former Israeli Yom Kippur War veterans by exploring the implications of prior direct and indirect stress and trauma in their lives. Specifically, the research explored the direct and moderating role of being ex-POWs' or veterans' spouses, being exposed to IPV, being an SGH survivor, and having faced SLEs since the war ended.

Secondary Traumatization

A considerable body of research has substantiated the negative repercussions of traumatized veterans' plight on their significant others, particularly their spouses). Secondary traumatization incurred by being exposed to people who

have been traumatized has been consistently observed in spouses of combat veterans (Greene et al., 2014), particularly among spouses of traumatized former POWs (e.g., Sherman et al., 2006). Due to spouses' exposure to their husbands' trauma and its negative repercussions, the most commonly noted sequelae among spouses include experiencing posttraumatic stress symptoms, depression, and anxiety (Norris et al., 2018). Moreover, a considerable international body of research has documented the association between veterans' combat and war captivity with aggressive and violent behavior toward their spouses (e.g., Beckham et al., 2000).

Intimate Partner Violence

IPV takes many forms, including physical, emotional, and economic terror. It involves an especially jarring betrayal of the marriage vows. As a result, it has been consistently implicated in long-term detrimental effects on the victims. These effects go well beyond the immediate impact felt by the victims and often include long-term poor physical and psychological health (e.g., Hawcroft et al., 2019), a high risk of suicide attempts (e.g., Devries et al., 2013), and higher adjusted mortality risk (Baker et al., 2009). Studies aiming to identify the adverse mental and emotional effects of physical and psychological domestic abuse have found psychological abuse to be more harmful than physical abuse (e.g., Comecanha et al., 2017; Pico-Alfonso, 2005; Taft et al., 2006).

Psychological abuse refers to sustained and repetitive behavior and is differentiated from the emotional, mental, and social pathogenic effects of abuse from transitory aggression and violence (e.g., Follingstad & Dehart, 2000). This form of abuse does not leave physical marks, instead leaving unseen pain that damages the victims' mental, emotional, and physical well-being (Almendros et al., 2009; Martin-de-las-Heras et al., 2022; Overstreet et al., 2015). Psychological abuse may include isolation, insults, ridicule, possessiveness, verbal threats, hostile nonphysical or sexual tactics, emotional blackmail, destroying cherished personal property, and controlling behavior (Domenech del Rio & Garcia del Valle, 2017; Schumacher et al., 2001). Studies on psychological abuse demonstrate that it can precede, follow, or occur alongside physical violence (e.g., Barros-Gomes et al., 2019). At the same time, psychological abuse has been noted as potentially occurring in the absence of physical abuse, as an independent form of abuse, or the beginning of a violence sequelae (e.g., Domenech del Rio & Garcia del Valle, 2017). One of the most common and conspicuous outcomes of IPV is depression and post-traumatic stress disorder (PTSD; e.g., Dokkedahl et al., 2021; La Flair et al., 2012), which were found to be more frequent and severe under

conditions of psychological abuse than under physical IPV (e.g., Comecanha et al., 2017; Dye, 2019; Pico-Alfonso, 2005). Reports of high rates of IPV-induced depression are consistent across various sociocultural groups (e.g., Comecanha et al., 2017; Wong et al., 2011) and populations (e.g., Martin-de-las-Heras et al., 2022).

SGH Survivors

The vulnerability perspective suggests that prior trauma often leaves survivors vulnerable to subsequent adversity (Breslau et al., 1999; Solomon et al., 2021). One group of women who may be at an increased risk of depression in the wake of IPV are SGH survivors. SGH survivors are individuals who were raised in a family in which one or two parents were exposed to the Holocaust, the genocide of Jews by the Nazi regime during World War II. The psychological literature identifies SGH survivors as an emotionally vulnerable group (e.g., Van Lizendoorn et al., 2013). SGH survivors are described as being prone to extreme distress and psychopathology (Baider et al., 2000), high anxiety, low self-esteem, fear of aggression, problems developing interpersonal relationships (Zimmermann & Forstmeier, 2020), a reduced level of independence, and a tendency to be submissive (Gangi et al., 2009).

The literature has noted that prior trauma may erode a person's resilience and coping capacities when facing subsequent adversity (Breslau et al., 1999; Solomon et al., 2021). For instance, higher levels of distress were noted among SGH survivors facing life-threatening illnesses (Baider et al., 2000), and higher rates of PTSD were noted among SGH survivors who faced combat stress (Solomon et al., 1988).

Prior SLEs

Another potential risk factor for depression following IPV relates to prior SLEs among IPV victims. Such events usually refer to significant experiences that an individual interprets as physically, socially, or psychologically threatening, such as a serious illness, loss of a job or intimate relationship, or death of a loved one (Cohen et al., 2019). Research on the effects of SLEs on individuals' psychological well-being has demonstrated its overwhelming adverse and pathogenic effects (e.g., Hammen, 2016). Previous studies have demonstrated the pathogenic effects of SLEs on individuals' emotional and mental well-being and noted the particular pathogenic effects of interpersonal SLEs (those related to interpersonal events) on women (e.g., Kucharska, 2017). Moreover, research on depression has reported the detrimental effects of exposure to SLEs specifically in relation to spouses facing IPV (Bodenmann

et al., 2010). However, the question remains: Is cumulative SLE a risk factor precipitating depression or a moderating factor protecting from depression?

