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Cumulative Effects of Exposure to Violence on Post-Traumatic Stress in Palestinian and Israeli Youth

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Abstract

Objective—We examine cumulative and prospective effects of exposure to conflict and violence across four contexts (ethnic-political, community, family, school) on post-traumatic stress (PTS) symptoms in Palestinian and Israeli youth.

Method—Interviews were conducted with 600 Palestinian and 901 Israeli (Jewish and Arab) children (ages 8, 11, and 14) and their parents once a year for three consecutive years.

Results—Palestinian children, males, and older youth were generally at greatest risk for exposure to conflict/violence across contexts. Regression analysis found unique effects of exposure to ethnic-political (Palestinian sample), school (Palestinian and Israeli Jewish samples), and family conflict/violence (Israeli Arab sample) during the first two years on PTS symptoms in year 3, controlling for prior PTS symptoms. Cumulative exposure to violence in more contexts during the first two years predicted higher subsequent PTS symptoms than did exposure to violence in fewer contexts, and this was true regardless of the youth's level of prior PTS symptoms.

Conclusions—These results highlight the risk that ongoing exposure to violence across multiple contexts in the social ecology poses for the mental health of children in contexts of ethnic-political violence. Researchers and mental health professionals working with war-exposed youth in a given cultural context must assess both war- and non-war-related stressors affecting youth. Based on this assessment, interventions may not be limited to individual-based, war-trauma-focused approaches, but also may include school-based, community-based, and family-level interventions.

Keywords

exposure to violence; ethnic-political violence; post traumatic stress; youth

Exposure to ethnic-political conflict and violence has deleterious impacts on children (e.g., Betancourt et al., 2010; Cummings et al., 2010; Kithakye et al., 2010; Qouta, Punamaki, & El Sarraj, 2008). Researchers most often have been concerned with effects on post-traumatic stress (PTS). Most of these studies have used cross-sectional designs, making it difficult to draw causal inferences or to assess long-term effects (Barber & Schluterman, 2009). In addition, there has been relatively little research on the converging impact of multiple contexts of violence exposure among youth exposed to war-related stressors. Our study is unique in that we examine the prospective and cumulative effects of exposure to conflict/violence across four contexts (ethnic-political, community, family, and school) on PTS symptoms among Palestinian and Israeli youth.

In the Middle East, since the beginning of the second Intifada in September 2000 through the end of January 2011, 7,487 people have been killed, including 1,442 minors (B'Tselem, Israeli Information Center for Human Rights in the Occupied Territories, 2011).

Theoretically, exposure to extreme ethnic-political violence interferes with the child's cognitive and emotional processing of those experiences and leads to the three hallmark symptom clusters of post-traumatic stress disorder: re-experiencing the event through intrusive memories, dreams, etc.; avoidance of stimuli associated with the events and emotional numbing; and symptoms of increased arousal (e.g., hypervigilance, sleep problems) (American Psychiatric Association, 2000). Studies in the Middle East have yielded modestly to moderately positive correlations between exposure to ethnic-political conflict/violence and PTS symptoms among both Israeli and Palestinian children (e.g., Abdeen, Qasrawi, Nabil, & Shaheen, 2008; Laor et al., 1997; Dubow et al., 2010; Landau et al., 2010; Qouta et al., 2008; Slone, 2009; Thabet, Ibraheem, Shivram, Winter, & Vostanis, 2009). Observed rates of PTSD depend on degree of exposure, ethnic group (lower among Israeli children, higher among Palestinian children), and time since the end of exposure (rates decline over time).

