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## ***Conflict will Harden your Heart: Exposure to Violence, Psychological Distress, and Peace Barriers in Israel and Palestine***

SIVAN HIRSCH-HOEFLE, DAPHNA CANETTI, CARMIT RAPAPORT AND STEVAN E. HOBFOLL\*

Does exposure to political violence prompt civilians to support peace? We investigate the determinants of civilian attitudes toward peace during ongoing conflict using two original panel datasets representing Israelis ( $n = 996$ ) and Palestinians in East Jerusalem, the West Bank and Gaza ( $n = 631$ ) (149 communities in total). A multi-group estimation analysis shows that individual-level exposure to terrorism and political violence makes the subject populations less likely to support peace efforts. The findings also confirm psychological distress and threat perceptions as the mechanism that bridges exposure to violence and greater militancy over time. The study breaks ground in showing that individual-level exposure – necessarily accompanied by psychological distress and threat perceptions – is key to understanding civilians' refusal to compromise in prolonged conflict.

Ending long-standing conflicts is a first-order global goal; dozens of countries have been affected by ongoing armed civil conflict over the past decade.<sup>1</sup> Given the growing proportion of civilian victims in political conflicts, there has been a concomitant increase in the number of people exposed to stressful events associated with such conflict. However, debate over the psychological effects of war and terrorism, and their political ramifications, remains in its nascence. One question in particular demands attention: how (and to what extent) does individual-level exposure to political violence (EPV) impact civilians' willingness to compromise for peace – that is, to negotiate the core issues underlying a given prolonged conflict? We argue that (1) not all civilians amid conflict are exposed to violence the same degree and (2) variations in exposure may be associated with differences in attitudes toward peace. Civilians who are highly distressed and threatened as a result of exposure to war and terrorism are less likely to support diplomatic negotiation and peace.

We disaggregate data from Israel and Palestine to analyze the micro-foundations of prolonged conflict by examining EPV and its political effects. First we discuss the association between EPV and attitudes toward peace, and the psychological stress-threat mechanisms that characterize this process. Next, we present two-wave panels conducted in Israel and Palestine (the West Bank, Gaza Strip and East Jerusalem) in tandem. Our findings demonstrate that prolonged EPV has consequences beyond the harmful effects on individuals. Specifically, the

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<sup>1</sup> Leitenberg 2006.

concomitant psychological distress and sense of threat play an important role in modifying the attitudes of Israelis and Palestinians toward peace.

#### EXPOSURE TO VIOLENCE AND ATTITUDES TOWARD PEACE

In recent years, a growing body of work in political science has examined the effects of ongoing terrorism and political violence in the Middle East, Africa and Europe on political attitudes. Some studies, drawing on insights from economics, show that higher levels of terrorism translate to higher levels of right-wing voting and risk-seeking behaviors.<sup>2</sup> Social psychologists have sought to uncover the mechanisms underlying such effects by drawing on the study of emotions,<sup>3</sup> societal norms,<sup>4</sup> racial prejudice,<sup>5</sup> terror management theory<sup>6</sup> and contact interventions.<sup>7</sup> However, most studies that have examined these effects at the individual level have questioned respondents about their sentiments and perceptions of threat, but not about their direct exposure to violence.<sup>8</sup> For instance, surveys of Americans following 9/11 point to heightened feelings of threat and anxiety, but do not differentiate between respondents who were exposed to the attacks through news reports and those who witnessed them in person, or who lost a family member or friend. To the best of our knowledge, no study has accounted for the effect of prolonged individual-level EPV on attitudes toward peace.

The post-traumatic stress literature has provided numerous insights into the mental health impact of EPV.<sup>9</sup> In political scholarship, EPV was recently used to explain an array of political attitudes – support for combatants in Afghanistan,<sup>10</sup> support for exclusionism<sup>11</sup> or intragroup retaliation in Israel,<sup>12</sup> conservatism in the United States<sup>13</sup> and voting behavior<sup>14</sup> – but not attitudes toward peace. This study is based on the premise that EPV is key to understanding the relationship between terrorism and political violence, on the one hand, and attitudes toward peace and compromise on the other.

#### THE DISTRESS-THREAT MEDIATION HYPOTHESIS

We posit that prolonged EPV produces high levels of psychological distress and threat perceptions, which in turn may lead to a refusal to support peace. This argument is driven by both a psycho-political explanation that we term the ‘stress-based model of political extremism’<sup>15</sup> and by the Shattered Assumptions theory,<sup>16</sup> according to which EPV causes people to feel vulnerable and threatened – feelings that people seek to buffer via defensive

<sup>2</sup> Berrebi and Klor 2008; Gould and Klor 2010; Jaeger and Paserman 2008; Montalvo 2011; Voors et al. 2012.

<sup>3</sup> Lerner et al. 2003.

<sup>4</sup> Bar-Tal et al. 2012.

<sup>5</sup> Echebarria-Echabe and Fernández-Guede 2006.

<sup>6</sup> Greenberg, Pyszczynski, and Solomon 1986.

<sup>7</sup> Maoz 2011.

<sup>8</sup> Davis and Silver 2004; Inglehart, Moaddel, and Tessler 2006; Jakobsson and Blom 2014; Merolla and Zechmeister 2009.

<sup>9</sup> Bleich, Gelkopf, and Solomon 2003; Canetti et al. 2010; Canetti et al. 2014.

<sup>10</sup> Lyall, Blair, and Imai 2013.

<sup>11</sup> Canetti-Nisim et al. 2009.

<sup>12</sup> Zeitzoff 2013.

<sup>13</sup> Bonanno and Jost 2006.

<sup>14</sup> Koch 2011.

<sup>15</sup> Canetti-Nisim et al. 2009. Canetti et al. 2013

<sup>16</sup> Janoff-Bulman 1992.

coping attitudes aimed to protect the self.<sup>17</sup> These attitudes can include inflexibility, stubbornness and an unwillingness to compromise. In the political sphere, this inflexible attitude toward compromise can become linked to political views extant in the public discourse – as seen, for example, in the classic arguments between hawks and doves.