The Present Study

The present study focused on predicting depression among spouses of ex-POWs and their counterparts, spouses of combat veterans. This was done by focusing on the implication of prior SLEs and trauma experienced directly and indirectly in their spouses' lives via a longitudinal design. Prior trauma often leaves survivors vulnerable in the face of subsequent adversity (Breslau et al., 1999; Solomon et al., 2021). This vulnerability may stem from previous direct or secondary traumatic exposure. Thus, in the current study, the specific contribution of physical and psychological IPV as experienced in their relationship was explored while also exploring the role of additional stressful or traumatic exposure. First, the secondary traumatization related to being an SGH survivor was explored. Second, the contribution of the cumulative stress effects deriving from additional SLEs during their lives was considered. Finally, the interactions between these traumatic and stressful events were examined.

In summary, the current study focused on predicting depression following exposure to cumulative stressful and traumatic events in the lives of spouses of war veterans (both combat veterans and ex-POWs). The research explored both the direct contribution of each layer of exposure and the moderating effects. Thus, the hypotheses were as follows:

Direct effect: (1) Wives whose husbands are ex-POWs will be at higher risk of depression than those whose husbands were not held captive. (2) Wives who experienced psychological and physical IPV will be at increased risk of depression. (2a) However, psychological IPV will have a greater pathogenic effect than physical IPV on wives' depression. (3) Wives who are SGH survivors and have been exposed to more SLEs will be at higher risk of depression.

Interaction effects: (4a) Wives exposed to IPV and who are SGH survivors will be at higher risk of depression than those who are not SGH. (4b) Wives who experienced IPV and more SLEs will be at higher risk of depression than those who experienced fewer SLEs. (4c) Last, a three-way interaction: Wives exposed to IPV who are SGH survivors and experienced more SLEs will be at higher risk of depression than those who had not.

Methods

Participants and Procedure

The current study was part of a multi-cohort longitudinal study of Israeli combat veterans of the 1973 Yom Kippur War and their spouses. Data were

collected by questionnaires filled out by the veterans and their spouses. The questionnaires were administered at the participants' homes or another location of their choice, and they were requested to fill them out in privacy. For the overall study, data were collected from two groups of 1973 Yom Kippur War combat veterans, ex-POWs and a matched control group of non-POWs, at three time points (1991, 2003, and 2008–2010). For this study and as a part of the larger project's data collection, data were collected from spouses 30 (T1: 2003) and 37 (T2: 2010) years after the war (for details, see Greene et al., 2014). Of the 230 veterans who participated in T1, 213 were married or had a partner, of which 156 (73.2%) agreed to participate. In T2, 250 of the veterans were married and 172 (68.8%) of spouses agreed to participate.

In all, 129 wives participated in both time measurements and were included in the study. The spouses had an average age of 58 ($M=58.28$, standard deviation [SD]=5.79), 14 years of education ($M=14.6$, $SD=3.17$), 34 years of marriage ($M=34.20$, $SD=9.19$), and three children ($M=3.23$, $SD=3.00$); 47.7% were working full-time, 20.9% had part-time jobs, and 31.4% were not working. Of the participants, 37 were born to Holocaust survivors—for 25, both parents were Holocaust survivors; for six, only their mother was a Holocaust survivor; and for six, only their father was a Holocaust survivor (for further information, see Greene et al., 2014).

Following approval from the Israel Defense Forces and Tel Aviv University Review Board, we contacted the veterans and their spouses and obtained written informed consent.

Measures

Symptom Checklist 90 and Global Severity Index

Wives' psychiatric symptoms were measured using the Symptom Checklist 90 (Derogatis & Cleary, 1977), a widely used, well-validated, 90-item, self-report questionnaire measuring psychological issues. The Global Severity Index of the checklist examines the overall severity of psychiatric symptomatology. Items are rated on a scale of 0 (*not at all*) to 4 (*extremely*) about the 2-week period prior to completing the questionnaire. Based on norms for psychiatric outpatients (Derogatis, 1977), scores equal to or greater than 0.73 were considered as an indication for endorsement of depressive symptoms (Dekel, Mandl, & Solomon, 2013; Dekel, Peleg, & Solomon, 2013; Dekel, Solomon, & Rozenstreich, 2013). For each participant, we calculated the average frequency of experiencing depressive symptoms at each time point. The checklist has been found to have good validity and reliability (Solomon et al., 2005). Cronbach's alpha for the General Severity Index was .96.

Conflict Tactics Scale

The experience of domestic abuse was assessed using the Conflict Tactics Scale (Straus, 1979). This is a self-report scale that includes 6 items measuring psychological IPV (e.g., insults or swearing, yelling) and 13 items measuring physical IPV (e.g., throwing things, pushing, grabbing, or shoving). Spouses were asked to rate how often they were subjected to each type of aggressive behavior, as perpetrated by their veteran partners, during the previous year. Respondents made their estimates using a 6-point frequency scale: *never*, *once*, *2–5 times*, *6–10 times*, *11–20 times*, and *every day*. Scoring was different than the common usage of the measure. Two indexes reflecting the frequencies of physical and psychological aggression were computed. Due to the fact that none of the participants reported being threatened with a knife or being burned as a result of domestic abuse, these two items were not included, and the final score was based on only 17 items. Furthermore, instead of a sum score, the final scores were based on means. The Conflict Tactics Scale has an established internal consistency ranging from .88 to .95 in samples of husbands and wives (Straus et al., 1990). In the present study, Cronbach's alpha was .92.