Despite a growing interest in measuring the converging impact of violence experienced across multiple contexts (e.g., Finkelhor, Ormrod, & Turner, 2007; Mrug, Loosier, & Windle, 2008), few studies of children exposed to ethnic-political violence have examined the simultaneous impact of exposure to violence in non-war contexts (e.g., home, school, community). Social learning theory (e.g., Huesmann & Kirwil, 2007), models of nested social ecosystems (e.g., Bronfenbrenner, 1979; Landau & Pfeffermann, 1988), and cumulative risk models (e.g., Sameroff, 2000) predict that exposure to violence at multiple levels of the social ecology affects the child's emotional, cognitive, and behavioral development. Several studies of war-traumatized youth have examined the additive impact of exposure to war-related and family violence (e.g., Al-Krenawi, Lev-Wiesel, & Sehwal, 2007; Catani, Shauer, & Neuner, 2008; Fernando, Miller, & Berger, 2010; Garbarino & Kastelny, 1996). For example, Al-Krenawi et al. (2007) found that a composite domestic violence exposure score (sibling-to-sibling, parent-to-child, spousal violence) was a stronger predictor of Palestinian adolescents' psychological distress than was exposure to political violence.

Previous findings from our project have been in line with other studies. Dubow et al. (2010) and Landau et al. (2010) reported results from wave 1: exposure to ethnic-political conflict/violence was related both to aggression and PTS symptoms, even after controlling for a range of demographic and contextual factors. Boxer et al. (in press) found that political violence exposure predicted increases over time in aggression at peers, beyond the effects of violence exposure in other contexts. The present study is the only one that examines, prospectively, the unique role of ethnic-political, intra-ethnic community, school, and family conflict/violence, and their cumulative effects, on subsequent PTS symptoms. For the present analyses, first, we examine age, gender, and ethnic subgroup differences in exposure to conflict/violence across contexts and PTS symptoms. Next, we examine the unique contributions of exposure to conflict/violence in the four contexts during the first two waves to predicting wave 3 PTS symptoms, controlling for PTS symptoms in the first wave. Finally, we examine the relation between the number of contexts in which the youth was exposed to violence and subsequent PTS symptoms, and whether this relation depends on the youth's initial level of PTS symptoms.

Method

Sampling Procedures

Palestinians—At wave 1, we interviewed 600 Palestinian children: 200 8-year olds (101 girls, 99 boys), 200 11-year olds (100 girls, 100 boys) and 200 14-year olds (100 girls, 100 boys) and one of their parents (98% were mothers). Residential areas were sampled proportional to the general population in the West Bank (64% of the sample) and Gaza Strip (36% of the sample); 90% of those approached agreed to participate. Staff from the Palestinian Center for Policy and Survey Research conducted the sampling and interviews.

One hundred percent of the parents were Muslim and 99% were married. One-third had at least a high school degree; and 47% had incomes below the Palestinian average. On average, there were 4.89 ($SD = 1.86$) children in the home. These statistics are representative of the general population of Palestinians based on the 2007 census (Palestinian Central Bureau of Statistics, 2008).

At wave 2, we re-interviewed 590 Palestinian children and their parents (98% resampling rate); at wave 3, we re-interviewed 572 Palestinian children and their parents (95%). T-tests of the major wave 1 study variables (i.e., exposure to violence, PTS symptoms) revealed that there were no differences between resampled and non-resampled children at wave 3, and attrition was unrelated to the child's sex and age and parents' income and education levels.

Israelis—The Israeli sample (half Israeli Jews and half Israeli Arabs) included 901 children and one of their parents. In comparison to the level of violence in Palestine, the level of violence is relatively low in the major population centers of Israel; so, we oversampled high-risk areas (see Dubow et al., 2010). Fifty-five percent of Jews and 65% of Arabs who were approached agreed to participate. Staff from the Mahshov Survey Research Institute conducted the sampling and interviews.

The Jewish group consisted of 451 children: 151 8-year olds (79 girls, 72 boys), 150 11-year olds (73 girls, 77 boys) and 150 14-year olds (94 girls, 56 boys) and one of their parents (87% were mothers). Ninety-one percent of the parents were married, over 80% had graduated from high school, and 42% had incomes below the Israeli average. On average, there were 3.59 ($SD = 1.83$) children in the home. At wave 2, we re-interviewed 305 Israeli Jewish children and their parents (68%); at wave 3, we re-interviewed 282 Israeli Jewish children and their parents (63%). (The relatively high attrition between waves 1 and 2 was primarily due to refusals by individuals who were unhappy about the level of incentives which had been reduced due to exchange rate.) T-tests revealed that re-interviewed children reported higher levels of exposure to intra-ethnic community violence and their parents had higher levels of education ($p < .05$); attrition was unrelated to exposure to conflict/violence in the other contexts (ethnic-political, family, school), PTS symptoms, the child's sex or age, or the parents' income.

