

PTSD Symptoms, Satisfaction With Life, and Prejudicial Attitudes Toward the Adversary Among Israeli Civilians Exposed to Ongoing Missile Attacks

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Few studies have examined the consequences of exposure to ongoing missile attacks in civilian populations. The authors examine the relationships between such exposure, and posttraumatic stress disorder (PTSD), satisfaction with life, and prejudicial attitudes toward the adversary. By using a stratified probability sampling, 160 adults, exposed to repeated missile attacks in southern Israel, were compared to 181 adults from areas outside the range of these attacks. Exposed participants reported more PTSD symptoms and less satisfaction with life, as compared to unexposed participants. The associations between PTSD and satisfaction with life and between PTSD and prejudicial attitudes were significantly stronger among the exposed participants, as compared to those who were not exposed to the attacks. Theoretical and clinical implications of the findings are discussed.

Numerous studies have documented the detrimental mental health effects of exposure to mass violence events (for review see Galea, Nandi, & Vlahov, 2005; Neria, Nandi, & Galea, 2008; Norris et al., 2002). Although most studies to date have focused on the effects of a single and discrete incident, the psychological consequences of exposure to ongoing and repeated incidents have been rarely addressed. The aim of this study is to narrow this gap in knowledge by focusing on the effects of ongoing exposure to missile attacks on a civilian population.

From 2000 to 2008—a period of more than 7 years—the town of Sderot (S'de-rote) and its surrounding communities, located approximately 7 kilometers from the Israel–Gaza border in southern Israel, have been repeatedly attacked by Hamas and Islamic Jihad forces operating from the Gaza Strip. Over 6,000 rockets and 2,500 mortars have been launched into this populated area, usually accompanied by the wailing of sirens. These attacks have resulted in more than 20 fatalities and 430 injuries. Although a number of studies have focused on Israel civilian populations exposed to terrorism (e.g., Bleich, Gelkopf, & Salomon, 2003; Hobfoll et al., 2008; Shalev & Freedman, 2005; Shalev, Tuval, Frenkiel-Fishman, Hadar, & Eth, 2006), few studies have attempted to address the associations between this exposure and the range of emotional do-

main beyond posttraumatic stress disorder (PTSD). In addition to PTSD, the current study examined changes in satisfaction with life and prejudicial attitudes toward the adversary.

The mental health burden of exposure to terrorism is substantial (e.g., Galea, Nandi, & Vlahov, 2005; Neria et al., 2008; Rubin et al., 2007) and not limited to those who are directly exposed to trauma (Galea et al., 2002; Silver, Holman, McIntosh, Poulin, & Gil-Rivas, 2002). Although PTSD symptoms have been reported by some individuals indirectly exposed to terrorism (e.g., via the media: Ahern, Galea, Resnick, & Vlahov, 2004; Marshall et al., 2007; Neria et al., 2007), significant levels of PTSD have been reported among those directly exposed to terrorism (e.g., Bleich et al., 2003; Galea et al., 2002; Hobfoll et al., 2008; Neria, Gross, & Marshall, 2006; Shalev & Freedman, 2005).

The psychological impact of terrorism is not limited to PTSD. Exposure to terror attacks has been found to negatively impact other mental health domains, such as depression, bereavement, physical health, functioning, and disability (e.g., Galea et al., 2002; Neria et al., 2007; Neria et al., 2008; Silver et al., 2002; Stout, 2002).

Although the association of PTSD with reduced quality of life has been examined in a number of civilian populations (e.g.,

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Holbrook et al., 2005; Paunovic & Öst, 2004) and war veteran populations (e.g., Zatzick et al., 1997), it has been suggested that more research is needed to better understand the relationships between PTSD and quality of and satisfaction with life (e.g., Howgego et al., 2005; Rapaport, Clary, Fayyad, & Endicott, 2005). Over the last three decades, satisfaction with life has emerged as a central domain of the construct of subjective well-being and quality of life (Diener, Suh, Lucas, & Smith, 1999; Staudinger, Fleeson, & Baltes, 1999), and has been hypothesized to be distinct from “affective” appraisals (e.g., mood and affect symptoms), in that it is more cognitively driven than emotionally driven (see, e.g., Diener, Oishi, & Lucas, 2003; Pavot & Diener, 2004). Although exposure to trauma may negatively impact satisfaction with life, to the best of our knowledge, no study to date has directly addressed the effects of exposure to terrorism and PTSD on satisfaction with life. The current study is intended to contribute to the investigation of such a relationship.