Significant Life Events

SLEs were assessed using an adaptation of a scale employed in previous studies of Israeli combat veterans (e.g., Solomon et al., 1991). It includes nine stressful experiences: bereavement, financial loss, threat of injury or death, severe road accidents, criminal victimization, severe illness experienced by the veteran or a close person, criminal encounters with the law, and substance abuse. The score indicates the total number of events endorsed.

Data Analysis

Data were analyzed using IBM SPSS Statistics version 22. Data were based on the reports of 129 wives, including those who were SGH survivors ($n=37$) and non-SGH survivors ($n=92$). Expectation maximization was utilized to account for missing data because Little's missing completely at random test was not significant ($\chi^2[16]=14.78, p=.541$), suggesting data were missing at random.

In the first step, we compared the groups based on the study variables. In the second step, bivariate Pearson correlations were computed for all study variables. In the third step, we introduced two multiple moderation analyses (Hayes, 2012). We examined the contribution of physical and psychological IPV at T1 to depression symptoms at T2 (beyond the link between T1 depression and T2 depression). We also examined the main effects of (a) previous

SLEs across the life span since the war and until T2 and (b) the contribution of being an SGH survivor on depression, controlling for the contribution of being an ex-POW's spouse. In the last step, we tested three variables using two-way interactions and one three-way interaction: (a) SLEs and physical or psychological IPV; (b) SGH survivor status and physical or psychological IPV, and (c) physical or psychological IPV, SGH survivor status, and SLEs.

We used the PROCESS computational tool (Hayes, 2012) Model 3 to examine two models, one that focused on physical IPV and another that focused on psychological IPV. Power analyses using acceptability calculators of G*Power 3 software (Faul et al., 2007), assuming $\alpha = .05$ and $n = 129$, were conducted; a small effect size of .15 for analyses of multiple regression with eight predictors, of which three were variables, indicated a high power of .850. We divided the IPV types into two models due to high multicollinearity between these variables. Moreover, adding variables to a regression of both IPV types created a load of 19.44 (variance inflation factor). The bivariate correlation between the IPV types was $r = .69$, and in a regression, the coefficient exceeded the possible range. Therefore, we ran two separate regressions.

Results

Table 1 presents univariate differences between ex-POWs' spouses and spouses of controls in all study measures. As shown in Table 1, ex-POWs' spouses reported higher T1 depression symptoms compared to control spouses. However, the groups reported similar levels of depression at T2. In addition, ex-POWs' spouses reported higher T1 psychological IPV compared to control spouses (generally, there was a higher variance in psychological violence, with relatively more participants reporting different levels of occurrences of violence at all ranges, between *never* and *almost always*). However, similarly low levels of physical IPV were reported by both groups (most participants in both groups reported scores of 1–3, whereas very few, 7%–9%, scored 4 or more, which indicates *never* to *2–5 times* regarding occurrences of violence). The groups also did not differ in SLEs. In addition, no significant differences in the levels of the study variables (depression, IPV, and SLEs) between SGH and non-SGH survivors were found.

Bivariate Correlations

Bivariate Pearson correlations and means and SDs of the study variables are presented in Table 2. As can be seen from the table, T1 depression and T2 depression were significantly and positively associated. Higher levels of depression at T1 and T2 were significantly associated with higher levels of

Table 1. Differences Between Ex-POW's Spouses and Control Spouses in Study Variables.

	Control Spouses	Ex-POW Spouses	F(1, 94)	p
Psychological IPV T1	1.34 (0.35)	1.62 (0.79)	4.17*	.044
Physical IPV T1	1.03 (0.08)	1.11 (0.46)	1.43	.234
Depression T1	0.56 (0.60)	0.91 (0.83)	5.17*	.025
Depression T2	0.60 (0.58)	0.77 (0.49)	2.41	.123
SLEs	2.95 (1.45)	3.10 (1.84)	0.22	.442

Note. Ex-POW = ex-prisoner of war; IPV = intimate partner violence; SLEs = stressful life event. * $p < .05$.

Table 2. Bivariate Pearson Correlations Between Study Variables and Means and SDs of Study Variables.

	1	2	3	4	5	6	7
1. Depression T1	—						
2. Depression T2	.52***	—					
3. Psychological IPV	.39***	.46***	—				
4. Physical IPV	.26*	.51***	.69***	—			
5. SLEs	.21*	.26*	.12	.03	—		
6. SGH survivor	-.02	-.02	.04	-.07	.12	—	
7. Ex-POW's spouse	.21*	.14	.20*	.12	-.05	.04	—
M	0.79	0.72	1.52	1.08	3.06	0.19	0.67
SD	0.77	0.56	0.68	0.37	1.73	0.40	0.47

Note. Ex-POW = ex-prisoner of war; IPV = intimate partner violence; SD = standard deviation; SGH = second-generation Holocaust; SLEs = stressful life events. *** $p < .001$. * $p < .05$.

psychological and physical IPV. More SLEs were also associated with higher depression at T1 and T2.

Contribution of Psychological IPV to T2 Depression and the Moderating Role of SLEs and SGH Survivor Status

The psychological IPV model was significant, $F(9, 119) = 10.83, p < .001$, with 45.04% of the variance explained. Table 3 demonstrates the main and

Table 3. Estimated Effects of T1 Physical/Psychological Violence on T2 Depression.