The Arab group consisted of 450 children: 150 8-year olds (66 girls, 84 boys), 149 11-year olds (69 girls, 80 boys) and 151 14-year olds (79 girls, 72 boys) and one of their parents (68% were mothers). Ninety-two percent of the parents were married; 55%–60% did not graduate from high school; and 43% had incomes below the Israeli average. On average, there were 3.17 ($SD = 1.39$) children in the home. At wave 2, we re-interviewed 386 Israeli Arab children and their parents (86%); at wave 3, we re-interviewed 385 Israeli Arab children and their parents (86%). T-tests revealed that re-interviewed children reported lower levels of exposure to ethnic-political violence and lower levels of PTS symptoms ($p < .05$); attrition was unrelated to exposure to conflict/violence in the other contexts, or any demographic variables.

Consent and Interview Procedures: The research protocol was approved by the institutional review boards of the University of Michigan (Behavioral Sciences) and Hebrew University. One-hour interviews of the parent and child (separately) were conducted in the families' homes. Parents provided written consent and children provided written assent. The family was compensated at the rate of \$25 at each wave, with an extra \$25 if they participated in all three waves. Interviewers read surveys to respondents, who indicated their answers which were then recorded by the interviewer.

Measures

Exposure to ethnic-political conflict and violence—Parents of 8-year olds reported on their children's exposure to political conflict and violence, whereas 11- and 14-year old children provided self-reports. Dubow et al. (2010) computed analyses showing the comparability of self and parent reports (e.g., $r = .68$ in a pilot sample of 10 year-olds). The exposure to political conflict and violence scale includes 24 items adapted from Slone et al. (1999) ($\alpha_s = .87, .86$ for parent report, $\alpha_s = .78, .85$ for self-report, waves 1 and 2, respectively). Respondents indicated the extent to which the child experienced the event in the past year along a 4-point scale (0 = *never*, 1 = *once*, 2 = *a few times*, 3 = *many times*). The items comprise the following domains of events: loss of, or injury to, a friend or family member; non-violent conflict events (e.g., spent a prolonged period of time in a security shelter or under curfew); self or significant others participated in political demonstrations; witnessed actual violence (e.g., seen right in front of you Palestinians being held hostage, tortured, or abused by Israelis); and witnessed media portrayals of violence. Because of the scale's relatively high internal consistency, we used a total score reflecting the average of the responses to the 24 items (range = 0 to 3).

Exposure to conflict/violence in other contexts—Children responded to items regarding intra-ethnic community, school, and family violence by indicating the extent to which they experienced each event in the past year along a 4-point scale (0 = *never*, 1 = *once*, 2 = *a few times*, 3 = *many times*). Scale scores reflect the average of a participant's responses to items in that context (i.e., the score ranges from 0 to 3).