It is well established in the stress literature that EPV can be psychologically traumatic, with severe mental health consequences – heightened anxiety, depression, subjective sense of insecurity, vulnerability and post-traumatic stress disorder (PTSD) – which is generally unnoticed in political research.<sup>18</sup> Not surprisingly, people who experience serious loss, disruption, injury or the death of a loved one tend to show more severe psychological distress than those who suffer fewer consequences.<sup>19</sup> According to Rony Berger, a psychologist and expert in responses to trauma, ‘people in societies beset by prolonged conflict live under a sense of constant threat and, in reaction, develop symptoms of anxiety’.<sup>20</sup>

A key factor connecting EPV to attitudes toward peace is perceptions of threat – that is, the appraisal of danger that the ‘other’, or out-group, poses to the life or well-being of the individual or to the security or self-concept of the group (the latter is also known as sociotropic threat).<sup>21</sup> Threat perceptions are heightened in situations of prolonged conflict; seemingly unrelated events are liable to be seen as threats. This is true for both relatively circumscribed and acute incidents of political violence, such as NYC 9/11, Madrid 3/11, London 7/7 or Oslo 7/22,<sup>22</sup> as well as violence over prolonged periods.<sup>23</sup>

Indeed, since 9/11, a growing number of researchers have begun to examine the impact of terrorism and violence.<sup>24</sup> The current study joins others in examining the impact of threat perceptions as drivers of harsh counter-terrorism policies and increased intransigence,<sup>25</sup> and adds the new elements of individual-level EPV and psychological distress. We hypothesize that psychological distress and threat perceptions will mediate the relationship between EPV and negative attitudes toward peace.

The research model, presented in Figure 1, can be expressed in the following equation, where  $exp_i$  stands for individual-level exposure to political violence,  $ps$  for psychological distress,  $tp$  for threat perceptions,  $Y$  for attitudes toward peace, and  $t$  for the time lag between 2007 ( $t_0$ ) and 2008 ( $t_1$ ):

$$Y = -(exp_i + ps + tp) * t.$$

<sup>17</sup> Hobfoll, Canetti-Nisim, and Johnson 2006.

<sup>18</sup> Bleich, Gelkopf, and Solomon 2003; Bonanno and Jost 2006; Comer et al. 2008; Galea et al. 2002; Hobfoll et al. 2011; Muldoon and Downes 2007; Muldoon and Lowe 2012; Muldoon and Trew 2000; Poulin et al. forthcoming; Solomon and Lavi 2005.

<sup>19</sup> Canetti et al. 2014.

<sup>20</sup> Authors’ interview with Rony Berger, former director of community services at Natal Trauma Center, Herzliya, Israel, 2013.

<sup>21</sup> Canetti-Nisim, Ariely, and Halperin 2008; Huddy et al. 2002; Riek, Mania, and Gaertner 2006.

<sup>22</sup> Echebarria-Echabe and Fernández-Guede 2006; Huddy and Feldman 2011; Jakobsson and Blom 2014; Lerner et al. 2003; Rubin et al. 2007.

<sup>23</sup> Cairns 1996. Despite claims of systematic desensitization, large representative samples that are powered to detect the effects of cumulative trauma exposure on mental health suggest that greater past traumas increase the risk of developing PTSD from a subsequent traumatic event (see Breslau et al. 1999). Thus findings are not clearly suggestive of a desensitization hypothesis. Although some may become desensitized, studies on Israeli–Palestinian affected civilians have shown that the more an individual was exposed, the more likely he or she was to fall into a group with a worse trajectory (i.e., chronic poor mental health) (see Hobfoll et al. 2009).

<sup>24</sup> Bonanno and Jost 2006; Canetti-Nisim et al. 2009; Laor et al. 2010; Rubin et al. 2007.

<sup>25</sup> Gadarian 2010; Green, Fasel, and Sarasin 2010; Herrmann, Tetlock, and Visser 1999; Huddy et al. 2002; Huddy and Feldman 2011; Sniderman, Hagendoorn, and Prior 2004.

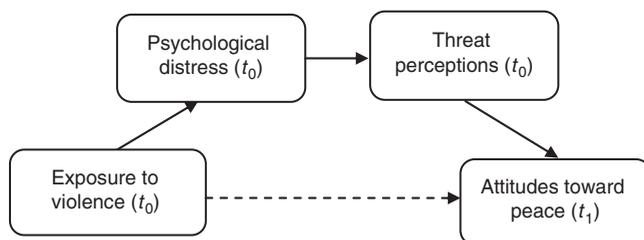


Fig. 1. Hypothesized model explaining changes in attitudes toward peace as a result of exposure to ongoing conflict

#### ISRAELIS AND PALESTINIANS IN THE RANGE OF FIRE

Asymmetric in nature,<sup>26</sup> marked by a large power imbalance<sup>27</sup> and a reality of structured inequalities,<sup>28</sup> the Israeli–Palestinian conflict is one of the deepest and most prolonged conflicts in modern history.<sup>29</sup> Even in times of relative peace, the daily stress of enduring occupation<sup>30</sup> for the Palestinians, or maintaining vigilance against terrorist attacks or rocket fire for Israelis, takes its toll on the mental, cognitive<sup>31</sup> and physical<sup>32</sup> functioning of those living in the shadow of this conflict. Of specific relevance to the underlying mechanisms in our study are far-reaching indications that prolonged exposure has led to heightened levels of psychological distress and threat perceptions in both populations.<sup>33</sup> For example, more than one-third of the subjects in some Israeli studies<sup>34</sup> reported some form of impairment caused by post-traumatic stress. Similarly, a study in the Palestinian territories<sup>35</sup> shows an extremely high prevalence of conflict-related PTSD and depression among Palestinians. These and other statistics underscore the tremendous level of stress and threat engendered by the high levels of violence endemic to this conflict.

#### RESEARCH DESIGN AND METHOD

The study uses two original two-wave panels representing adult Israeli Jews ( $n = 996$ ) and Palestinians ( $n = 631$ ) from low- and high-risk areas.<sup>36</sup> The longitudinal design enables careful causal analysis, allowing us to draw inferences about the impact of EPV on attitudes toward peace over time. Large- $N$  panels permit a unique between-subjects design to determine how ‘like’ populations responded to the conflict.

<sup>26</sup> Gross 2010.

<sup>27</sup> Friedman 2005.

<sup>28</sup> Maoz 2011; Rouhana 2004.

