

Who is Prone to React to Coinciding Threats of Terrorism and War? Exploring Vulnerability Through Global Versus Differential Reactivity

Dov Shmotkin · Giora Keinan

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Abstract This study addressed reactions of Israelis to terrorism and the confrontation with Iraq when these threats coincided in 2003. A sample of 471 participants (age range 19–88) rated affective, cognitive, and behavioral reactions to each threat. Stronger reactions related to higher neuroticism, lower education, and being a woman; reactions to the confrontation with Iraq also related to lower extraversion and being a Holocaust survivor. Participants reacting predominantly to terrorism revealed higher conscientiousness and better subjective health. The study suggests that global reactivity to a critical dual-stressor situation is linked with risk factors of vulnerability whereas differential reactivity may indicate adaptability.

Keywords Terrorism · War · Stress reactions · Mental health · Israel

Introduction

The targeting of civilians is the principal mode of action by terrorist perpetrators, who spread mortal violence in order to coerce individuals and nations to change political positions (Marsella 2004). As civilians are usually targeted in conventional wars as well, the study of warfare-inflicted communities addresses issues of maintaining mental health in the face of large-scale stress and potential victimization (Krippner and McIntyre 2003). The present study examined individual differences among people in Israel who

simultaneously faced threats of terrorism and imminent war.

Events that put the Israeli population under the threat of attack included the Gulf War in 1991 and the terrorism of the Palestinian uprising, called “Al-Aqsa Intifada,” since 2000. In the Gulf War, Iraqi missile attacks on Israel caused death, injury, and damage, along with prevalent reactions of distress (Lomranz et al. 1994; Keinan 1994; Milgram 1993; Solomon 1995; Shalev and Solomon 1996). More recently, a study on Israelis during the Al-Aqsa Intifada (Bleich et al. 2003) found that almost half of the participants in a nationwide sample had been exposed to terrorism either personally or through relatives and friends. Another study (Klar et al. 2002) found that most Jewish Israelis estimated the danger of terrorism as intermediate and had implemented precautionary behaviors. In 2003, the threat of terrorism coincided with the newer threat of confrontation with Iraq, the latter clearly echoing the prior experience of the Gulf War. Juxtaposing these two threats, the present study explored both their global and differential concomitants.

Psychological reactions to extreme national threat were investigated in relation to the terrorist attacks on the World Trade Center in New York on September 11, 2001 (Galea et al. 2002; Schlenger et al. 2002; Schuster et al. 2001; Silver et al. 2002). The studies found that while stress reactions increased with geographic proximity to the World Trade Center, substantial stress reactions were nevertheless prevalent throughout the US and related to various sociodemographic factors. The prevalence of posttraumatic stress disorder (PTSD) following the September 11 attacks was estimated in various US samples to be 7.5–17.0%; for comparison, the estimates for terrorism-related PTSD in various Israeli samples were 6.6–18.0% (Bleich et al. 2003; Hobfoll et al. 2008).

D. Shmotkin (✉) · G. Keinan
Department of Psychology, Tel Aviv University,
69978 Tel Aviv, Israel
e-mail: shmotkin@post.tau.ac.il

Being exposed to the media's reportage of terrorist attacks, people in targeted communities often feel as if they are being attacked themselves (Wayment 2004), and may thus become "secondary victims" along with the original ones (Keinan et al. 2003). Hence, we should assume that any victimization caused by terrorism (or by other kinds of war) includes not only direct victims but the threatened community at large.

Besides stressful and posttraumatic reactions to terrorism, findings depict high resilience in affected communities (Bonanno et al. 2006). Israeli studies suggest that the detrimental impact of terrorism and wars on mental health may be ameliorated by habituation, accommodation, and coping (Lomranz et al. 1994; Milgram 1993; Zeidner 2006). Studies on the aftermath of the September 11 attacks also showed positive feelings (e.g., love, optimism) coexisting with negative reactions (Fredrickson et al. 2003).

Conceptually, threats of terrorism and war constitute an assault on people's most critical concerns. The terror management theory (Pyszczynski et al. 2003) explains the impact of terrorism and war by their paramount effect of inducing a condition of high awareness of death. People in this condition strive to adopt protective worldviews, by which they feel bound to esteemed values (cultural, religious, ideological, etc.) that should prevail long beyond their personal life's limit. From another theoretical perspective (Shmotkin 2005), terrorism and war are realization of a "hostile-world scenario," defined as one's image of actual or potential threats to one's life or integrity. The hostile-world scenario serves as a system that scans for adversity, thus countering individuals' basic inclination to sustain a favorable environment of well-being. According to Hobfoll's conservation of resources (COR) theory (Hobfoll et al. 1995), terrorism and war are likely to inflict loss, or further loss cycles, of valued resources, both material and psychological. Actual and anticipated depletion of resources generates distress and calls for protective effects of the individual's reservoirs and investments.