1. The exposure to *intra-ethnic community violence* scale includes 4 items from Attar, Guerra, and Tolan (1994) and Barber (1999) ($\alpha_s = .58, .56$, waves 1 and 2). A sample item is: "How often has someone in your family been robbed or attacked by another [individual from the same ethnic group as yours]?"
2. The exposure to *school violence* scale includes 3 items from Attar et al. (1994) ($\alpha_s = .78, .85$, waves 1 and 2). A sample item is: "How often have you seen violent physical fights between other kids at school or before or after school?"
3. For exposure to *family violence*, we used two indices: a) A single self-report item adapted from Attar et al. (1994): "How often have you seen or heard a violent argument between your adult relatives?"; and b) Parents completed 6 items from the physical assault scale of the Revised Conflict Tactics Scales (Straus, Hamby, Boney-McCoy, & Sugarman, 1996; $\alpha_s = .92, .87$, waves 1 and 2), indicating whether either partner engaged in the behavior (e.g., thrown something at the other, hit the other) in the past year on a 10-point scale (0 = *never* to 9 = *9 or more times*). For the two family violence measures at both waves, over 50% of the sample indicated having experienced no family violence. So, we dichotomized scores on each of the two measures (i.e., 0 = no violence exposure reported, 1 = any violence exposure reported) and added them to reflect the number of measures on which any family violence was experienced in each wave (i.e., 0, 1, or 2). For exposure to ethnic-political, community, school, and family conflict/violence, we averaged the

participant's scores across the first two years to reflect mean yearly cumulative exposure to conflict/violence within that context.

We also created a score to reflect the number of contexts (0 – 4) in which the participant was exposed to “high” levels of violence. “High” ethnic-political and “high” community violence were determined if scores were at least 1.00 on average across the first two waves. Such a score could be obtained in several ways. For example, a participant could have experienced each event “*once*” during each year, or a participant could have experienced some events “*never*,” some events “*once*,” and some events “*a few times*,” 26% of participants were “high” in ethnic-political, and 20% were “high” in community violence exposure. “High” school violence was determined if scores were at least 2.00 on average across the first two waves (i.e., on average, participants experienced each event “*a few times*” during each year, or some events “*a few times*” and some events “*many times*”); 58% were “high” in school violence. “High” family violence was determined if youth were exposed to any family violence according to more than 1 family violence measure in the past two years; 42% were “high” in family violence.

Post-traumatic stress symptoms—Children completed 9 items (α s=.75, .84, waves 1 and 2) from the *Child Post Traumatic Stress Symptoms Index* (Pynoos, Frederick, & Nader, 1987). The items follow the three major PTSD symptom clusters in the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 2000). The scale was administered immediately after the exposure to conflict and violence items. Youth were asked to think about these events and, “Tell me how often you had these feelings and thoughts in the past month... 0 = *never*, 1 = *hardly ever*, 2 = *sometimes*, 3 = *a lot*.” We chose three items from each of three symptom cluster subscales: re-experiencing the event (e.g., “You have upsetting thoughts, pictures, or sounds of what happened come into your mind when you do not want them to.”); avoidance of stimuli associated with the event (e.g., “You try not to talk about, think about, or have feelings about what happened.”); and increased arousal (e.g., “When something reminds you of what happened, you have strong feelings in your body like heart beating fast, headaches, or stomach aches.”).¹ Scores are the sum of responses to the items.

Results

Descriptive Analyses

Table 1 shows differences by ethnic group, sex, and age in mean scores on average yearly exposure to violence across waves 1 and 2, and initial (wave 1) and later (wave 3) PTS scores. These results were obtained by computing two separate MANOVAs: one for the four context-specific measures of exposure to conflict/violence and one for the two continuous PTS measures. In general, these analyses show that Palestinian children, males, and older children were exposed to the greatest amounts of conflict/violence, and Palestinian children, females, and younger children displayed the most PTS symptoms. The more a child was exposed to ethnic-political violence, the more the child was exposed to family ($r = .34$), intra-ethnic community ($r = .43$), and school violence ($r = .51$) (all $ps < .001$).

¹The abbreviated scale can be obtained from the author. Regarding psychometric properties other than the adequate to high internal consistency, item-total correlations at each time point were all positive ($>.23$, mostly $>.50$), with no indication that eliminating an item would enhance the scale's internal consistency. In addition, as would be expected, scores were moderately stable over time (r s ranged from .40–.48 between waves), and scores were positively related to parent-reported emotional distress and attention problems (on the Strength and Difficulties Questionnaire (SDQ); r s = .34, .22, respectively), and self-reported emotional distress and attention problems (SDQ; r s = .60, .32, respectively).