Repeated exposure to terrorism may have detrimental effects on attitudes toward the adversary among individuals in the impacted communities. It has been previously suggested that in-group ties and hostility toward outgroups may be strengthened among populations exposed to terrorist attacks (Bar-Tal & Labin, 2001; Coryn, Beale, & Myers, 2004; Hobfoll, Canetti-Nisim, & Johnson, 2006). According to this line of thought, hostile attitudes derive mainly from the challenges posed by outgroups toward the values, identity, culture, and even socioeconomic resources of ingroup members (e.g., Lubbers & Scheepers, 2001; Mudde, 1995; Quillian, 1995; Watts, 1996). The current study extends this line of research by investigating whether prejudicial attitudes toward the adversary are associated with the type of trauma exposure and PTSD.

The overall goal of this study was to examine the associations between exposure to missile attacks, PTSD, satisfaction with life, and prejudicial attitudes toward the adversary. We tested the following three hypotheses: (a) Participants exposed to ongoing missile attacks will manifest elevated levels of PTSD symptoms, reduced levels of satisfaction with life, and elevated levels of prejudicial attitudes toward the adversary compared to unexposed participants; (b) PTSD symptoms will be negatively related to satisfaction with life and positively related to prejudicial attitudes; and (c) the associations between PTSD symptoms and satisfaction with life, and between PTSD symptoms and prejudicial attitudes will be stronger among participants exposed to attacks than among participants with no such exposure.

METHOD

Participants

The study was conducted between October 2007 and April 2008. Of the 379 individuals initially approached, 364 (96%) agreed to take part in the study. Of these, 23 individuals (6.3%) were

excluded from the study (five of these individuals were undergoing psychological treatment, eight of the individuals from the unexposed area had relatives or friends in the exposed area, six individuals from the unexposed area had not been permanent residents of the area for at least 10 years, and four individuals were not fluent in Hebrew). Hence, the final sample consisted of 341 adults aged 20–60 years.

Participants from the exposed area were 160 Jewish adults, including 79 (49.4%) men and 81 (50.6%) women, with a mean age of 33 years ($SD = 10$) and a mean 13.4 years of formal education ($SD = 2.8$). These individuals had each experienced more than 7 years of direct exposure to terrorist attacks in Sderot, a small town with a population of approximately 19,400 residents, and its surrounding communities. Participants from the unexposed area were 181 Jewish adults, including 90 (49.7%) men and 91 (50.3%) women, with a mean age of 35 years ($SD = 9$) and a mean 13.7 years of formal education ($SD = 1.9$). These individuals all lived in the southeastern region of Israel, in an area about 350 km from the exposed community that includes Eilat, a town of approximately 47,000 residents, and its surrounding communities. The unexposed group was matched with the exposed group in terms of sociodemographic factors and type of community (small town, kibbutz, or village), but none of the individuals in this group had ever been directly exposed to life-threatening experiences related to terrorism or wars, or had relatives, friends, or acquaintances living in the exposed area. Participants were recruited and data were collected simultaneously for both the exposed and the unexposed samples.

Sampling

We employed a stratified sampling probability method to reduce sampling error. To identify population subsets that shared at least one common characteristic among gender, type of exposure, and type of community, we first identified the relevant strata and their actual representation in the population. We then used multistage cluster sampling to select subjects from each stratum. The proportions of the small town, kibbutz, and village subpopulations in our samples were kept proportionally representative of their actual representations in the total population of the Gaza-bordering communities (the area directly exposed to the attacks). At the time of the study, the residents of Sderot accounted for 60% of the population in the area directly exposed to missile attacks. We divided the small towns in each sample (exposed vs. unexposed) into neighborhoods that were matched according to their socioeconomic status, which was calculated using the Israel Central Statistical Bureau Index (ratio between the number of persons living in a household and the number of rooms in the home). Using multistage cluster sampling, within each type of community (small town, kibbutz, or village), we randomly selected a subset of neighborhoods; within these neighborhoods, we randomly selected a subset of streets from which we randomly selected a subset of households. This strategy

allowed for a good representation of different parts of the communities within each area, including distances from missile falls within each community in the exposed sample. We then approached participants in their homes for personal interviews. To ensure that participants within each sample were not interdependent, spouses or those living in the same household were not approached. In both groups, we limited this final stage to Jewish Israelis aged 20 or older who could fluently read and comprehend Hebrew, had been permanent residents of the area for at least 10 years, were not currently receiving counseling or psychological or psychiatric treatment, and had no previous psychiatric history. Each group contained approximately equal numbers of men and women.