Threats of terrorism and war challenge worldviews, scenarios, and resources. Yet, according to all the above theories, this challenge activates individual differences in reacting to the common threats. Thus, applications of the COR theory to the effects of terrorism in Israel (Hobfoll et al. 2008) and the September 11 attacks in New York (Hobfoll et al. 2006) revealed that loss of psychosocial resources (e.g., sense of control, intimate relationships) related to individuals' variability in PTSD and depression. In this context of warfare effects, the present study examined the role of *relatively stable* personal attributes, which included sociodemographic positions, subjective health status, relation to the Holocaust experience, and basic personality traits. Relating to resource theory (Hobfoll 2002), the importance of these attributes lies in

their wide-spectrum power to constitute vulnerability and regulate shifts of resources in individuals' reactions to stressful and traumatic conditions.

The role of personality as an antecedent of reactivity to warfare stress has been a focus of the present study because it is rarely addressed in epidemiological surveys of reactions to mass adversity. The Big Five theory (McCrae and Costa 1996, 2003) postulates that the traits of neuroticism, extraversion, openness to experience, conscientiousness, and agreeableness constitute endogenous basic tendencies that precede any characteristic adaptations and hence mental health structures. In a similar vein, McAdams (1996) depicted the basic level of personality as comprising dispositional traits, such as the Big Five, which are relatively decontextualized and unconditional. Residing at a higher level are personal concerns such as defense and coping mechanisms, often couched in motivational and developmental terms.

The Timing of the Present Study

The study questionnaires were administered during January through May 2003 while Israelis had been confronting the terrorism of the Al-Aqsa Intifada. Since the start of the Intifada in September 2000 and until the end of the questionnaire administration, 788 persons (549 civilians) were killed in terrorist attacks and 5,491 persons (3,846 civilians) were injured, including 61 persons killed and 299 injured within the particular 5-month period of the questionnaire administration (Israel Defense Forces 2004). Attacks included car and bus explosions, suicide bombings in shopping centers and public sites, stabbings, and random shooting at people.

Simultaneously, Israelis were under the threat of the approaching war against Iraq. Based on the Gulf War experience, it was commonly expected that a war against the Iraqi leader Saddam Hussein would prompt him to attack Israel by missiles, possibly using chemical or biological warheads. Following governmental rules, Israelis prepared for the potential attack by obtaining gas masks and arranging sealed rooms. The authorities formally declared a state of emergency in Israel on March 18, 2003. The war against Iraq began on March 20th. On April 13th, 4 days after the US forces took control of Baghdad, the emergency state in Israel was officially cancelled. Eventually, Israel was not involved in this war in Iraq.

Aims, Conceptual Considerations, and Hypotheses

This study sought to delineate personal attributes associated with individuals' reactions to the co-occurring threats of terrorism and imminent war. Reactions were assessed in three domains: affective (anxiety generated by the danger),

cognitive (thinking about the danger) and behavioral (taking steps to reduce the danger). Besides the exploratory search for salient attributes, the investigation examined four hypotheses about the roles of certain concomitants in reacting to the particularly threatening, dual-stressor situation.

Reactions to acute threats are usually adaptive, reflecting individuals' mobilization of resources designed to contend with the danger (Taylor 1991). However, in line with resource theory (Hobfoll 2002), relatively strong reactions may reflect difficulties in handling the threats among people lacking resources or having had a prior traumatic loss of resources. Hence, focusing on socioeconomic resources as most valued and visible, our first hypothesis was that stronger reactions to both threats of terrorism and the confrontation with Iraq would relate to lower educational and economic status. A prior traumatic loss of resources may be most characteristically represented by Holocaust survivors, who were found vulnerable vis-a-vis warfare stress (Dekel and Hobfoll 2007; Solomon 1995). Hence, a second hypothesis was that stronger reactions would be revealed among Holocaust survivors and those whose parents had endured the Holocaust.

We also expected that reactions to warfare-related threats would co-vary with personality. Relying on the Big Five traits as a core model of personality (McCrae and Costa 2003), our third hypothesis was that stronger reactions to terrorism and the confrontation with Iraq would relate to a higher level of neuroticism and a lower level of extraversion. Neuroticism represents proneness to anxiety and vulnerability while extraversion represents the inclination to positive emotions and assertiveness. Producing inherent orientations of negativity and positivity, neuroticism and extraversion constitute primary temperamental dispositions whereas the other three traits of the Big Five serve as instrumental agents for creating conditions that shape one's well-being (McCrae and Costa 1991).