Prediction of PTS from Cumulative Exposure to Conflict/Violence within Contexts

For the entire sample, bivariate correlations between exposure to conflict/violence averaged over the first two years and PTS scores in wave 3 were $r=.34$ (ethnic-political), $r=.15$ (intra-ethnic community), $r=.29$ (school), and $r=.18$ (family) (all $ps < .01$).

To examine the unique effects of exposure to violence in each context over two waves to predicting wave 3 PTS, we computed the hierarchical multiple regressions shown in Table 2 for the entire sample and for each ethnic subgroup. For the entire sample, in step 1, the child's sex, age, the parents' average education level, and the child's prior PTS symptoms in wave 1 accounted for a significant 18% of the variance in wave 3 PTS with the significant predictors being prior PTS symptoms ($\beta = .36$), child gender ($\beta = -.08$), and parents' average education ($\beta = -.13$). In step 2, exposure to conflict/violence in the four contexts accounted for an additional 5% of the variance in wave 3 PTS. Unique significant effects were found for exposure to ethnic-political ($\beta = .21$) and school conflict/violence ($\beta = .12$). The block of exposure variables was significant for the Palestinians (unique effects for ethnic-political and school violence) and approached significance for the Israeli Jews (unique effect for school violence); although the block was not significant for Israeli Arabs, there was a unique effect for family violence.

Next, to examine the effect of cumulative high levels of exposure in multiple contexts to predicting wave 3 PTS, and whether this effect depended on wave 1 PTS, we computed a hierarchical multiple regression. In step 1, we entered sex, age, parental education, wave 1 PTS, and number of contexts (0–4) in which the youth experienced “high” exposure. In this step, both initial PTS ($\beta = .31$) and cumulative exposure across contexts ($\beta = .16$) were significant ($p < .01$) unique predictors of wave 3 PTS. In step 2, we entered the interaction of wave 1 PTS (centered) and cumulative exposure (centered) to determine if the relation between cumulative exposure and later PTS symptoms depended on initial PTS symptoms. The interaction was not significant.

Figure 1 is a graphic display of these results. For ease of presentation, we divided participants into three groups based on number of contexts in which they were exposed to high violence: 0 contexts = 29% of the sample; 1 or 2 contexts = 50%; and 3 or 4 contexts = 22%. Also, we categorized initial PTS symptom levels as “low,” “medium,” and “high,” by creating three cut-off scores (corresponding to the three PTS symptom clusters). An individual needed to experience, at least “*sometimes*” during the past month, at least 1 symptom of intrusive recollection, 2 symptoms of avoidant/numbing, and 2 symptoms of hyperarousal.² Initial level of PTS symptoms was coded as low (meeting 0 or 1 cut-off scores, 56%), medium (meeting 2 cutoff scores, 32%), and high (meeting all 3 cut-off scores, 12%). The graph shows that cumulative exposure to violence across more contexts predicts subsequent PTS, regardless of initial level of PTS symptoms.

Discussion

We note some limitations to the present research. First, because of time limitations in interviewing families, we used abbreviated measures of some scales, including the PTS scale. Although the 9-item measure was psychometrically sound, the measure must be viewed as a screening instrument for post-traumatic stress symptoms, not as a tool to diagnose PTSD. Second, our measures of violence exposure were focused primarily on

²We used these cut-off scores for graphical purposes only; they are not meant to reflect actually meeting each of the DSM criteria because we did not administer the full PTS measure that includes all symptoms of each criterion. To meet the actual DSM criterion for intrusive recollection, the individual needs to have experienced 1 of 5 such symptoms; for avoidant/numbing, 3 of 7 such symptoms; and for hyper-arousal, 2 of 5 such symptoms.

witnessing violence rather than being victimized. Future studies should consider the relative effects of both channels of exposure. Also, our measures were generally based on self reports. Future studies should utilize multiple converging sources of information.