<sup>29</sup> The outbreak of the Al Aqsa Intifada signaled a surge in terrorist attacks against Israeli civilians, with over 8,000 rockets having been launched into Israel. Since 2000, 6,580 Palestinians have been killed by Israeli security forces (<http://old.btselem.org/statistics/english/Casualties.asp>). During Operation Cast Lead, the three-week armed conflict that took place in the Gaza Strip during the winter of 2008–09, some 1,387 Palestinians were killed by 2,572 Israeli strikes (Goldstone 2009, 10–11).

<sup>30</sup> Alimi and Hirsch-Hoefler 2012; Longo, Canetti, and Hite-Rubin 2014.

<sup>31</sup> Heath, Hall, and Canetti 2013; Hobfoll et al. 2009.

<sup>32</sup> Canetti et al. 2014.

<sup>33</sup> Al-Krenawi, Graham, and Kanat-Maymon 2009; Canetti-Nisim et al. 2009; Solomon and Lavi 2005.

<sup>34</sup> Berger, Gekkopf, and Heineberg 2012; Chipman et al. 2011.

<sup>35</sup> Canetti et al. 2010.

<sup>36</sup> For more information on this project, see: <http://www.daphnacanetti.com/Exposure-to-Political-Violence-War-and-Terrorism-Surveys.html>.

### Sample

*The Israeli sample.* Respondents at  $t_0$  were recruited between 30 May and 18 July 2007, using a random telephone survey based on stratified samples to ensure that the sample would be representative of Israeli Jews. The respondents' localities were defined as representing either high- or low-risk areas (Figure 2a). Those who agreed were surveyed again ( $t_1$ ) six months later (18 November 2007 to 31 January 2008), with a final sample of 996 respondents.<sup>37</sup>

*The Palestinian sample.* We employed a stratified cluster random sampling strategy for Palestinian adults living in the West Bank, Gaza Strip and East Jerusalem.<sup>38</sup> As with the Israeli sample, the respondents' localities were defined as representing either high or low risk (Figure 2b). At  $t_0$ , face-to-face interviews were conducted between 16 September and 16 October 2007. The six-month follow-up interviews ( $t_1$ ) took place between 24 April and 17 May 2008,<sup>39</sup> resulting in a final sample of 631 respondents.

### Measures

We designed a closed-ended questionnaire incorporating four measures: EPV, psychological distress, threat perceptions and attitudes toward peace.

*Individual-level EPV.* Individual-level EPV was assessed using three items, in line with the approach proposed by Lyall, Blair and Imai.<sup>40</sup> Respondents were asked whether they had experienced any of the following as a result of Palestinian rocket fire or terrorist attacks (for Israelis) or Israeli attacks or violence (for Palestinians): (1) the death of a family member or friend; (2) witnessing an attack or being present at a site where there were injuries or fatalities; and/or (3) injury to oneself, a family member or a friend. Responses were coded as 0 ('Not exposed to any of these events') or 1 ('Exposed to at least one event').

*Psychological distress.* Psychological distress was assessed using a seventeen-item scale of post-traumatic stress symptoms.<sup>41</sup> Respondents were asked to report on the frequency of

<sup>37</sup> Of eligible candidates contacted at  $t_0$ , 1,365 agreed to participate in the study, which represents a 68 per cent response rate. This response rate compares favorably with those of other phone surveys in Israel and the United States (Galea et al. 2002). Eighty per cent of the first-wave respondents, or 1,103 participants, agreed to be re-interviewed at  $t_1$  – an excellent rate for panels, particularly in conflict zones (e.g., Romano 2006; at the time of the study, Israeli communities bordering Gaza were the target of frequent rocket fire from Palestinian militants). Some respondents ( $n = 107$ ) did not provide answers to some or all of the sensitive questions on EPV, and so were excluded from the analysis. This led to a final sample of 996 respondents, which was largely representative of the adult Jewish Israeli population (Central Bureau of Statistics 2007). Logistic regression indicated no significant differences between the respondents who participated in both waves and those who dropped out, across the major variables and socio-demographic indicators.

<sup>38</sup> A probability-proportional-to-size design was applied to sixty clusters with populations of 1,000 or more, after stratification by district and type of community – urban, rural and refugee camp. Secondly, twenty households were selected in each of the chosen clusters. In the third stage, one individual in each household was selected, using Kish tables to ensure within-household randomization.

<sup>39</sup> Of the 1,902 individuals contacted at  $t_0$ , 1,196 completed the first interviews (a response rate of 63 per cent); 999 members of the original sample agreed to be re-contacted. Of these, 111 could not be reached, leaving 888 in the final sample – a 66.3 per cent re-interview rate. We excluded those who reported exposure only to violence among Palestinian factions (not Israeli violence). Since our goal is to discuss intergroup violence across societies, exposure to inter-factional violence in Palestine was not part of this analysis. Finally, logistic regression found no significant predictors of drop-out.

<sup>40</sup> Lyall, Blair, and Imai 2013.

<sup>41</sup> Foa et al. 1993.