Measures

The Impact of Event Scale-Revised (IES-R; Weiss & Marmar, 1997) was used to assess symptoms of PTSD. This instrument is comprised of 22 items resembling the PTSD criteria according to the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV)*; American Psychiatric Association, 1994). Respondents were asked to rate each item on a scale of 0 (*not at all*), 1 (*a little bit*), 2 (*moderately*), 3 (*quite a bit*), and 4 (*extremely*), according to how distressed they had been by symptoms of intrusion, hyperarousal, and avoidance over the past 7 days. All participants were asked to specifically link the symptoms to the missile attacks. Following previous studies, a score of 2 or higher on each of the PTSD subscales (intrusion, avoidance, and hyperarousal) indicated that a cutoff point had been met (e.g., Weiss & Marmar, 1997). The average score across all symptoms served as the overall PTSD symptom score. The IES-R has good psychometric properties (see, for example, Creamer, Bell, & Failla, 2003) and has good convergent validity with other measures of PTSD (Ljubotina & Muslic, 2003). In the present study, we obtained internal consistency reliability coefficients of $\alpha = .87, .83, .86, \text{ and } .86, .82, \text{ and } .84$ for intrusion, hyperarousal, and avoidance for the exposed and the unexposed groups, respectively.

The Satisfaction with Life Scale is a measure of life satisfaction developed by Diener and colleagues (Diener, Emmons, Larsen, & Griffin, 1985) to assess satisfaction with the respondent's life as a whole. The five-item scale was "designed around the idea that one must ask subjects for an overall judgment of their life in order to measure the concept of life satisfaction" (Diener et al., 1985, pp. 71–72). Participants indicated their agreement with each item, to judge whether their lives seemed worthwhile based on internal experience (Pavot & Diener, 1993). Participants responded to each item using 7-point Likert-type scales (1 = *strongly disagree*; 2 = *disagree*; 3 = *slightly disagree*; 4 = *neither agree nor disagree*; 5 = *slightly agree*; 6 = *agree*; 7 = *strongly agree*). The average score across the five items was the overall score for the Satisfaction with Life Scale. The scale has been found to have good discriminant validity for emotional well-being measures and good convergent validity with other scales and other types of assessments of subjective

well-being, and has shown strong internal reliability (Diener et al., 1985; Magnus, Diener, Fujita, & Pavot, 1993; Pavot, Diener, & Colvin, 1991; Yardley & Rice, 1991). In the present study, we obtained internal consistency reliability coefficients of $\alpha = .87$ and $.82$ for the exposed and the unexposed groups, respectively.

The participants' prejudicial attitudes toward the attackers were measured using the Prejudicial Attitude Survey (Stephan, Ybarra, Martinez, Schwarzwald, & Tur-Kaspa, 1998). This instrument contains six reactions: hatred, disdain, dislike, hostility, superiority, and rejection. The response format consisted of a 10-point scale ranging from 0 (*no hostility at all*) to 9 (*extreme hostility*) and required participants to indicate the extent to which each item reflected their feelings toward the adversary, defined as "those launching missiles from the Gaza Strip and attacking the town of Sderot and surrounding communities." Higher values indicate higher levels of prejudicial attitude. In the present study, we obtained internal consistency reliability coefficients of $\alpha = .88$ and $.91$ for the exposed and the unexposed groups, respectively. The average score across the six elements of the Prejudicial Attitudes Survey (i.e., hatred, disdain, dislike, hostility, superiority, and rejection) served as the overall Prejudicial Attitude score in further analyses.