Model of Psychological Violence		B	SE	t	p
Predictors					
Predicted variable: T2 depression					
T1 psychological IPV		.22**	0.08	2.71	.007
T1 depression		.35***	0.07	5.09	.000
SLE		-.02	0.03	-0.88	.378
Ex-POWs		.03	0.03	0.33	.744
SGH		.02	0.03	0.54	.593
Two-way interactions	SLE × psychological IPV	-.05	0.04	-1.11	.269
	SGH × psychological IPV	.02	0.08	0.24	.808
Three-way interaction	Psychological IPV × SGH × SLE	-.16**	0.05	-3.14	.002
Probing	1. Non-SGH and a high number of SLE	.42**	0.15	2.90	.004
T1 psychological IPV	2. Non-SGH and a low number of SLE	-.03	0.14	-0.20	.839
	3. SGH and a high number of SLE	-.14	0.15	-0.96	.339
	4. SGH and a low number of SLE	.63*	0.24	2.60	.010
Model of Physical Violence		B	SE	t	p
T1 physical IPV		.59	0.32	1.84	.681
T1 depression		.43***	0.07	6.29	.000
SLE		-.02	0.03	-0.61	.541
Ex-POWs		.02	0.84	0.27	.790
SGH		.10	0.10	1.00	.321
Two-way interactions	SLE × physical IPV	-.17	0.21	-0.82	.451
	SGH × physical IPV	2.18*	1.02	2.14	.034
Probing	1. SGH	2.82 [^]	1.51	1.87	.065
	2. Non-SGH	-.03	0.15	-0.21	.834
Three-way interaction	Physical IPV × SGH × SLE	-1.05	0.68	-1.54	.125

Note. Ex-POWs = ex-prisoners of war; IPV = intimate partner violence; SGH = second-generation Holocaust; SE = standard error; SLEs = stressful life events.

***p < .001. **p < .01. *p < .05. [^]p < 0.1.

interaction effects. Higher levels of psychological IPV were associated with higher levels of T2 depression, beyond the association between T1 and T2 depression, which was also significant. SLE levels were not associated with T2 depression. In addition, the main effect of SGH survivor status was not significant.

The interaction between SLE and psychological IPV was not significant. Having an ex-POW spouse was not associated with T2 depression. Importantly,

the interaction between SGH survivors and psychological IPV was not significant. The three-way interaction between psychological IPV, SGH survivors, and SLEs was significant. The addition of the three-way interaction to the model was significant ($R^2\Delta=4.56$, $F[1, 121]=9.87$, $p=.002$). Probing of the three-way interaction showed that under conditions of non-SGH survivor status, only participants with a high number of SLEs had a significant association between T1 psychological IPV and T2 depression. Conversely, for non-SGH survivors who experienced a few SLEs, the association was not significant. However, for SGH survivors with a few SLEs, the association was significant, whereas among SGH survivors with more SLEs, the association was not significant.

Contribution of Physical IPV to T2 Depression and the Moderating Role of SLE and SGH Survivor Status

The physical IPV model was significant, $F(9, 119)=10.41$, $p<.001$, with 44.07% of the variance explained. Table 3 demonstrates the main and interaction effects. Physical IPV was not associated with T2 depression beyond the association between T1 and T2 depression, which was significant. SLE levels were not associated with T2 depression. In addition, the main effect of SGH survivor status was not significant. Being a spouse of an ex-POW was not associated with T2 depression.

The interaction between SLEs and physical IPV was not significant. Importantly, there was a significant interaction between SGH survivors and physical IPV. The three-way interaction between physical IPV, SGH survivors, and SLEs was not significant, and the addition of the three-way interaction to the model also was not significant ($R^2\Delta=1.12$, $F[1, 119]=2.39$, $p=.125$).

Probing of the SGH survivor status and physical IPV interaction showed that among SGH survivors, the association between T1 physical IPV and T2 depression was positive and marginally significant but greater than the association in the non-SGH survivor group between T1 physical IPV and T2 depression, which was not significant.

Discussion

The current study focused on spouses of war veterans (ex-POWs and combat veterans) and was based on a vulnerability perspective. This perspective assumed that these spouses would have higher risk of both depression and IPV and that their earlier exposures of being SGH survivors and having faced

SLEs would be additional risk factors that would negatively moderate their exposure to current stressors.

Although we hypothesized that spouses of ex-POWs would report higher levels of both psychological and physical IPV, our results only supported this for psychological abuse. In addition, only psychological IPV was associated with depression. Thus, in line with our hypotheses, psychological abuse demonstrated more pathogenic effects than physical abuse, in terms of IPV-induced depression. Our findings are in line with previous studies that reported psychological abuse as related to negative mental and physical health beyond physical IPV (e.g., Coker et al., 2002; Foran et al., 2014; Straight et al., 2003). Of particular relevance to our study is the seemingly salient and particular pathogenic effect of psychological abuse on a family's well-being, through spousal IPV-induced depression. According to prior studies, such spousal depression appeared to be greater and more severe than IPV-induced depression associated with physical abuse (Dye, 2019; Koirala & Chuemchit, 2020) and seemed to be a stronger predictor of PTSD symptoms in IPV victims (e.g., Pico-Alfonso, 2005).

Our findings on the correlation between cumulative SLEs and depression appear to corroborate findings regarding pathogenic effects associated with cumulative SLEs among general populations (e.g., Rubens et al., 2013; Suliman et al., 2009) and IPV spouses (Bodenmann et al., 2010). Such findings may be linked to prior observations noting that cumulative traumas may erode a person's coping skills amid adversity (Breslau et al., 1999; Solomon et al., 2021). Therefore, the cumulative SLEs of ex-POWs' spouses may have been a significant risk factor regarding spouses' IPV-induced depression.