Despite these limitations, our study makes a unique contribution to the literature on youth exposed to ethnic-political violence. First, although previous research has examined the combined effects of family and ethnic-political violence among war-exposed youth (e.g., Al-Krenawi et al., 2007; Catani et al., 2008; Fernando et al., 2010; Garbarino & Kastelny, 1996), we broadened these contexts to include school and intra-ethnic-community violence. We observed unique effects on subsequent PTS symptoms of exposure to ethnic-political conflict/violence in one sample (Palestinians), school conflict/violence in two samples (Palestinians and Israeli Jews), and family violence in one sample (Israeli Arabs), even after controlling for youth's initial PTS levels. Although more research is needed to understand these ethnic subgroup differences in the contributions of exposure to violence across contexts in predicting PTS symptoms, these findings support those of Catani et al. (2008) who studied war-exposed Afghan and Sri Lankan children. Those authors concluded that interventions need to be tailored to specific cultural contexts. In addition, although most studies of youth exposed to political violence are cross-sectional in design, we examined prospective effects of exposure on PTS symptoms. We found that the more contexts in which youth were exposed to violence, the higher their levels of *subsequent* PTS symptoms, regardless of initial level of PTS symptoms.

In terms of implications for interventions for youth exposed to ethnic-political violence, Miller and Rasmussen (2010) highlighted the importance of moving beyond the “trauma-focused model” which views exposure to war-related violence as the critical intervention target. Instead, these authors advocated for a “psychosocial model,” where the focus is broadened to include other adverse conditions that may or may not be related to the war itself, as well as potential protective factors (e.g., social networks). Indeed, our results support the notion that there are a number of critical ecological factors affecting development of youth in settings of persistent ethnic-political conflict, and in some cases, the war conflict itself might not carry the most potent effect. These alternative models guide distinct interventions. The trauma-focused model is consistent with interventions that are mostly individual-based, often exposure-oriented, such as Trauma-Focused Cognitive Behavioral Therapy (see Cohen, Mannarino, & Deblinger, 2006). This may well be one component of a more “sequenced, integrated model” described by Miller and Rasmussen (2010; see also DeJong, 2010). Those authors suggested that in a given cultural context, mental health professionals and researchers first must assess both war- and non-war-related stressors affecting youth. Based on this assessment, interventions may include school-based (e.g., violence prevention), community-based (e.g., neighborhood watch programs), and family-level (e.g., addressing spousal conflict) approaches.

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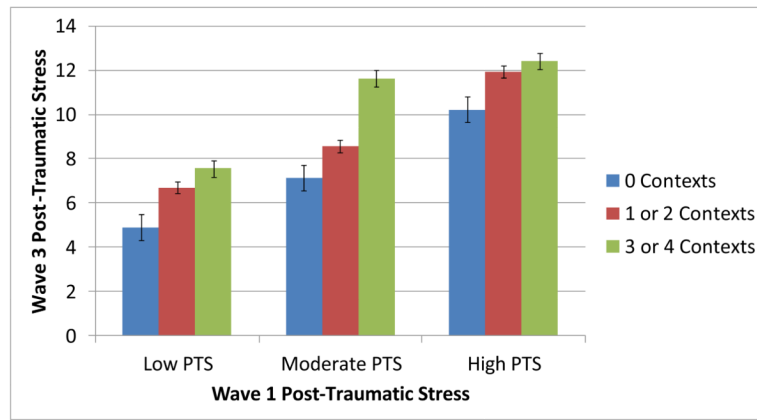


Figure 1. Post-Traumatic Stress Scores at Wave 3 as a Function of Number of Contexts of “High” Violence (Waves 1 & 2 Combined) and Wave 1 Post-Traumatic Stress.