Procedure

Potential participants were asked whether they would be willing to complete a questionnaire about attitudes and mood. To be sure that all of the participants in the exposed group had been exposed to the long-term missile threat, we only interviewed adults who had lived in the geographical area for the last 10 years. Participants were met individually and interviewed. The questionnaires were translated into Hebrew. All participants were reminded of their right to withdraw from the study should they feel uncomfortable. None chose to do so. After the completion of the Impact of Event Scale-Revised, the Satisfaction with Life Scale, and the prejudicial attitudes questionnaires, the participants were given a written debriefing. Potential order effects were controlled by means of randomized presentation of the questionnaires within and between participants.

Data Analysis

Descriptive statistics were calculated separately for each of the two groups. We first examined whether there were significant differences between the two groups in terms of PTSD symptoms, satisfaction with life, and prejudicial attitudes. Then, we conducted bivariate analyses of the relationships between PTSD symptoms, satisfaction with life, and prejudicial attitudes for the entire sample as a whole, as well as for each individual group. We next conducted multivariate analysis using hierarchical multiple regression with interactions represented by product terms (see Aiken & West, 1991) to examine the unique associations between type

Table 1. Percentages, Means, and Group Differences of Exposed ($n = 160$) and Unexposed ($n = 181$) Respondents

| Measure | Groups | | | | Analysis | | Observed Power |
|---|---------|-------|-----------|-------|--------------------|-----------------|----------------|
| | Exposed | | Unexposed | | $\chi(1, N = 341)$ | Effect size d | |
| | n | % | n | % | | | $t(339)$ |
| Percentage of participants reporting moderate to severe levels of PTSD symptoms | | | | | | | |
| Intrusion | 79 | 49.38 | 16 | 8.84 | 69.43** | 1.01 | |
| Avoidance | 54 | 33.75 | 22 | 12.15 | 22.87** | 0.54 | |
| Hyperarousal | 88 | 55.00 | 8 | 4.42 | 107.42** | 1.30 | |
| All symptoms ^a | 43 | 26.88 | 5 | 2.76 | 40.83** | 0.74 | |
| | M | SD | M | SD | | | |
| PTSD symptoms | | | | | | | |
| Intrusion | 1.90 | 1.19 | 0.80 | 0.81 | 10.10** | 1.10 | 1.0 |
| Avoidance | 1.61 | 0.93 | 0.99 | 0.78 | 6.72** | 0.73 | 1.0 |
| Hyperarousal | 1.94 | 1.22 | 0.55 | 0.63 | 13.47** | 1.47 | 1.0 |
| All PTSD symptoms | 1.82 | 1.03 | 0.78 | 0.65 | 11.25** | 0.70 | 1.0 |
| Prejudicial attitudes | | | | | | | |
| Hatred | 7.18 | 2.51 | 6.69 | 2.75 | <1 | 0.19 | .40 |
| Disdain | 7.54 | 2.33 | 7.24 | 2.68 | <1 | 0.12 | .20 |
| Disliking | 7.39 | 2.45 | 7.27 | 2.58 | <1 | 0.05 | .08 |
| Hostility | 7.04 | 2.56 | 7.28 | 2.32 | <1 | 0.10 | .14 |
| Superiority | 4.29 | 3.55 | 4.08 | 3.34 | <1 | 0.06 | .09 |
| Rejection | 7.25 | 2.69 | 7.24 | 2.61 | <1 | 0.00 | .05 |
| Overall prejudicial attitudes score | 6.78 | 1.92 | 6.63 | 2.13 | <1 | 0.00 | .10 |
| Satisfaction with Life | | | | | | | |
| SWLS | 23.38 | 6.92 | 25.33 | 5.65 | 2.86* | 0.31 | .82 |

Note. PTSD = Posttraumatic stress disorder; SWLS = Satisfaction with Life Scale score.

^aIntrusion, avoidance and hyperarousal mean scores were all at moderate to severe levels (mean score of 2 or higher).

* $p < .01$. ** $p < .001$, two-tailed.

of exposure, satisfaction with life, prejudicial attitudes, and the interactive associations of exposure with satisfaction with life and prejudicial attitudes and PTSD symptom scores, while controlling for demographic variables. We first entered the demographic variables, then the type of exposure, followed by satisfaction with life and prejudicial attitude scores, and finally the Exposure \times Satisfaction with life and Exposure \times Prejudicial attitudes interactions. An alpha level of .05 was chosen a priori.