Furthermore, this study's findings suggest that being an SGH survivor, in and of itself, is not a risk factor for IPV-induced depression. This finding seems to be in line with studies noting functional characteristics in SGH survivor profiles, which combine resilience, posttraumatic growth, and positive life attitudes (e.g., Shrira et al., 2011). Thus, it is plausible that the functional, positive characteristics of SGH survivor status play a significant role in moderating the pathogenic effects of IPV, resulting in non-significant differences between IPV-induced depression of SGH and non-SGH survivors.

The picture of the interactive effects between SLEs and SGH survivor status was more complex regarding the moderating role of these factors. When predicting depression with psychological IPV, we found that the three-way interaction was significant. Probing this interaction revealed that SLEs had a different effect on the association between psychological IPV and depression when comparing SGH to non-SGH survivors. It appears that

having SLEs and being an SGH survivor have a protective effect, reflected by a non-significant association between psychological IPV and depression. For SGH survivors who had only a few SLEs and non-SGH survivors with a large number of SLEs, this association was significant. These findings highlight that exposure to earlier stressful events might not necessarily be associated with adversity but rather resilience. This could be due to various mechanisms, including generating individual toughness, creating a sense of mastery over adversity, fostering perceived control and the belief in the ability to cope successfully, establishing effective social support networks, and promoting cell growth in brain areas relevant for coping (Seery, 2011).

Several limitations of this study should be noted. First, the relatively small sample impedes generalizability. Second, assessments were based on self-report questionnaires, which are prone to reporting and memory bias and shared method variance. Third, our research was limited in assessing the prior psychological well-being of the study sample. Given that several studies have indicated the bidirectional relationship between depression and IPV, it is possible that spouses in our sample had existing depressive symptoms, and therefore were more likely to experience subsequent IPV (Devries et al., 2013; Filson et al., 2010).

Notwithstanding these limitations, the findings highlight the complex nature of IPV and suggest that the understanding of nonphysical abuse requires special attention, in terms of both generating a comprehensive analytic understanding of its nature, patterns, and pathogenic effects and developing appropriate tools for treatment, intervention, and prevention. Despite its heightened pathogenic effects on victims' and families' social, mental, and emotional well-being, psychological IPV still requires further research.

Furthermore, future research would benefit from examining psychological IPV and related factors among military couples. Oddly enough, despite findings that psychological IPV is more prevalent than physical IPV in military samples (Byrne & Riggs, 1996; Solomon et al., 2008), to date, most studies with military samples have focused on reporting findings on physical IPV (O'Donnell et al., 2006). This study's findings stress the importance of differentiating between physical and psychological IPV when studying their effects.

Finally, our findings demonstrated that wives who have IPV-induced depression should not be viewed as a homogeneous, undifferentiated group. For example, this research suggests that spouses who were SGH survivors and faced SLEs were more resilient to psychological IPV-induced depression. Such findings imply that additional risk and protective factors influencing the effects of IPV on spouses' depression may exist and await research.

For example, diversity was noted between IPV-induced depression of ex-POWs' spouses and combat veterans' spouses. Similarly, diversity in IPV-induced depression was noted between spouses who were SGH or non-SGH survivors, as well as spouses with cumulative SLEs and those with noncumulative SLEs. Future research should endeavor to further identify IPV-induced depression risk factors among different populations of spouses. In addition, a more comprehensive understanding of IPV-induced depression may be achieved by designs that include husbands' assessments of the abuse they inflict, SLEs they might have experienced (other than combat or war captivity), their own possible abuse by spouses, and their distinct PTSD level. Thus, a comprehensive understanding of IPV-induced depression would be generated using dyadic research designs that capture the complex interactive nature of IPV's pathogenic outcomes and risk factors.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interests with respect to the authorship and/or publication of this article.

Funding

The authors received no financial support for the research and/or authorship of this article.

ORCID iD

Dayan Hava  <https://orcid.org/0000-0003-4314-5384>

References

- Almendros, C., Gamez-Guadix, M., Antonio Carrobles, J., Rodriguez-Carballeira, A., & Porrua, C. (2009). Intimate partner psychological abuse: Concept, measurement, and recent contributions. *Psicologia Conductual, 17*(3), 433–451.
- Baider, L., Peretz, T., Hadani, P. E., Perry, S., Avramov, R., & Kaplan DeNour, A. (2000). Transmission of response to trauma? Second-generation Holocaust survivors' reaction to cancer. *American Journal of Psychiatry, 157*(6), 904–910.
- Baker, C. K., Niolon, P. H., & Oliphant, H. (2009). A descriptive analysis of transitional housing programs for survivors of intimate partner violence in the United States. *Violence Against Women, 15*(4), 460–481.
- Barros-Gomes, P., Kimmes, J., Smith, E., Cafferky, B., Stith, S., Durtschi, J., & McCollum, E. (2019). The role of depression in the relationship between psychological and physical intimate partner violence. *Journal of Interpersonal Violence, 34*(18), 3936–3960.
- Baum, N., Rahav, G., & Sharon, M. (2014). Heightened susceptibility to secondary traumatization: A meta-analysis of gender differences. *American Journal of Orthopsychiatry, 84*(2), 111–122.