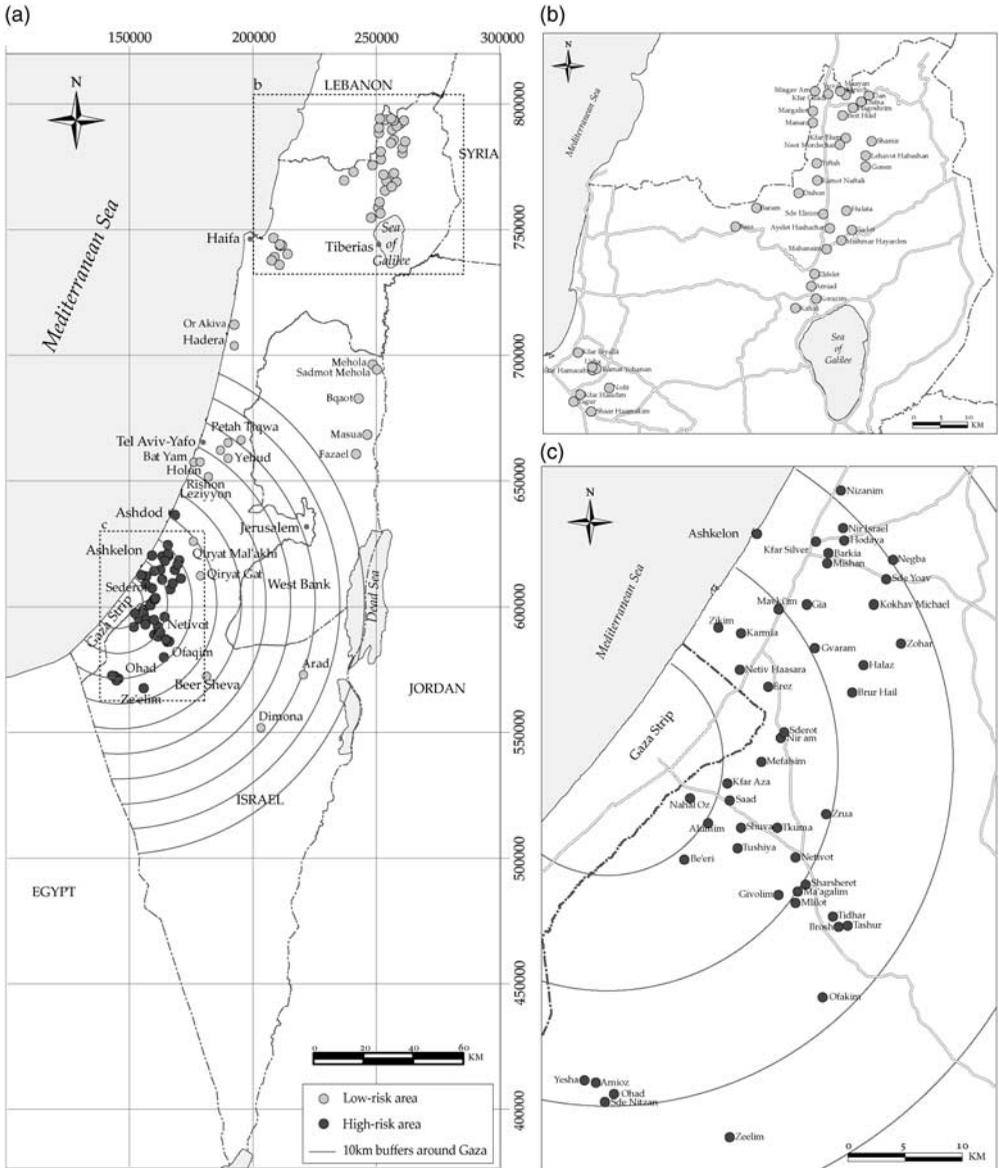


Fig. 2a. Arc GIS-generated map for the Israeli sample showing communities that were highly affected and less affected by Palestinian violence

symptoms over the preceding month on a scale from 1 ('Not at all') to 4 ('Extremely frequent'). Total scores were calculated as the average of all seventeen responses. Cronbach's alpha for the scale was 0.89 for the Israeli sample and 0.84 for the Palestinian sample.

*Threat perceptions.* Threat perceptions were measured using a two-item scale based on studies conducted in the United States<sup>42</sup> and in the Israeli–Palestinian context.<sup>43</sup> We asked

<sup>42</sup> Huddy et al. 2002; Kam and Kinder 2007.

<sup>43</sup> Canetti et al. 2013.



respondents how concerned they were about the possibility of an actual threat to their security from the other side (for example, for Israeli Jews: massive missile attacks; for Palestinians: a large-scale military attack). Answers ranged from 1 ('Not at all') to 4 ('To a very great degree'). The ratings on the two items were averaged to create a single score (Cronbach's alpha was not calculated for these items).

*Attitudes toward peace.* Attitudes toward peace were assessed using items tapping a likely framework for compromise in peace negotiations. Israeli respondents were asked: 'What is your opinion about a peace settlement with the Palestinians in return for restoring the 1967 borders with some border adjustments?' Palestinian respondents were asked: 'What is your opinion about signing a peace agreement with Israel based on a two-state formula while (1) forgoing return of the refugees into the state of Israel and (2) forgoing Palestinian sovereignty over parts of Jerusalem?' In all cases, respondents rated their agreement on a scale from 1 ('Strongly object') to 6 ('Strongly support'). The ratings on the two items for the Palestinian sample were averaged to create a single score (Cronbach's alpha was not calculated for the two items).

Covariates included gender (female = 0, male = 1), age (years) and attitudes toward peace at  $t_0$  (same measure as at  $t_1$  above).

### Data Analysis

We used AMOS 6 to perform Multigroup Structural Equation Modeling, which allows simultaneous testing for regression weights, variances and errors across groups on the basis of analysis of covariance structures.<sup>44</sup> It allows the validation of important aspects of the suggested model by comparing them to their possible alternatives (that is, inverse causality or a direct relationship instead of the proposed mediation). To examine the invariance or variance of peace outcomes between the two subject populations, we calculated maximum likelihood estimates for both models, evaluated by (1) fit measures, namely  $\chi^2$  and degrees of freedom, NFI, TLI and CFI in combination with RMSEA<sup>45</sup> and (2) comparisons of nested models<sup>46</sup> based on  $\chi^2$  differences for restricted and unrestricted models.

## RESULTS

EPV was high overall; 49 per cent of all respondents had experienced at least one violent event (as described in the measures). As Table 1 shows, Palestinians had higher levels of both EPV

TABLE 1 *Descriptive Statistics of Research Variables, and Comparison between Israeli Jews and Palestinian Samples*

Entire sample Variables	Israeli Jews (n = 996)		Palestinians (n = 631)		T	P
	M	SD	M	SD		
Exposure to violence ( $t_0$ )	0.39	0.48	0.64	0.48	10.16	<0.001
Psychological distress ( $t_0$ )	0.39	0.46	2.28	0.52	77.22	<0.001
Threat perceptions ( $t_0$ )	2.96	0.88	2.93	0.89	-0.65	ns
Attitudes toward peace ( $t_1$ )	2.82	1.76	1.62	0.88	-15.92	<0.001

<sup>44</sup> Joreskogand and Sorbom 1996; Kline 2005.

<sup>45</sup> Boomsma 2000.

<sup>46</sup> Bollen 1989.

(M = 0.64, SD = 0.48) and psychological distress (M = 2.28, SD = 0.52). Israeli Jews reported lower levels of EPV (M = 0.39, SD = 0.48), and more positive attitudes toward peace (that is, a greater willingness to compromise) (M = 2.82, SD = 1.76). Interestingly, Israeli Jews and Palestinians reported similar threat perceptions (M = 2.96, M = 2.93, respectively).