RESULTS

Group Differences

We first compared the exposed and the unexposed groups in terms of demographics and the study variables. No significant differences were found between the groups in terms of gender, $\chi^2 < 1$, age, $t(339) = 1.83$, ns , or education, $t(339) = 1.21$, ns . As shown in Table 1, higher levels of PTSD intrusion, avoidance, and arousal symptoms were reported in the exposed group, as compared to the unexposed group. Overall, approximately 27%

of the exposed group reported experiencing PTSD symptoms, compared to approximately 3% of the unexposed group. In addition, participants in the exposed group reported significantly lower levels of satisfaction with life, as compared to the unexposed group. No differences were found between prejudicial attitudes in the two groups (Table 1).

Bivariate Associations

Correlations were derived for the whole sample to determine the associations between PTSD, satisfaction with life, and prejudicial attitudes. These analyses revealed significant positive associations between PTSD symptoms and prejudicial attitudes, $r(341) = .26$, $p < .001$, and negative associations between PTSD symptoms and satisfaction with life, $r(341) = -.23$, $p < .001$. There was no significant association between prejudicial attitudes and satisfaction with life, $r(341) = -.10$, ns .

Zero-order correlations for each of the exposure groups are summarized in Table 2. As can be seen, gender was related to PTSD among individuals in the exposed group, and education was

Table 2. Bivariate Correlations among Exposed ($n = 160$; Below Diagonal) and Unexposed ($n = 181$; Above Diagonal) Respondents

| Variable | 1 | 2 | 3 | 4 | 5 | 6 |
|---------------------------|--------|------|-------|--------|--------|------|
| 1. Gender | – | .02 | .01 | .01 | .05 | .00 |
| 2. Age (years) | –.08 | – | .22** | .05 | –.18 | .07 |
| 3. Education (years) | –.12 | –.01 | – | –.09 | –.34** | .15 |
| 4. PTSD symptoms | –.20** | .08 | –.13 | – | .10 | –.07 |
| 5. Prejudicial attitudes | .08 | –.12 | –.12 | .44*** | – | –.12 |
| 6. Satisfaction with life | –.14 | –.06 | .03 | –.25** | –.07 | – |

Note. PTSD = Posttraumatic stress disorder. To insure that the overall chance of making a Type I error is still less than .05, a full Bonferroni Correction was implied. Gender is a binary-coded variable (0 = women, 1 = men).

** $p < .01$. *** $p < .001$ (two-tailed).

inversely related to prejudicial attitudes only among individuals in the unexposed group. No significant associations were found between age, education, gender, and satisfaction with life in either group. A significant correlation was found between PTSD symptoms and low satisfaction with life among individuals in the exposed group. Nonsignificant correlations were observed between PTSD symptoms and satisfaction with life in the unexposed group, and between satisfaction with life and prejudicial attitudes scores in both groups. Finally, a significant correlation was observed between PTSD symptoms and prejudicial attitudes in the exposed group, whereas a nonsignificant association between these factors was observed in the unexposed group.

Multivariable Analyses

Results of the hierarchical multiple regression analysis to predict PTSD are summarized in Table 3. We designated the relevant demographic variables (gender, age, and education) as covariables in Step 1 and controlled for the significant effect of exposure on PTSD Symptoms in Step 2. Then, in Step 3, we found that, beyond the obtained significant effects of gender, low education, and direct exposure, low satisfaction with life and high prejudicial attitude scores were associated with PTSD symptom scores. In addition, when we tested for the hypothesized Exposure \times Satisfaction with life and Exposure \times Prejudicial attitude interactions, the results indicated that both two-way interactions significantly predicted PTSD symptom scores (see Table 3). The final model explained 42% of the variance in PTSD symptom scores. Using simple slope examination, we found that levels of satisfaction with life were significantly associated with PTSD symptom scores as a function of exposure, with significant associations among the exposed individuals, but not among the unexposed individuals (see Figure 1). Finally, using simple slope examination, we found that prejudicial attitude scores were significantly associated with PTSD symptom scores as a function of exposure, with a significant association among the exposed individuals, but not among the unexposed individuals (see Figure 2).