- Beckham, C., Moore, S. D., & Reynolds, S. (2000). Interpersonal hostility and violence in Vietnam combat veterans with chronic posttraumatic stress disorder: A review of theoretical models and empirical evidence. *Aggression and Violent Behavior, 5*, 451–466. [https://doi.org/10.1016/S1359-1789\(98\)00018-4](https://doi.org/10.1016/S1359-1789(98)00018-4)
- Bloxham, D. (2009). *The final solution: A genocide*. Oxford University Press.
- Bodenmann, G., Meuwly, N., Bradbury, T. N., Gmelch, S., & Ledermann, T. (2010). Stress, anger, and verbal aggression in intimate relationships: Moderating effects of individual and dyadic coping. *Journal of Social and Personal Relationships, 27*(3), 408–424.
- Breslau, N., Chilcoat, H. D., Kessler, R. C., & Davis, G. C. (1999). Previous exposure to trauma and PTSD effects of subsequent trauma: Results from the Detroit Area Survey of Trauma. *American Journal of Psychiatry, 156*(6), 902–907.
- Byrne, C. A., & Riggs, D. S. (1996). The cycle of trauma: Relationship aggression in male Vietnam veterans with symptoms of posttraumatic stress disorder. *Violence and Victims, 11*, 213–223.
- Cohen, S., Murphy, M. L. M., & Prather, A. A. (2019). Ten surprising facts about stressful life events and disease risk. *Annual Review of Psychology, 70*, 577–597. <https://doi.org/10.1146/annurev-psych-010418-102857>
- Coker, A. L., Davis, K. E., Arias, I., Desai, S., Sanderson, M., Brandt, H. M., & Smith, P. H. (2002). Physical and mental health effects of intimate partner violence for men and women. *American Journal of Preventive Medicine, 23*(4), 260–268.
- Comecanha, R., Basto-Pereira, M., & Maia, A. (2017). Clinically speaking, psychological abuse matters. *Comprehensive Psychiatry, 73*, 120–126.
- Dekel, R., & Solomon, Z. (2006). Marital relations among former prisoners of war: Contribution of posttraumatic stress disorder, aggression, and sexual satisfaction. *Journal of Family Psychology, 20*(4), 709–712.
- Dekel, S., Mandl, C., & Solomon, Z. (2013). Is the Holocaust implicated in PTG in second generation Holocaust survivors? A prospective study. *Journal of Traumatic Stress, 26*(4), 530–533.
- Dekel, S., Peleg, T., & Solomon, Z. (2013). The relationship of PTSD to negative cognitions: A 17-year longitudinal study. *Psychiatry, 76*(3), 241–255.
- Dekel, S., Solomon, Z., & Rozenstreich, E. (2013). Secondary salutogenic effects in veterans whose parents were Holocaust survivors? *Journal of Psychiatric Research, 47*(2), 266–271.
- Derogatis, L. R. (1977). *SCL-90: Administration, scoring, and procedure manual*. Johns Hopkins University Press.
- Derogatis, L. R., & Cleary, P. A. (1977). Confirmation of the dimensional structure of the SCL-90: A study in construct validation. *Journal of Clinical Psychology, 33*(4), 981–989.
- Devries, K. M., Mak, J. Y., Bacchus, L. J., Child, J. C., Falder, G., Petzold, M., Astbury, J., & Watts, C. H. (2013). Intimate partner violence and incident depressive symptoms and suicide attempts: A systematic review of longitudinal studies. *PLoS Medicine, 10*(5), e1001439.

- Dokkedahl, S., Kristenten, T. R., Murphy, S., & Elklit, A. (2021). The complex trauma of psychological violence: Cross-sectional findings from a cohort of four Danish Women Shelters. *European Journal of Psychotraumatology, 12*(1), 1863580. <https://doi.org/10.1080/20008198.2020.1863580>
- Domenech del Rio, I., & Garcia del Valle, E. S. (2017). The consequences of intimate partner violence on health: A further disaggregation of psychological violence—evidence from Spain. *Violence Against Women, 23*(4), 1771–1789.
- Dye, H. L. (2019). Is emotional abuse as harmful as physical and/or sexual abuse? *Journal of Child & Adolescent Trauma, 13*, 399–407.
- Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behaviour Research Methods, 39*(2), 175–191.
- Filson, J., Ulloa, E., Runfola, C., & Hokoda, A. (2010). Does powerlessness explain the relationship between intimate partner violence and depression? *Journal of Interpersonal Violence, 25*(3), 400–415.
- Follingstad, D. R., & Dehart, D. D. (2000). Defining psychological abuse of husbands toward wives: Contexts, behaviors, and typologies. *Journal of Interpersonal Violence, 15*(9), 891–920.
- Foran, H. M., Heyman, R. E., & Smith Slep, A. M. (2014). Emotional abuse and its unique ecological correlates among military personnel and spouses. *Psychology of Violence, 4*(2), 128–142.
- Gangi, S., Talamo, A., & Ferracuti, S. (2009). The long-term effects of extreme war-related trauma on the second generation of Holocaust survivors. *Violence and Victims, 24*(5), 687–700.
- Greene, T., Lahav, Y., Bronstein, I., & Solomon, Z. (2014). The role of ex-POWs' PTSD symptoms and trajectories in wives' secondary traumatization. *Journal of Family Psychology, 28*(5), 666–674.
- Hammen, C. (2016). Depression and stressful environments: Identifying gaps in conceptualization and measurement. *Anxiety, Stress, & Coping, 29*(4), 335–351.
- Hawcroft, C., Hughes, R., Shaheen, A., Usta, J., Elkadi, H., Dalton, T., Ginwalla, K., & Feder, G. (2019). Prevalence and health outcomes of domestic violence amongst clinical populations in Arab countries: A systematic review and meta-analysis. *BMC Public Health, 19*, 315.
- Hayes, A. F. (2012). *PROCESS: A versatile computational tool for observed variable mediation, moderation, and conditional process modeling*. <https://www.afhayes.com/public/process2012.pdf>
- Herman, J. L. (2015). *Trauma and recovery: The aftermath of violence—from domestic abuse to political terror*. Hachette.
- Koirala, P., & Chuemchit, M. (2020). Depression and domestic violence experiences among Asian women: A systematic review. *International Journal of Women's Health, 12*, 21–33.
- Kucharska, J. (2017). Sex differences in the appraisal of traumatic events and psychopathology. *Psychological Trauma: Theory, Research, Practice, and Policy, 9*(5), 575–582.