*Exposed vs. Not Exposed*

Table 2 presents means and standard deviations of the research variables by EPV. As expected, individuals exposed to at least one violent event scored significantly higher on psychological distress and threat perceptions than those who were not exposed. Conversely, exposed individuals were less likely to report positive attitudes toward peace.

TABLE 2 Comparison between Exposed and Non-exposed Participants, entire sample (Israeli Jews and Palestinians)

Variables	Exposure to violence (n = 797)		No exposure to violence (n = 830)		T	P
	M	SD	M	SD		
Psychological distress ( $t_0$ )	1.41	1.06	0.84	0.94	-11.26	<0.001
Threat perceptions ( $t_0$ )	3.06	0.86	2.83	0.89	-5.20	<0.001
Attitudes toward peace ( $t_1$ )	2.12	1.51	2.58	1.63	5.89	<0.001

*Multigroup Model*

We examined the role of psychological distress and threat perceptions as mediators between EPV and attitudes toward peace across the two samples.<sup>47</sup> We constrained the regression weights for both groups to be equal. This model was compared to a ‘fully free’ model (allowing for variance across the two groups). As seen in Table 3, the findings reveal no significant differences between the two models and an excellent fit to the data ( $\chi^2(7) = 11.06, p > 0.05, CFI = 0.99, NFI = 0.99, TLI = 0.96$ ). This supports the parsimonious model, in which the hypothesis holds for both Israelis and Palestinians.

TABLE 3 Goodness-of-fit Indices and Comparison

	CFI	NFI	RMSEA	TLI	$\chi^2$	Df	$\Delta\chi^2$	$\Delta df$	P
Fully free	0.99	0.99	0.02	0.95	7.27	4			
Regression coefficients only (constrained for two groups)	0.99	0.99	0.03	0.96	11.06	7	3.78	3	ns

<sup>47</sup> To examine causality, we also tested for an alternative model in which EPV leads to increased threat perceptions, which in turn increase levels of psychological distress, leading to negative attitudes toward peace. This model yielded poor adequacy to the data ( $\chi^2(2) = 15.17, p < 0.00, CFI = 0.92, NFI = 0.89, TLI = 0.79, RMSEA = 0.06$ ).

Figure 3 presents the standardized path coefficients<sup>48</sup> for both groups in the constrained model. The results rule out a direct relationship between EPV and attitudes toward peace. Instead, they support our hypothesis of a mediated path between EPV and civilians' refusal to compromise in prolonged conflict through psychological distress coupled with threat perceptions. Three findings are crucial: (1) EPV has a positive and statistically significant effect on psychological distress, (2) higher levels of psychological distress are associated with higher levels of threat perceptions and (3) threat perceptions have a negative and statistically significant effect on support for peace. Given the mediation process, the overall effect of EPV on attitudes toward peace is small, yet the novelty of the findings is our ability to rule out a direct effect in favor of the mediation model.

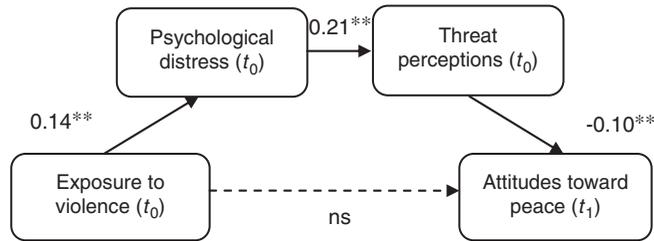


Fig. 3. Psychological distress leading to threat perceptions, leading to more negative attitudes toward peace among Israelis and Palestinians

\*\* $p < 0.01$

Beyond merely asserting an association between EPV and distress, these data provide additional support for our thesis that Palestinian and Israeli attitudes to war and peace should be understood as pivoting on the personal experiences of individuals and related stress reactions. This finding corroborates our basic argument that the contribution of mental health must be acknowledged in any attempt to explain civilians' attitudes amid violent conflict.

Further mediation (bootstrapping) analysis revealed the following results: for psychological distress (as a mediator between EPV and threat perceptions),  $\beta = 0.03$ ,  $SE = 0.007$ ,  $CI = 0.019-0.042$ ,  $p < 0.01$  for Israelis,  $\beta = 0.029$ ,  $SE = 0.006$ ,  $CI = 0.019-0.040$ ,  $p < 0.01$  for Palestinians; while for threat perceptions (as a mediator between psychological distress and a willingness to compromise),  $\beta = -0.01$ ,  $SE = -0.003$ ,  $CI = -0.015-0.004$ ,  $p < 0.01$  for Israelis, and  $\beta = -0.023$ ,  $SE = 0.008$ ,  $CI = -0.036-0.009$ ,  $p < 0.01$  for Palestinians. Along with the auxiliary testing for the threat model alone,<sup>49</sup> this process again supports our prediction that the effects of exposure to violence play a role in translating EPV into attitudes toward peace, and that – as per our novel finding – these effects are fully mediated by psychological

<sup>48</sup> Structural models display standardized path coefficients and correlations among constructs and error variances for structural equations, facilitating the interpretation and comparison of the relative effects of the measures. This is especially useful when combining variables that are on very different scales.

<sup>49</sup> To examine the mediating role played by threat perceptions only, we ran a separate analysis ( $X^2(6) = 12.53$ ,  $p > 0.05$ ,  $CFI = 0.99$ ,  $NFI = 0.98$ ,  $TLI = 0.95$ ) with full mediation of threat perceptions in both groups (Israeli sample:  $\beta = -0.009$ ,  $SE = 0.003$ ,  $CI = -0.013-0.004$ ,  $p < 0.01$ ; Palestinian sample:  $\beta = -0.017$ ,  $SE = 0.006$ ,  $CI = -0.026-0.008$ ,  $p < 0.01$ ), and compared this model to the quadratic model of exposure-distress-threat- attitudes toward peace. The results showed (1) variance across groups in the threat-mediation model, (2) a significant mediation effect for psychological distress between exposure and threat perceptions in the full model and (3) significantly better goodness-of-fit measures for the full model as compared to the threat-only model ( $X^2 = 20.81$ ,  $df = 9$ ,  $CFI = 0.98$ ,  $RMSEA = 0.03$ ).

reactions among both parties to the conflict. Hence, the findings affirm that prolonged EPV reduces individuals' willingness to compromise to the extent that it triggers psychological distress, which intensifies threat perceptions.