DISCUSSION

To the best of our knowledge, this study is the first to examine the psychological consequences of exposure to the ongoing missile attacks on a civilian population that occurred between 2000 and 2008 in southern Israel. The results show that, as compared to residents of an area that had not been exposed to these attacks, residents of communities directly and continuously exposed to these attacks had elevated levels of PTSD (27% vs. 3%). Although the reported levels of PTSD symptoms among the exposed individuals seem to exceed previous estimates for Israeli populations (e.g., Bleich et al., 2003; Shalev et al., 2006), they are in line with estimates previously reported among populations recently exposed to terrorism and large-scale disasters (e.g., Neria et al., 2008).

The negative association found between PTSD and satisfaction with life is in accordance with earlier findings of quality of life studies (Holbrook et al., 2005; Jordan et al., 1992; Magruder et al., 2004; Michaels et al., 2000; Rapaport et al., 2005; Schnurr, Hayes, Lunney, McFall, & Uddo, 2006; Zatzick et al., 1997). However, in focusing on satisfaction with life, our study extends this knowledge by showing that continuous exposure to a life-threatening situation intensifies these associations.

Previous studies have described prejudicial attitudes toward racial, ethnic, and other social groups as comprised of cognitive and affective components, such as negative thoughts, beliefs, and feelings toward the target individuals or groups (see, e.g., Dovidio et al., 2004). Prejudicial attitudes can be influenced by both realistic and symbolic threats, as well as social desirability (Schweitzer, Perkoudis, Krome, Ludlow, & Ryan, 2005). Our results support this line of thinking. Although social desirability might explain the nonsignificant differences between the levels of prejudicial attitudes toward the adversary observed in the exposed and unexposed groups, realistic threat might explain the significant associations observed between PTSD and prejudicial attitudes among those who are directly and continuously exposed to trauma. These results further indicate that prejudicial attitudes toward the adversary are not merely a function of discrimination or

Table 3. Multivariate Hierarchical Multiple Regression of Posttraumatic Stress Disorder Symptoms

| Predictors | R^2 | ΔR^2 | B | $SE B$ | β | F change | Overall F | df |
|-----------------------------------|-------|--------------|-------|--------|---------|------------|-------------|--------|
| Step 1 | .04 | | | | | 4.83*** | 4.83*** | 3, 337 |
| Gender ^a | | | -0.92 | 0.32 | -.15** | | | |
| Age | | | 0.00 | 0.02 | .01 | | | |
| Education | | | -0.18 | 0.07 | -.14** | | | |
| Step 2 | .30 | 25% | | | | 120.83*** | 35.12*** | 4, 336 |
| Gender ^a | | | -0.58 | 0.28 | -.10* | | | |
| Age | | | 0.02 | 0.01 | .06 | | | |
| Education | | | -0.14 | 0.06 | -.11* | | | |
| Exposure ^b | | | 3.04 | 0.28 | .51*** | | | |
| Step 3 | .37 | 8% | | | | 19.87*** | 32.67*** | 6, 334 |
| Gender ^a | | | -0.70 | 0.26 | -.12** | | | |
| Age | | | 0.03 | 0.01 | .09* | | | |
| Education | | | -0.07 | 0.06 | -.05 | | | |
| Exposure ^b | | | 2.89 | 0.27 | .49*** | | | |
| Satisfaction with life | | | -0.07 | 0.02 | -.14** | | | |
| Prejudicial attitudes | | | 0.35 | 0.07 | .24*** | | | |
| Step 4 | .42 | 5% | | | | 14.72*** | 30.19*** | 8, 332 |
| Gender ^a | | | -0.76 | 0.25 | -.13** | | | |
| Age | | | 0.03 | 0.01 | .09* | | | |
| Education | | | -0.09 | 0.05 | -.07 | | | |
| Exposure ^b | | | .870 | 1.38 | .15 | | | |
| Satisfaction with life | | | -0.02 | .030 | -.04 | | | |
| Prejudicial attitudes | | | 0.09 | 0.08 | .06 | | | |
| Exposure × Satisfaction with life | | | -0.08 | 0.04 | -.35* | | | |
| Exposure × Prejudicial attitudes | | | 0.60 | 0.13 | .73*** | | | |

^aGender is a binary-coded variable (0 = women, 1 = men). ^bExposure is a binary-coded variable (0 = unexposed; $n = 181$, 1 = exposed; $n = 160$).
* $p < .05$. ** $p < .01$. *** $p < .001$, two-tailed.