As explicated by certain models (Easterbrook 1959; Reich et al. 2003), high-stress situations induce individuals to reduce the complexity of information and to simplify response options. In this vein, people in stress tend to yield generalized, rather than differentiated, reactions by linking parts of the environment into large schemes (Keinan et al. 1991; Keinan and Sivan 2001). Accordingly, the above hypotheses imply that salient personal attributes would be associated with global reactions to both kinds of threat under study.

As the threats of terrorism and the confrontation with Iraq represented different dangers and implications (Gilat and Latzer 2007), we expected them to generate differential reactions as well. Most terrorist attacks targeted people outside their homes and engaging mainly in work, travel, shopping, and entertainment. On the other hand, Iraqi attacks on Israel were expected, according to the Gulf War

experience, to endanger people *inside* their homes by striking residential areas. The threats of terrorism and the confrontation with Iraq also differed in feasibility (actual versus hypothetical, respectively), the damage involved (local attacks, yet costly in lives, versus a full-fledged war, though one uncertain in nature), and ways to control the related danger (high-alert and avoidant behaviors outside one's home versus precautions taken at one's home). Therefore, people who reacted more strongly to the feasible threat of terrorism than to the hypothetical threat of the confrontation with Iraq might reasonably be more likely to actually encounter the danger of terrorism by frequenting public sites and utilizing transportation due to their work, study, social activity, or family commitments. Hence our fourth hypothesis was that concomitants differentially linked to reactions to terrorism, rather than to the confrontation with Iraq, would reflect greater adaptability.

Method

Participants

The sample consisted of 471 community-dwelling, Jewish participants aged 19–88 years ($M = 43.4$, Median = 41, $SD = 16.6$). While conducting a convenience sampling, the interviewers recruited participants in a wide array of sites such as workplaces, community centers, shopping areas, educational institutions, and other gathering places as well as private homes in various parts of Israel. The sample included 40.8% men and 59.2% women; 71.7% were born in Israel; 59.2% were married; 66.8% rated themselves as secular; and 96.6% rated themselves as having average or better health. The sample overrepresented middle and higher socioeconomic status: 93.4% had full high school or higher education, and 87.9% rated their economic status as average or better. Table 1 presents distributions of descriptive characteristics in the sample.

Measures

Sociodemographic Questionnaire

This questionnaire included probes of descriptive characteristics as well as self-ratings of economic status, health, and religiousness (see Table 1 for rating categories of these variables).

Self-Rated Reactions to Terrorism and the Confrontation with Iraq

Three items in this measure referred to the terrorist attacks on Israelis, respectively assessing an affective reaction

Table 1 Distributions of descriptive characteristics in the complete sample ($N = 471$)

Variable	%	N
Gender		
1. Men	40.8	192
2. Women	59.2	279
Place of birth		
1. Israel	71.7	330
2. Elsewhere	28.3	130
Education		
1. Elementary	2.8	13
2. Partial high school	3.7	17
3. Full high school	17.8	83
4. Higher education	10.1	47
5. Partial academic	17.4	81
6. B.A	32	149
7. M.A./Dr	16.1	75
Marital status		
1. Bachelor	28.2	133
2. Married	59.2	279
3. Divorced	6.4	30
4. Widowed	6.2	29
Economic status (self rated)		
1. Bad	4.5	21
2. Not so good	7.7	36
3. Average	52.2	245
4. Good	29.9	140
5. Very good	5.8	27
Religiousness (self rated)		
1. Secular	66.8	314
2. Traditionalist	24	113
3. Orthodox	7.9	37
4. Ultra-orthodox	1.3	6
Subjective health (self rated)		
1. Bad	.4	2
2. Not so good	3	14
3. Average	13.6	64
4. Good	43.9	206
5. Very good	39	183
Holocaust survivor^a		
1. No	95.9/81.1	450/77
2. Yes	4.1/18.9	19/18
Parents (at least one) endured the Holocaust^b		
1. No	79.1	291
2. Yes	20.9	77

Data of 0–11 cases were occasionally missing in individual variables

^a Survivors were defined as respondents who lived during 1939–1945 under Nazi rule; results after the slash refer to participants born before 1945

^b Coded for participants born in 1945 onwards; 1 = not second generation, 2 = second generation

(“The terrorist attacks cause me high anxiety”), cognitive reaction (“I frequently think of the possibility of getting hurt by a terrorist attack”), and behavioral reaction (“The threat of terrorist attacks affects my behavior”; respondents were given examples such as reducing outdoor activities or frequenting only secured public sites). Another three items referred to the 2003 confrontation with Iraq, respectively assessing an affective reaction (“The confrontation with Iraq causes me high anxiety”), cognitive reaction (“I frequently think of the possibility of getting hurt by the war against Iraq”) and behavioral reaction (“The confrontation with Iraq affects my behavior”; respondents were given examples such as preparing for chemical or biological attacks or avoiding long travels away). Respondents rated each item on a 5-step scale ranging 1 (“strongly disagree”) to 5 (“strongly agree”).