- La Flair, L. N., Bradshaw, C. P., & Campbell, J. C. (2012). Intimate partner violence/abuse and depressive symptoms among female health care workers: Longitudinal findings. *Women's Health Issues, 22*(1), e53–e59.
- Lahav, Y., Renshaw, K. D., & Solomon, Z. (2019). Domestic abuse and forgiveness among military spouses. *Journal of Aggression, Maltreatment & Trauma, 28*(2), 243–260.
- Martin-de-las-Heras, S., Khan, K. S., Velasco, C., Cano, A., Dios Luna, J., & Rubio, L. (2022). Propensity score analysis of psychological intimate partner violence and preterm birth. *Scientific Reports, 12*, 2942. <https://doi.org/10.1038/s41598-022-06990-2>
- Norris, D., Eichler, M., Cramm, H., Tam-Seto, L., & Smith-Evans, K. (2018). Operational stress injuries and the mental health and well-being of veteran spouses: A scoping review. *Journal of Family Theory & Review, 10*(3), 657–671.
- O'Donnell, C., Cook, J. M., Thompson, R., Riley, K., & Neria, Y. (2006). Verbal and physical aggression in World War II former prisoners of war: Role of post-traumatic stress disorder and depression. *Journal of Traumatic Stress, 19*(6), 859–866. <https://doi.org/10.1002/jts.20157>
- Overstreet, N. M., Willie, C. T., Hellmuth, J. C., & Sullivan, T. P. (2015). Psychological intimate partner violence and sexual risk behaviour: Examining the role of distinct posttraumatic stress disorder symptoms in the partner violence-sexual risk link. *Women's Health Issues, 25*(1), 73–78.
- Pico-Alfonso, M. A. (2005). Psychological intimate partner violence: The major predictor of posttraumatic stress disorder in abused women. *Neuroscience & Biobehavioral Reviews, 29*(1), 181–193.
- Rabinovich, A. (2004). *The Yom Kippur War: The epic encounter that transformed the Middle East*. Schocken Books.
- Renshaw, K. D., & Caska, C. M. (2012). Relationship distress in partners of combat veterans: The role of partners' perceptions of posttraumatic stress symptoms. *Behavior Therapy, 43*(2), 416–426.
- Rubens, S. L., Fite, P. J., Gabrielli, J., Evans, S. C., Hendrickson, M. L., & Pederson, C. A. (2013). Examining relations between negative life events, time spent in the United States, language use, and mental health outcomes in Latino adolescents. *Child & Youth Care Forum, 42*(5), 389–402.
- Schumacher, J. A., Smith Slep, A. M., & Heyman, R. E. (2001). Risk factors for male-to-female partner psychological abuse. *Aggressive and Violent Behavior, 6*(2–3), 255–268.
- Seery, M. D. (2011). Resilience: A silver lining to experiencing adverse life events? *Current Directions in Psychological Science, 20*(6), 390–394.
- Sherman, M. D., Sautter, F., Jackson, M. H., Lyons, J. A., & Han, X. (2006). Domestic violence in veterans with posttraumatic stress disorder who seek couples therapy. *Journal of Marital and Family Therapy, 32*(4), 479–490.
- Shrira, A., Palgi, Y., Ben-Ezra, M., & Shmotkin, D. (2011). Transgenerational effects of trauma in midlife: Evidence for resilience and vulnerability in offspring of