#### DISCUSSION AND CONCLUSION

The relationship between terrorism and political violence on the one hand, and political attitudes on the other, has long presented an alluring puzzle. Recently, researchers have begun to articulate the role of psychological mechanisms in this process, but the dynamics of how prolonged EPV influences attitudes toward peace, and the role of psychological components, have remained unclear. We employed a powerful design with 1,627 subjects from 149 communities across Israel and Palestine (East Jerusalem, the West Bank and Gaza). Contrary to the view that is often promulgated by both state and non-state actors – namely, that force promotes political solutions<sup>50</sup> – our findings provide powerful evidence that EPV reduces individuals' willingness to compromise. Our analyses reveal that under prolonged EPV, elevated levels of distress influence perceptions of threat, which in turn are associated with more intransigent and militant attitudes.

Despite existing assumptions in political scholarship that the sufferings of individuals exposed to violence play a minor role in larger geopolitical decision making, the current study of Israelis and Palestinians – in line with other emerging work pursued in the Middle East<sup>51</sup> – points to such individual-level outcomes as key micro-foundations of conflict. At the theoretical level, our work extends previous research on political attitudes among civilians living amid political violence by connecting individual trauma subsequent to such violence with collective attitudes toward peace and compromise. We propose a mediation model linking individual-level EPV to reduced support for compromise and peace, with psychological distress and threat perceptions as the mechanism bridging the two. More important, we test and validate this model in a large sample of civilians on both sides of the Israeli–Palestinian conflict.

At a practical level, our work provides useful guidance for practitioners who advocate peace. Specifically, the findings highlight the fact that EPV functions as a barrier to peace. It thus demonstrates the importance of removing violence, particularly violence directed at civilians, from the political landscape. In addition, our findings emphasize that actions to reduce threat perceptions are crucial to the success of any peace negotiations. As a start in this direction, acknowledging and legitimizing the losses of the other side is imperative for building support in constituencies that find moving toward peace most challenging.

The Israeli–Palestinian conflict offers ample evidence that without peace-building processes to encourage people on both sides of the conflict to change entrenched and polarizing attitudes, waves of violence will continue to take their psychological and political toll. Civilian casualties constitute impediments to breaking the cycle of violence, as affected civilians and their communities become increasingly resistant to peace. From a defensive coping perspective,<sup>52</sup> hardening their hearts by adopting self-defensive attitudes may be the most effective way for individuals victimized by violence to help themselves. However, only by changing those dynamics can we hope to create a psychological-societal infrastructure<sup>53</sup> capable of sustaining formal political agreements in conflict-ridden regions of the world.

<sup>50</sup> Haass 1988; Zartman 1989; Zartman and Touval 1985.

<sup>51</sup> Lyall, Blair, and Imai 2013.

<sup>52</sup> Hobfoll, Canetti-Nisim and Johnson 2006.

<sup>53</sup> Bar-Tal et al. 2012; Zartman 1989.

## REFERENCES

- Al-Krenawi, Alean, John R. Graham, and Yaniv Kanat-Maymon. 2009. Analysis of Trauma Exposure, Symptomatology and Functioning in Jewish Israeli and Palestinian Adolescents. *The British Journal of Psychiatry* 195:427–32.
- Alimi, Eitan Y., and Sivan Hirsch-Hoefler. 2012. Structure of Political Opportunities and Threats, and Movement-Counter-movement Interaction in Segmented Composite Regimes. *Comparative Politics* 44:331–49.
- Bar-Tal, Daniel, Keren Sharvit, Eran Halperin, and Anat Zafran. 2012. Ethos of Conflict: The Concept and its Measurement. *Peace and Conflict: Journal of Peace Psychology* 18:40–61.
- Berger, Rony, Marc Gelkopf, and Yotam Heineberg. 2012. A Teacher-Delivered Intervention for Adolescents Exposed to Ongoing and Intense Traumatic War-Related Stress: A Quasi-Randomized Controlled Study. *Journal of Adolescent Health* 51:453–61.
- Berrebi, Claude, and Esteban F. Klor. 2008. Are Voters Sensitive to Terrorism? Direct Evidence from the Israeli Electorate. *American Political Science Review* 102:279–301.
- Bleich, Avraham, Marc Gelkopf, and Zahava Solomon. 2003. Exposure to Terrorism, Stress-Related Mental Health Symptoms, and Coping Behaviors Among a Nationally Representative Sample in Israel. *Journal of the American Medical Association* 290:612–20.
- Bollen, Kenneth A. 1989. *Structural Equations with Latent Variables*. Canada: John Wiley and Sons Inc.
- Bonanno, George A., and John T. Jost. 2006. Conservative Shift among High-Exposure Survivors of the September 11th Terrorist Attacks. *Basic and Applied Social Psychology* 28:311–23.
- Boomsma, Anne. 2000. Reporting Analyses of Covariance Structures. *Structural Equation Modeling* 7:461–83.
- Breslau, Naomi, Howard D. Chilcoat, Ronald C. Kessler, and Glenn C. Davis. 1999. Previous Exposure to Trauma and PTSD Effects of Subsequent Trauma. *American Journal of Psychiatry* 156:902–7.
- Cairns, Ed. 1996. *Children and Political Violence*. Oxford: Blackwell.
- Canetti, Daphna, Sandro Galea, Brian J. Hall, Robert J. Johnson, Patrick A. Palmieri, and Stevan E. Hobfoll. 2010. Exposure to Prolonged Socio-Political Conflict and the Risk of PTSD and Depression Among Palestinians. *Psychiatry – Interpersonal and Biological Processes* 73: 219–32.
- Canetti, Daphna, Carmit Rapaport, Carly Wayne, Brian J. Hall, and Stevan Hobfoll. 2013. An Exposure Effect? Evidence from a Rigorous Study on the Psychopolitical Outcomes of Terrorism. In *The Political Psychology of Terrorism Fears*, edited by Samuel J. Sinclair and Daniel Antonius, 193–212. New York: Oxford University Press.
- Canetti, Daphna, Brian J. Hall, Carmit Rapaport, and Carly Wayne. 2013. Exposure to terrorism and Political extremism: a stress-based process. *European Psychologist* Advance online publication. doi: 10.1027/1016-9040/a000158
- Canetti, Daphna, Eric Russ, Judith Luborsky, and Stevan Hobfoll. 2014. Inflamed by the Flames? The Impact of Terrorism and War on Immune Dysregulation. *Journal of Traumatic Stress* 27:345–52.
- Canetti, Daphna, Brian J. Hall, Talya Greene, Jeremy C. Kane, and Stevan E. Hobfoll. 2014. Improving Mental Health is a Key Catalyst for Reducing Political Violence in Israel and Gaza. *The Lancet* 384 (9942):493–4.
- Canetti-Nisim, Daphna, Gal Ariely, and Eran Halperin. 2008. Life, Pocketbook, or Culture: The Role of Perceived Security Threats in Promoting Exclusionist Political Attitudes Towards Minorities in Israel. *Political Research Quarterly* 61:90–103.
- Canetti-Nisim, Daphna, Eran Halperin, Keren Sharvit, and Stevan E. Hobfoll. 2009. A New Stress-Based Model of Political Extremism: Personal Exposure to Terrorism, Psychological Distress, and Exclusionist Political Attitudes. *Journal of Conflict Resolution* 53:363–89.
- Central Bureau of Statistics. 2007. Statistical abstract of Israel. Jerusalem: Central Bureau of Statistics.
- Chipman, Katie J., Patrick A. Palmieri, Daphna Canetti, Robert J. Johnson, and Stevan E. Hobfoll. 2011. Predictors of Posttraumatic Stress-Related Impairment in Victims of Terrorism and Ongoing Conflict in Israel. *Anxiety, Stress and Coping* 24:255–71.