The correlations among the reactions to terrorism ranged from .54 to .70, and among the reactions to the confrontation with Iraq, .60–.72. Due to the high correlations among the three domains, reactions to each threat were averaged across domains, thus producing a composite index of reactions to terrorism ($N = 432$, $M = 2.73$, $SD = 1.00$) and to the confrontation in Iraq ($N = 358$, $M = 2.22$, $SD = .95$). The respective indices had Cronbach’s alphas of .82 and .87, and the correlation between the two was .67 ($N = 357$, $P < .001$).

Big Five Inventory (BFI)

This measure assesses the Big Five traits (John 1990; John and Srivastava 1999). It consists of 44 items rated on a 5-point scale ranging from 1 (“strongly disagree”) to 5 (“strongly agree”). Scores are the respondent’s mean ratings for the respective traits. The BFI scales showed internal consistency, retest reliability, a clear factor structure, and both convergent and discriminant validity with other Big Five measures (John and Srivastava 1999). The BFI Hebrew adaptation was agreed upon by two bilingual judges after examining two independent translations from English into Hebrew and two independent back translations. In the present sample, Cronbach’s alpha coefficients were .85 for neuroticism (8 items, $M = 2.70$, $SD = .83$); .71 for extraversion (8 items, $M = 3.40$, $SD = .62$); .77 for openness to experience (10 items, $M = 3.87$, $SD = .60$); .77 for conscientiousness (9 items, $M = 3.84$, $SD = .62$); and .73 for agreeableness (9 items, $M = 3.83$, $SD = .58$).

Mental Health Indicators

A negative aspect of mental health was measured by the *Center for Epidemiological Studies—Depression Scale* (CES-D; Radloff 1977), which consists of 20 depressive

symptoms, each rated by respondents for frequency of occurrence during the past week on a 4-step scale (alpha in the present sample was .87). Mental health was also assessed by measures of subjective well-being: first, the *Satisfaction with Life Scale* (SWLS; Diener et al. 1985), which consists of five judgments about one's life, each rated by respondents for agreement on a 7-step scale (alpha in the present sample was .82); second, the *Affect Balance Scale* (ABS; Bradburn 1969), which consists of five positive affect (PA) items along with five negative affect (NA) items, each rated by respondents for frequency of occurrence during the past week on a 4-step scale (alphas in the present sample were .74 for PA and .62 for NA). Each of the mental health measures was scored as the respondent's mean ratings. Examples of using the Hebrew adaptations of these measures can be found for CES-D in Shmotkin et al. (2003), and for SWLS and ABS in Shmotkin and Lomranz (1998).

Procedure

Participants were interviewed individually or in small groups by six graduate psychology students. The interviewers asked potential participants to take part in a study on people's feelings and self-attitudes, and guaranteed anonymity. The ratings of reactions to terrorism and the confrontation with Iraq were placed at the end of the questionnaire packet. Efforts were made to ensure minimal external distractions while the questionnaires were completed. The study was approved by the institutional ethical committee at Tel Aviv University. The authors have no conflicts of interest with this study, and hereby certify responsibility for it.

Results

Preliminary Examinations of the Reactions to Threats

Thirty-seven (7.9%) participants did not rate any of their reactions to terrorism and the confrontation with Iraq. Univariate comparisons between these participants and others who completed at least one self-rating ($n = 434$) revealed that the former had lower education ($t = -3.59$, $P < .001$, two-tailed) and economic status ($t = -2.25$, $P < .05$, two-tailed). No significant differences were found with regard to age, gender, origin, marital status, and religiousness. While all valid responses served for analyzing reactions to terrorism, analyses of reactions to the confrontation with Iraq included only 82.6% of the respondents whose questionnaires had been completed before April 13, 2003 (i.e., the day when the emergency in Israel was cancelled).

In each of the three domains, the mean rating related to terrorism was significantly higher than the counterpart related to the confrontation with Iraq: $t = 14.52$ for affective reactions, $t = 9.12$ for cognitive reactions, and $t = 6.03$ for behavioral reactions (for all, $df = 355$, $P < .001$, two-tailed).

Using both negative and positive indicators of mental health within a multiple regression, the composite index of the reactions to terrorism was significantly related to depressive symptoms (CES-D; $\beta = .21$, $P < .01$) whereas life satisfaction (SWLS) and affective well-being (PA, NA) proved redundant (multiple $R = .22$, $P < .001$). Likewise, the composite index of the reactions to the confrontation with Iraq was also significantly related to depressive symptoms ($\beta = .20$, $P < .01$), whereas life satisfaction and affective well-being again proved redundant (multiple $R = .22$, $P < .01$).