Table 1
 Mean Scores on Cumulative Exposure to Conflict/Violence and Post-Traumatic Stress Symptoms by Ethnic Group, Sex, and Age

Variable	Range	Ethnic Group			Sex		Age			
		Pal (N=560) M (SD)	I-Jew (N=294) M (SD)	I-Arab (N=382) M (SD)	Females (N=630) M (SD)	Males (N=606) M (SD)	8 (N=416) M (SD)	11 (N=417) M (SD)	14 (N=403) M (SD)	
Mean Yearly Exposure to Violence (Waves 1 & 2)										
Political	0-3	1.01 (.32) _a	.60 (.32) _b	.31 (.24) _c	.64 (.38) _a	.75 (.47) _b	.59 (.39) _a	.69 (.41) _b	.81 (.44) _c	
Family	0-2	.89 (.56) _a	.27 (.42) _b	.63 (.50) _c	.64 (.56) _a	.68 (.56) _a	.66 (.56) _a	.63 (.55) _a	.68 (.58) _a	
School	0-3	2.34 (.67) _a	1.72 (.71) _b	1.64 (.83) _c	1.84 (.79) _a	2.12 (.78) _b	1.93 (.78) _a	2.01 (.78) _a	1.99 (.84) _a	
Intra-ethnic community	0-3	.73 (.49) _a	.29 (.29) _b	.57 (.44) _c	.52 (.43) _a	.63 (.50) _b	.49 (.41) _a	.55 (.46) _b	.69 (.52) _c	
MANOVA F			$F(8,2430)=208.28^{**}$			$F(4,1215)=16.72^{**}$				$F(8,2430)=18.32^{**}$
PTSD symptoms		(N=572)	(N=282)	(N=383)	(N=632)	(N=605)	(N=411)	(N=421)	(N=405)	
Wave 1	0-27	12.45 (5.39) _a	9.33 (4.88) _b	7.31 (4.88) _c	10.63 (5.62) _a	9.64 (5.53) _b	10.36 (5.58) _a	10.27 (5.42) _a	9.81 (5.78) _b	
Wave 3	0-27	10.37 (6.26) _a	7.25 (4.69) _b	4.64 (5.19) _c	8.54 (6.37) _a	7.20 (5.8) _b	8.21 (6.21) _a	7.84 (5.95) _{ab}	7.61 (6.25) _{bc}	
MANOVA F			$F(4,2436)=94.33^{**}$			$F(2,1218)=7.45^{**}$				$F(4,2436)=2.28^+$

Notes. Ns differ for the two MANOVAs due to missing data. M = Mean. SD = Standard deviation. Means with the same subscripts are not significantly different ($p > .05$) in pairwise comparisons. MANOVA F statistics are based on Wilks' lambda.

** $p < .01$.

* $p < .05$.

+ $p < .10$.

Table 2

Predicting Wave 3 Post-Traumatic Stress Symptoms from Mean Wave 1 & 2 Exposure to Conflict/Violence in Each Context and Wave 1 Background Variables

Predictors	Overall		Palestinians		Israeli Jews		Israeli Arabs	
	ΔR^2	β (step)	ΔR^2	β (step)	ΔR^2	β (step)	ΔR^2	β (step)
Step 1: Wave 1 Background variables	.18**		.16**		.13**		.03*	
Age		-.04		-.04		-.19**		.09 ⁺
Sex ^a		-.08**		-.15**		-.06		.01
Parents' average education		-.13**		-.07 ⁺		-.01		.02
Post-traumatic stress symptoms (wave 1)		.36**		.32**		.26**		.13*
<i>F</i> (step)		F(4,1190)=66.18**		F(4, 541) = 25.23**		F(4, 266)=9.61**		F(4,373)=2.52*
Step 2: Mean wave 1 & 2 exposure to violence	.05**		.06**		.03 ⁺		.02	
Ethnic-political violence		.21**		.12*		.06		-.07
Family violence		.00		-.01		-.05		.11*
School violence		.12**		.22**		.12 ⁺		.03
Intra-ethnic community violence		-.04		.02		.08		-.06
<i>F</i> (step)		F(4,1186)=19.62**		F(4, 557)=10.41**		F(4, 262)=2.18 ⁺		F(4,369)=1.43

^a0=Females, 1=Males.

***p* < .01.

**p* < .05.

⁺*p* < .10.