- Comer, Jonathan S., Jami M. Furr, Rinad S. Beidas, Courtney L. Weiner, and Philip C. Kendall. 2008. Children and Terrorism-Related News: Training Parents in Coping and Media Literacy. *Journal of Consulting and Clinical Psychology* 76:568–78.
- Davis, Darren W., and Brian D. Silver. 2004. Civil Liberties vs. Security: Public Opinion in the Context of the Terrorist Attacks on America. *American Journal of Political Science* 48:28–46.
- Echebarria-Echabe, Agustín, and Emilia Fernández-Guede. 2006. Effects of Terrorism on Attitudes and Ideological Orientation. *European Journal of Social Psychology* 36:259–65.
- Foa, Edna B., David S. Riggs, Constance V. Dancu, and Barbara O. Rothbaum. 1993. Reliability and Validity of a Brief Instrument for Assessing Post-Traumatic Stress Disorder. *Journal of Traumatic Stress* 6:459–73.
- Friedman, Gil. 2005. Commercial Pacifism and Protracted Conflict: Models from the Palestinian-Israeli Case. *Journal of Conflict Resolution* 49:360–82.
- Gadarian, Shana Kushner. 2010. The Politics of Threat: How Terrorism News Shapes Foreign Policy Attitudes. *Journal of Politics* 72:469–83.
- Galea, Sandro, Jennifer Ahern, Heidi Resnick, Dean Kilpatrick, Michael Bucuvalas, Joel Gold, and David Vlahov. 2002. Psychological Sequelae of the September 11 Terrorist Attacks in New York City. *New England Journal of Medicine* 346:982–87.
- Goldstone, Richard. 2009. Statement by Richard Goldstone on Behalf of the Members of the United Nations Fact Finding. Available from <http://www.ohchr.org/EN/HRBodies/HRC/SpecialSessions/Session9/Pages/FactFindingMission.aspx>. Accessed 10 August 2014.
- Gould, Eric D., and Esteban F. Klor. 2010. Does Terrorism Work? *The Quarterly Journal of Economics* 125:1459–510.
- Green, Eva G. T., Nicole Fasel, and Oriane Sarrasin. 2010. The More the Merrier? The Effects of Type of Cultural Diversity on Exclusionary Immigration Attitudes in Switzerland. *International Journal of Conflict and Violence* 4:177–90.
- Greenberg, Jeff, Tom Pyszczynski, and Sheldon Solomon. 1986. The Causes and Consequences of the Need for Self-Esteem: A Terror Management Theory. In *Public Self and Private Self*, edited by Roy F. Baumeister, 189–212. New York: Springer-Verlag.
- Gross, Michael L. 2010. *Moral Dilemmas of Modern War: Torture, Assassination, and Blackmail in an Age of Asymmetric Conflict*. Cambridge: Cambridge University Press.
- Haass, Richard N. 1988. *Beyond the INF Treaty: Arms, Arms Control, and the Atlantic Alliance*. Lanham, MD: University Press of America.
- Heath, Nicole M., Brian J. Hall, and Daphna Canetti. 2013. Exposure to Political Violence, Psychological Distress, Resource Loss, and Benefit Finding as Predictors of Domestic Violence among Palestinians. *Psychological Trauma: Theory, Research, Practice, and Policy* 5 (4):366–76.
- Herrmann, Richard K., Philip E. Tetlock, and Penny S. Visser. 1999. Mass Public Decisions to Go to War: A Cognitive-Interactionist Framework. *The American Political Science Review* 93: 553–573.
- Hobfoll, Stevan E., Daphna Canetti-Nisim, and Robert Johnson. 2006. Exposure to Terrorism, Stress-Related Mental Health Symptoms, and Defensive Coping among Jews and Arabs in Israel. *Journal of Consulting and Clinical Psychology* 74:207–18.
- Hobfoll, S. E., Palmieri P. A., Robert Johnson, Daphna Canetti-Nisim, Brian J. Hall, and Galea, S. 2009. Trajectories of Resilience, Resistance, and Distress during Ongoing Terrorism: The Case of Jews and Arabs in Israel. *Journal of Consulting and Clinical Psychology* 77 (1):138–48.
- Hobfoll, Stevan E., Anthony D. Mancini, Brian J. Hall, Daphna Canetti, and George A. Bonanno. 2011. The Limits of Resilience: Distress Following Chronic Political Violence in the Palestinian Authority. *Social Science and Medicine* 72:1400–8.
- Huddy, Leonie, and Stanley Feldman. 2011. Americans Respond Politically to 9/11: Understanding the Impact of the Terrorist Attacks and their Aftermath. *American Psychologist* 66:455–67.
- Huddy, Leonie, Stanley Feldman, Theresa Capelos, and Colin Provost. 2002. The Consequences of Terrorism: Disentangling the Effects of Personal and National Threat. *Political Psychology* 23:485–509.