Relations of Sociodemographics, Health, and Holocaust Experience to Reactions to Threats

The bivariate correlations presented in Table 2 show that stronger reactions to terrorism and the confrontation with Iraq were significantly associated with being a woman, having lower education, having lower economic status, being religious, having lower subjective (self-rated) health, and being a Holocaust survivor. Partial correlations presented in Table 2 indicate that the above associations were not artifacts of age and gender. A specific association appeared between reactions to the confrontation with Iraq and higher age. Reactions to terrorism and the confrontation with Iraq did not relate to the respondents' place of birth (Israel or elsewhere), marital status (being currently married or unmarried), and having at least one parent that endured the Holocaust.

The Role of the Big Five in Predicting Reactions to Threats

In order to test the predictive power of the Big Five traits relative to the other descriptive characteristics, a hierarchical multiple regression model—for each threat separately—first introduced age and gender (Step 1), then added the other descriptive characteristics (Step 2), and finally added the Big Five (Step 3). In order to keep the samples intact, this analysis contrasted being a Holocaust survivor with all other participants (rather than with being same-age counterparts; see Table 2) and did not include having parents that endured the Holocaust (coded only for participants born after World War II and found uncorrelated with reactions to the threats). While age and gender alone (Step 1) explained together 8 and 5% of the variances respectively relating to the reactions to terrorism and the

Table 2 Correlations of descriptive characteristics with reactions to terrorism and the confrontation with Iraq (partial correlations controlling for age and gender in parentheses)

Characteristic	Terrorism	Confrontation with Iraq
Age	.03	.12*
Gender ^a	.28***	.19***
Place of birth ^b	-.01 (-.02)	.03 (-.02)
Education	-.24*** (-.23***)	-.35*** (-.34***)
Marital status ^c	.01 (.01)	-.02 (-.05)
Economic status	-.16** (-.18***)	-.18** (-.21***)
Religiousness ^d	.11* (.12*)	.15** (.15**)
Subjective health	-.10* (-.11*)	-.16** (-.13*)
Holocaust survivor ^e	.08/.21* (.09)/(.24*)	.18***/.27* (.17**)/(.27*)
Parents (at least one) endured the Holocaust ^f	-.02 (-.01)	.04 (.01)

Reported are Pearson correlations (point-biserial correlations for dichotomous variables). *N*s are 432 and 358 for reactions to terrorism and the confrontation with Iraq, respectively (with pairwise deletion, 1–7 cases with missing values are occasionally missing in individual variables)

* $P < .05$; ** $P < .01$; *** $P < .001$ (two-tailed)

^a Coded 1 = man, 2 = woman

^b Coded 1 = Israel, 2 = elsewhere

^c Coded 1 = currently unmarried, 2 = married

^d Coded 1 = secular, 2 = religious

^e Coded 1 = no, 2 = yes. Results after the slash refer to participants born before 1945 (for terrorism, $N = 88$; for the confrontation with Iraq, $N = 79$)

^f Coded 1 = not second generation, 2 = second generation, referring to participants born in 1945 onwards (for terrorism, $N = 340$; for the confrontation with Iraq, $N = 276$)

confrontation with Iraq, the whole set of descriptive characteristics (Step 2) explained 16 and 20%. Adding the Big Five (Step 3) explained an additional 11 and 7% of the respective variances (additions were significant at the .001 level). The results of the last step are presented in Table 3 as Model 1.

Model 1 shows that gender (being a woman), lower education, and high neuroticism best predicted stronger reactions to both threats. Among the descriptive characteristics, age, economic status, and health proved redundant whereas being religious and being a Holocaust survivor retained specific associations with stronger reactions to the confrontation with Iraq. The effect of being a Holocaust

survivor is notable because it was produced by only 17 survivors in the sample. Place of birth and marital status, which had zero bivariate correlations with the threats, revealed suppressive effects of removing irrelevant variance in other predictors in the equation. Among the Big Five, in addition to the effect of neuroticism, high extraversion was specifically predictive of *weaker* reactions to the confrontation with Iraq whereas high conscientiousness was specifically predictive of *stronger* reactions to terrorism. The results predicting reactions to terrorism, as reported for all available respondents ($N = 412$), were nearly identical to those in the subsample analyzed for reactions to the confrontation with Iraq ($N = 341$).

Analyses of Differential Reactions to Threats

The differential reactions to the two threats were analyzed by adding a fourth step to the above hierarchical multiple regression. Reported as Model 2 in Table 3, reactions unique to each threat (i.e., terrorism versus the confrontation with Iraq) were predicted by introducing the counterpart reactions to the other threat into the regression equation, thus *partialing out the common variance of the two threats* from the effects of the predictors. The significant effects in this analysis revealed that gender (being a woman) and neuroticism were positive predictors of the differential reactions to terrorism and *not* to the confrontation of Iraq. In parallel, education and extraversion were negative predictors of the differential reactions to the confrontation of Iraq and *not* to terrorism. Conscientiousness had a dual role of being a *positive* predictor of the differential reactions to terrorism but a *negative* predictor of those to the confrontation of Iraq.