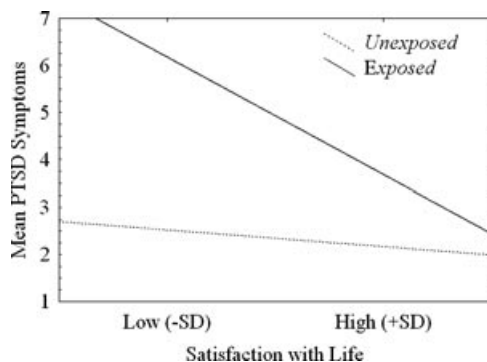


Figure 1. The association of satisfaction with life with posttraumatic stress disorder (PTSD) symptom scores as a function of exposure. Prejudicial attitude scores were significantly associated with PTSD symptom scores among the exposed individuals ($\beta = -.28$, $p < .001$), but not among the unexposed individuals ($\beta = -.06$, ns).

the existence of PTSD symptoms, but that a specific social context (e.g., severe exposure to trauma) plays a role in the PTSD–prejudice relationship.

The role of the exposure context could be interpreted in accordance with the conservation of resources (COR) theory (see Hobfoll, 2001, for a review). The COR theory suggests that the psychological impact of stress is primarily dependent on the threat of loss and/or the actual loss of resources suffered (e.g., Hobfoll, 1988, 1998). Accordingly, the COR theory may explain the significantly reduced life satisfaction observed among the exposed group as the result of the significant losses experienced among civilians exposed to terrorism. Those who are lacking personal and social resources may be more likely to employ unproductive and even harmful coping behaviors (Holahan, 2000; Holahan, Moos, Holahan, & Cronkite, 1999), such as hostile, negative, and prejudicial attitudes toward the adversary, which may be counterproductive coping mechanisms (Hobfoll et al., 2006). In line with this explanation are findings from a recent study conducted in Israel suggesting that exclusionism was more prevalent among

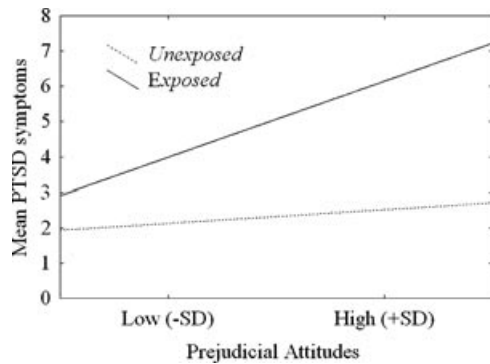


Figure 2. The association of prejudicial attitude scores with post-traumatic stress disorder (PTSD) symptom scores as a function of exposure. Levels of satisfaction with life were significantly associated with PTSD symptom scores among the exposed individuals ($\beta = .50$, $p < .001$), but not among the unexposed individuals ($\beta = .09$, *ns*).

individuals who believed that terrorism had caused them substantial damage (Hobfoll et al., 2006).

This study has a number of limitations. Because we used a cross-sectional design and self-reports to assess both predictor and outcome variables, we cannot track the temporal development of PTSD symptoms, prejudicial attitudes toward the adversary, or satisfaction with life to provide any definitive answer to the question of the causal direction of the observed effects. Moreover, over the years of attacks, about 15% of the exposed population left the area. People who choose to stay in a high-risk area, or have no other choice but to stay, may be different from those who choose to live in or move to lower-risk communities. Further studies should address this possibility. Nevertheless, it should be noted that the phenomenon under investigation is unique and characterized by unpredictable starting and termination points that did not allow the collection of either baseline or follow-up data. Finally, our sample included only individuals from Jewish towns and villages, thus it is impossible to generalize for non-Jewish Israeli populations.

Despite these methodological limitations, our study may provide new information for both researchers and clinicians. As shown in our study, exposure to ongoing and repeated violence may elicit not only excessive distress in the form of PTSD, but also diminished life satisfaction and increased prejudicial attitudes toward the enemy. The combination of stress-related symptoms and altered perceptions of both self and others may deserve an application of a comprehensive preventive approach that will include not only trauma-focused interventions, but also strategies to address changes in cognitions and interpersonal relations.

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