- Inglehart, Ronald, Mansoor Moaddel, and Mark Tessler. 2006. Xenophobia and In-Group Solidarity in Iraq: A Natural Experiment on the Impact of Insecurity. *Perspectives on Politics* 4:495–505.
- Jaeger, David A., and Daniele M. Paserman. 2008. The Cycle of Violence? An Empirical Analysis of Fatalities in the Palestinian-Israeli Conflict. *American Economic Review* 98:1591–604.
- Jakobsson, Niklas, and Svein Blom. 2014. Did the 2011 Terror Attacks in Norway Change Citizens' Attitudes Toward Immigrants? *International Journal of Public Opinion Research*. doi: 10.1093/ijpor/edt036.
- Janoff-Bulman, Ronnie. 1992. *Shattered Assumptions: Towards a New Psychology of Trauma*. New York: The Free Press.
- Joreskogand, Karl G., and Dag Sorbom. 1996. *LISREL 8: User's Reference Guide*. Chicago: Scientific Software International.
- Kam, Cindy D., and Donald R. Kinder. 2007. Terror and Ethnocentrism: Foundations of American Support for the War on Terrorism. *Journal of Politics* 69:17–29.
- Kline, Rex B. 2005. *Principles and Practice of Structural Equation Modeling*. New York: The Guilford Press.
- Koch, Michael T. 2011. Casualties and Incumbents: Do the Casualties from Interstate Conflicts Affect Incumbent Party Vote Share? *British Journal of Political Science* 41:795–817.
- Laor, Nathaniel, Alma Yanay-Shani, Leo Wolmer, and Oula Khoury. 2010. A Trauma-Like Model of Political Extremism: Psycho-Political Fault Lines in Israel. *Annals of the New York Academy of Sciences* 1208:24–31.
- Leitenberg, Milton. 2006. *Death in Wars and Conflict Between 1945 and 2000*. Ithaca, NY: Cornell University Peace Studies Program.
- Lerner, Jennife S., Roxana M. Gonzalez, Deborah A. Small, and Baruch Fischhoff. 2003. Effects of Fear and Anger on Perceived Risks of Terrorism: A National Field Experiment. *Psychological Science* 14:144–50.
- Longo, Matthew, Daphna Canetti, and Nancy Hite-Rubin. 2014. A Checkpoint Effect? Evidence from a Natural Experiment on Travel Restrictions in the West Bank. *American Journal of Political Science*. doi: 10.1111/ajps.12109.
- Lyall, Jason, Graeme Blair, and Kosuke Imai. 2013. Explaining Support for Combatants During Wartime: A Survey Experiment in Afghanistan. *American Political Science Review* 107:679–705.
- Maoz, Ifat. 2011. Does Contact Work in Protracted Asymmetrical Conflict? Appraising 20 Years of Reconciliation-Aimed Encounters Between Israeli Jews and Palestinians. *Journal of Peace Research* 48:115–25.
- Merolla, Jennifer L., and Elizabeth J. Zechmeister. 2009. *Democracy at Risk: How Terrorist Threats Affect the Public*. Chicago, IL: University of Chicago Press.
- Montalvo, Jose' G. 2011. Voting After the Bombings: A Natural Experiment on the Effect of Terrorist Attacks on Democratic Elections. *Review of Economics and Statistics* 93:1146–54.
- Muldoon, Orla T., and Ciara Downes. 2007. Social Identity and Prevalence of PTSD in Northern Ireland. *British Journal of Psychiatry* 191:146–9.
- Muldoon, Orla T., and Robert D. Lowe. 2012. Social Identity, Groups and PTSD. *Political Psychology* 33:259–73.
- Muldoon, Orla T., and Karen Trew. 2000. Children's Experiences and Adjustment to Conflict Related Events in Northern Ireland. *Peace Psychology: Journal of Peace and Conflict* 6:157–76.
- Riek, Blake M., Eric W. Mania, and Samuel L. Gaertner. 2006. Intergroup Threat and Outgroup Attitudes: A Meta-Analytic Review. *Personality and Social Psychology Review* 10:336–53.
- Romano, David. 2006. Conducting Research in the Middle East's Conflict Zones. *PS: Political Science & Politics* 39 (3):439–41.
- Rouhana, Nadim N. 2004. Group Identity and Power Asymmetry in Reconciliation Processes: The Israeli-Palestinian Case. *Peace and Conflict: Journal of Peace Psychology* 10:33.
- Rubin, James G., Chris R. Brewin, Neil Greenberg, Jamie H. Hughes, John Simpson, and Simon Wessely. 2007. Enduring Consequences of Terrorism: Seven-Month Follow-Up Survey of Reactions to the Bombings in London on 7 July 2005. *The British Journal of Psychiatry* 190:350–6.

- Sniderman, Paul M., Louk Hagendoorn, and Markus Prior. 2004. Predispositional Factors and Situational Triggers: Exclusionary Reactions to Immigrant Minorities. *American Political Science Review* 98:35–50.
- Solomon, Zahava, and Tamar Lavi. 2005. Israeli Youth in the Second Intifada: PTSD and Future Orientation. *Journal of the American Academy of Child and Adolescent Psychiatry* 44:1167–75.
- Voors, Maarten J., Eleonora E. M. Nillesen, Philip Verwimp, Erwin H. Bulte, Robert Lensink, and Daan P. Van Soest. 2012. Violent Conflict and Behavior: A Field Experiment in Burundi. *American Economic Review* 102:941–64.
- Zartman, William I. 1989. *Ripe for Resolution: Conflict and Intervention in Africa*. Oxford: Oxford University Press.
- Zartman, William I., and Saadia Touval. 1985. International Mediation: Conflict Resolution and Power Politics. *Journal of Social Issues* 41:27–45.
- Zeitoff, Thomas. 2013. Anger, Exposure to Violence and Intragroup Conflict: A Lab in the Field Experiment in Southern Israel. *Political Psychology* 35:309–35.