By another analytic approach, differential reactions to each threat were examined *by their combination with the reactions to the other threat*. Accordingly, high and low levels of the respective reactions to terrorism versus the confrontation with Iraq were cross-tabulated after having been split by medians (2.67 and 2.00, respectively). Due to the correlation between reactions to the two threats, the largest portions of respondents were concentrated in the *congruent* groups of either terrorism-low/Iraq-low (41.5%) or terrorism-high/Iraq-high (30.5%). The other respondents belonged to the *incongruent* groups of either terrorism-low/Iraq-high (15.4%) or terrorism-high/Iraq-low (12.6%). A discriminant analysis contrasted the groups with the personal attributes as discriminating variables (see Table 4). Analysis 1 discriminated among all four groups and yielded one significant ($P < .001$) discriminant function (out of a possible three). As indicated by the centroids, the function differentiated mainly between the two congruent groups, with the highest discriminant coefficients ($>.40$) reiterating that neuroticism, education, and gender best

Table 3 Last-step results of hierarchical multiple regression analyses predicting reactions to terrorism and the confrontation with Iraq separately (Model 1) and differentially (Model 2)

Predicting variable	Model 1: Predicting reactions separately		Model 2: Predicting reactions differentially	
	Terrorism (<i>N</i> = 412)	Confrontation with Iraq (<i>N</i> = 341)	Terrorism (<i>N</i> = 340)	Confrontation with Iraq (<i>N</i> = 340)
Descriptive characteristics				
Age	.01	.09	-.02	.07
Gender ^a	.22***	.14**	.11**	.03
Place of birth ^b	-.11*	-.14*	-.05	-.06
Education	-.14**	-.25***	-.04	-.14**
Marital status ^c	.11*	.11*	.04	.05
Economic status	-.05	-.09	-.02	-.05
Religiousness ^d	.08	.11*	-.00	.07
Subjective health	-.03	-.03	.02	-.04
Holocaust survivor ^e	.07	.12*	.01	.07
Big Five traits				
Neuroticism	.36***	.24***	.22***	.03
Extraversion	-.05	-.15**	.02	-.11*
Openness	-.09	-.02	-.05	.01
Conscientiousness	.09*	-.02	.11**	-.08*
Agreeableness	.09	.05	.02	.02
Counterpart reactions				
Confrontation with Iraq	–	–	.58***	–
Terrorism	–	–	–	.59***
<i>R</i>	.52***	.52***	.73***	.72***
<i>R</i> ²	.27***	.28***	.53***	.52***
<i>R</i> ² change	.11***	.07***	.25***	.25***

Entries for predicting variables are standardized regression coefficients (β s)

* $P < .05$; ** $P < .01$; *** $P < .001$

^a Coded 1 = man, 2 = woman

^b Coded 1 = Israel, 2 = elsewhere

^c Coded 1 = currently unmarried, 2 = married

^d Coded 1 = secular, 2 = religious

^e Coded 1 = no, 2 = yes

discriminated *concurrently* high reactions to both threats from the low counterparts. Similar results were obtained by Analysis 2, which discriminated between the two congruent groups only (due to the small number of Holocaust survivors, this variable was omitted from this and the following pair analyses).

Analysis 3 discriminated between the two incongruent groups, and its discriminant function (the only one possible in pair discrimination) reached an effect size (canonical correlation .47) similar to that of Analysis 1 but on the edge of significance due to the smaller subsample. Analysis 3 indicated that being in the terrorism-high/Iraq-low group, in contrast with terrorism-low/Iraq-high, was associated with being a woman, reporting *better* health, being more conscientious and less open to experience, and being less religious. Education did not differ between the two

incongruous groups but functioned as a suppressor variable.