- Holocaust survivors. *Psychological Trauma: Theory, Research, Practice, and Policy*, 3(4), 394–402.
- Solomon, Z. (1988). The effect of combat-related posttraumatic stress disorder on the family. *Psychiatry*, 51(3), 323–329.
- Solomon, Z., Dekel, R., & Zerach, G. (2008). The relationships between posttraumatic symptom clusters and marital intimacy among war veterans. *Journal of Family Psychology*, 22(5), 659–666. <https://doi.org/10.1037/a0013596>
- Solomon, Z., Kotler, M., & Mikulincer, M. (1988). Combat-related posttraumatic stress disorder among second-generation Holocaust survivors: Preliminary findings. *American Journal of Psychiatry*, 145(7), 865–868.
- Solomon, Z., Mikulincer, M., Ohry, A., & Ginzburg, K. (2021). Prior trauma, PTSD long-term trajectories, and risk for PTSD during the COVID-19 pandemic: A 29-year longitudinal study. *Journal of Psychiatric Research*, 141, 141–145.
- Solomon, Z., Mikulincer, M., & Waysman, M. (1991). Delayed and immediate onset posttraumatic stress disorder: The role of life events and social resources. *Journal of Community Psychology*, 19(3), 231–236.
- Solomon, Z., Shklar, R., & Mikulincer, M. (2005). Frontline treatment of combat stress reaction: A 20-year longitudinal evaluation study. *American Journal of Psychiatry*, 162(12), 2309–2314. <https://doi.org/10.1176/appi.ajp.162.12.2309>
- Straight, E. S., Harper, F. W., & Arias, I. (2003). The impact of partner psychological abuse on health behaviors and health status in college women. *Journal of Interpersonal Violence*, 18(9), 1035–1054.
- Straus, M. A. (1979). Measuring intrafamily conflict and violence: The Conflict Tactics (CT) scales. *Journal of Marriage and the Family*, 41(1), 75–88.
- Straus, M. A., Gelles, R. J., & Asplund, L. M. (1990). *Physical violence in American families: Risk factors and adaptations to violence in 8,145 families*. Transaction.
- Suliman, S., Mkabile, S. G., Fincham, D. S., Ahmed, R., Stein, D. J., & Seedat, S. (2009). Cumulative effect of multiple trauma on symptoms of posttraumatic stress disorder, anxiety, and depression in adolescents. *Comprehensive Psychiatry*, 50(2), 121–127.
- Taft, C. T., O'Farrell, T. J., Torres, S. E., Panuzio, J., Monson, C. M., Murphy, M., & Murphy, C. M. (2006). Examining the correlates of psychological aggression among a community sample of couples. *Journal of Family Psychology*, 20(4), 581–588.
- Van Lizendoorn, M. H., Fridman, A., Bakermans-Kranenburg, M. J., & Sagi-Schwartz, A. (2013). Aftermath of genocide: Holocaust survivors' dissociation moderates offspring level of cortisol. *Journal of Loss and Trauma*, 18(1), 64–80.
- Wong, J. Y. H., Tiwari, A., Fong, D. Y. T., Humphreys, J., & Bullock, L. (2011). Depression among women experiencing intimate partner violence in a Chinese community. *Nursing Research*, 60(1), 58–65.
- Zimmermann, S., & Forstmeier, S. (2020). From fragments to identity: Reminiscence, life review and well-being of Holocaust survivors: An integrative review. *Aging & Mental Health*, 24(4), 525–549.

Author Biographies

Dayan Hava, PhD, LLB is a tenured senior lecturer at the School of Criminology, Faculty of Law, University of Haifa, Israel. Using an interdisciplinary framework of analysis, she teaches, conducts research, and publishes papers on crime, law, and society, with a particular interest in gender, sexual crimes and homicide, and their treatment by criminal doctrines, legislation, and case law. Her book *Femicide and the Law: American Criminal Doctrines*, published by Routledge in 2018, is a legislative treatise on American criminal doctrines as applied in cases of femicide. Her upcoming book, *Femicide, Criminology, and Law*, to be published by Routledge in 2022, offers a novel interdisciplinary analysis of femicide by examining both criminological and legal ramifications of the various aspects of the phenomenon. Dr. Dayan is an editorial board member in the peer-reviewed academic journal *Women and Criminal Justice*.

Zahava Solomon is Prof emerita of Tel Aviv University where she served as the head of the Excellence Research Center for Mass Trauma, the head of the school of Social Work and the Head of the Adler Research Center. Formerly, she held role as the Head of Research in Mental Health in the Israeli Defense Forces, Medical Corp. Lt. Col. (retired). She has published over 450 academic articles and seven books. Prof Solomon has earned numerous Israeli and international awards, including the Prize of Israel (2009), which is the highest distinction bestowed by the State of Israel for academic excellence and the Emet prize (2016) and the Laufer Award for Outstanding Scientific Achievement in the field of PTSD by the International Society of Traumatic Stress Studies (1997). Her longitudinal studies of traumatized veterans, including prisoners of war, Combat Stress reaction casualties and their families, as well as decorated veterans, spans over 4 decades and are unique and unparalleled in scope, depth and breath. Prof Solomon's research is scholarly sophisticated, clinically meaningful and exceptionally exemplifies the value of theoretical scholarship in combination with clinically applicable empirical results. Her work has true social significance as it not only informs but also helps shape the psychosocial treatment and rehabilitation of traumatized soldiers and their families. Prof Solomon served on numerous advisory committees including DSM4. Last but not least she advised numerous documentaries on PTSD, and she herself played a role in the Oscar nominated Israeli film, *Waltz with Bashir*.

Prof. Rachel Dekel serves as the academic head of the International School at Bar-Ilan University, Ramat Gan, Israel. She is a full professor at the Louis and Gabi Weisfeld School of Social Work, and a former head of the school. She is the winner of the I-CORE grant: Israeli Centers of Research Excellence, in the area of mass trauma. Prof. Dekel is known for her research on caregiver burden, and couple and family coping, in the context of trauma, PTSD, and domestic violence. She is the founder and director of the Family Trauma Clinic, which promotes advances a family-oriented perspective in helping survivors of various traumatic experiences, such as road accidents, crime, and terror. She has won several Israeli and international grants and has published more than 150 scientific publications and supervised around 60 students. More details about her work can be found at: <https://www.racheldekel.com/>