Discussion

We examined reactivity to a critical dual-stressor situation when Israelis faced simultaneous threats of terrorism and the confrontation with Iraq. Three hypotheses addressed the question of whether global reactions to both threats were associated with vulnerability-related concomitants within an array of personal attributes. The special timing of the study also raised a fourth hypothesis as to the adaptability of differential reactions to the threats. Providing substantial support to the hypotheses, this study suggests that reactions to competing threats of terrorism and

Table 4 Discriminant analysis results for groups cross-tabulating high and low reactions to terrorism and the confrontation with Iraq

Discriminating variable	Analysis 1 (<i>N</i> = 340)	Analysis 2 (<i>N</i> = 246)	Analysis 3 (<i>N</i> = 95)
	All 4 groups ^a Function 1	The 2 congruent groups ^b Function 1	The 2 incongruent groups ^c Function 1
Standardized discriminant function coefficients			
Age	.18	.21	-.22
Gender ^d	.41	.33	.63
Place of birth ^e	-.35	-.29	-.16
Education	-.48	-.51	-.50
Marital status ^f	.22	.27	.16
Economic status	-.05	-.01	.03
Religiousness ^g	.16	.23	-.58
Subjective health	.03	-.05	.43
Holocaust survivor ^h	.17	–	–
Neuroticism	.68	.70	.14
Extraversion	-.19	-.23	.14
Openness	-.08	-.03	-.47
Conscientiousness	.12	.05	.56
Agreeableness	.16	.23	-.16
Discriminant function statistics			
Canonical correlation	.48	.54	.47
Significance	.000	.000	.055
Explained variance	78.5	100	100
Centroids of:			
Terrorism-low/Iraq-low	-.57	-.54	–
Terrorism-low/Iraq-high	-.02	–	-.48
Terrorism-high/Iraq-low	.23	–	.59
Terrorism-high/Iraq-high	.73	.76	–

Entries present results of a simultaneous solution. Coefficients higher than .40 are in boldface

^a Terrorism-low/Iraq-low, terrorism-low/Iraq-high, terrorism-high/Iraq-low, terrorism-high/Iraq-high

^b Terrorism-low/Iraq-low, terrorism-high/Iraq-high

^c Terrorism-low/Iraq-high, terrorism-high/Iraq-low

^d Coded 1 = man, 2 = woman

^e Coded 1 = Israel, 2 = elsewhere

^f Coded 1 = currently unmarried, 2 = married

^g Coded 1 = secular, 2 = religious

^h Coded 1 = no, 2 = yes

imminent war reflect a common denominator of vulnerability, and yet bear on adaptability when reactions are differential as evidenced by dwelling on one threat over the other.

The results supported the first hypothesis that stronger reactions to terrorism and the confrontation with Iraq would be negatively correlated with socioeconomic status. Thus, with age and gender controlled, education explained 5.3 and 11.6% of the reactions' respective variances while economic status explained 3.2 and 4.4%. These figures might underestimate the actual effect sizes because participants of lower education and economic status tended to refrain from reporting any of their reactions. In the full

regression model with other personal attributes, economic status proved redundant to education. Thus, the current findings stress the role of education level in linking lower socioeconomic status to greater vulnerability (Adler et al. 1994) and, in parallel, solidifying psychological well-being (Keyes et al. 2002).

Along with education, the effect of gender was most conspicuous. For both threats, women had stronger reactions than men, explaining 3.6–7.8% of the variance. The same result was reproduced in the full regression model. This finding is compatible with ample reports that women express stronger distress in reaction to terrorism (Bleich et al. 2003; Silver et al. 2002; Zeidner 2006) and stronger

traumatic stress reactions in general (Norris et al. 2002). Beyond the debate of whether women are genuinely more vulnerable or merely more ready to report their vulnerability, women may adopt different appraisals of stressors (Tamres et al. 2002) so that stronger reactions to danger may be adaptive in view of their traditional role as caretakers and keepers of emotional safety (Moen 1997).

The results partially supported the second hypothesis by indicating stronger reactions to both threats by Holocaust survivors when compared with same-age counterparts (adjusted for age and gender, the explained variances were respectively 5.8 and 7.3%) and stronger reactions only to the confrontation with Iraq when compared with all other participants (explained variance 2.9%). The latter effect remained significant also with adjustment for the other personal attributes. These findings are consistent with a recent report that the distress of Holocaust survivors in Israel related to resource loss due to the threat of terrorism (Dekel and Hobfoll 2007) and with past reports that Holocaust survivors revealed greater distress during the Gulf War (Solomon and Prager 1992). The greater sensitivity of survivors to the confrontation with Iraq than to terrorism might relate to the danger of chemical warfare attacks in the former, in which precautionary preparations of gas masks and sealed rooms possibly reminded the survivors of the Nazi mass murder of Jews by gas. The present results are based on a small number of Holocaust survivors, and thus cannot be considered representative of this particular subpopulation. These results, however, fit prior observations that Holocaust effects constitute specific vulnerabilities rather than hampering the overall resilience among survivors (Shmotkin et al. 2003; Shmotkin and Lomranz 1998). As to the nonsignificant results regarding participants born to Holocaust survivors, this study joins a body of research that could not detect detrimental effects on the “second generation” in nonclinical settings (van Ijzendoorn et al. 2003).

Firmly supporting the third hypothesis were the results that higher neuroticism was associated with stronger reactions to both threats. This effect of neuroticism attests to its pervasive role in generating reactions to stress by increasing negative emotionality and decreasing perceived coping (Gunthert et al. 1999; Penley and Tomaka 2002). A partial support to the third hypothesis was provided by the association of lower extraversion with stronger reactions only to the confrontation with Iraq. Extraversion, then, did not produce a general effect despite its quality of attenuating negative reactions by sensitizing people to positive stimuli (Lucas et al. 2000). Possibly, people low on extraversion felt particularly susceptible to the confrontation with Iraq because their inclination to stay home, socially idle, did not free them from the danger of missile attacks.

The differential analysis by the regression design (Model 2) suggested that variance unique to reactions to terrorism was associated with facilitators of anxiety (high neuroticism and being a woman) but also with competence (high conscientiousness, characterized by qualities such as being careful, reliable, organized, and efficient). On the other hand, variance unique to reactions to the confrontation with Iraq was associated with a socioeconomic deficiency (low education) and potential incompetence in social and task-oriented activity (low extraversion and low conscientiousness). These results partially supported the fourth hypothesis concerning the greater adaptability linked to reactions to terrorism rather than to the confrontation with Iraq.

Providing another differential view, the discriminant analysis of all four groups that cross-tabulated high versus low levels of reactions (Analysis 1), or only the two congruent groups (Analysis 2), reiterated the general role of neuroticism, education, and gender. However, the discriminant analysis of the two *incongruent* groups (Analysis 3) suggested that the predominance of reactions to the tangible threat (terrorism) over the hypothetical one (confrontation with Iraq) characterized adaptive people confronting the challenge of terrorism through their daily engagements, and hence likely exposure, in public sites. Accordingly, the terrorism-high/Iraq-low group differed from terrorism-low/Iraq-high by higher conscientiousness and better health (relevant to active and work-oriented people), being a woman (relevant to women assuming the role of caring), and lower openness to experience (relevant to realistic people refraining from contemplation and fantasy). These results were also supportive of the fourth hypothesis, corroborating Gilat and Latzer's (2007) suggestion that the terrorism during the Intifada was not perceived by the Israelis as imposing a total emergency state characteristic of a full-blown war, but rather an effort to continue with daily routine along with the encounter with a stressful situation.

Subjective health has a sound role in epidemiological research (e.g., Ferraro and Farmer 1999) but was seldom examined in studies on reactions to war and terrorism (Shirom et al. 2008). In this study, subjective health was a redundant concomitant of those reactions when adjusted for other demographic and personality variables. However, it played a role in differentiating the relevance of the competing threats, as the terrorism-high/Iraq-low group felt healthier than the terrorism-low/Iraq-high group, both in a univariate comparison ($F = 4.41, df = 1, 98, P < .05$) and a multivariate discriminant analysis (see above). Turning to another intriguing result, the high reactivity of religious people, mainly to the confrontation with Iraq, seems relevant to other Israeli reports on the possible susceptibility of religious people to posttraumatic reactions to terrorism

(Bleich et al. 2003; Hobfoll et al. 2008). This finding is inconsistent with the widely reported protective function of religiousness in stress (Ryff et al. 2004) and therefore poses a question about its cultural specificity.

As this study concentrated on basic-level attributes of life conditions and personality, adaptational processes such as coping and self-regulation were missing in the results and should be addressed in further studies on reactions to warfare threats. Besides, several methodological limitations of this study should be considered. First, the sample was not representative of the Israeli society. For example, as the Israel Statistical Abstract (Israel Central Bureau of Statistics 2007) indicates, the percentage of those having more than 12 years of schooling (beyond high-school level) was expected to approximate 49% in the Jewish adult (18+) population, but was as high as 75.6% in the present sample. The percentage of women, as another example, was expected to approximate 52% but reached 59.2% in the present sample. Thus, while the education bias possibly lowered the estimated strength of reactions to the warfare threats, the gender bias possibly raised it. It seems, however, that sampling biases were partly ameliorated by approaching heterogeneous adults along the life span and by improving collaboration in face-to-face, rather than mail or telephone, interviews.

A second limitation was the measurement of reactions by one indicator for each of three domains. In fact, the use of single items to estimate effects of stressors is common in stress research (Keinan 1994; Moos and Schaefer 1993). In our case, the highly correlated indicators lent themselves to a composite score, but further studies should strive to examine differential effects in diverse domains as well as to distinguish between direct and indirect war- and terrorism-related effects (Gilat and Latzer 2007). Another limitation was the one-time assessment of reactions, which could not examine effects of the threats on each other while this possibility has been shown elsewhere (Kutz and Dekel 2006). Lastly, the reliance on self-reports joins other typical difficulties of studying mental health effects of terrorism (North and Pfefferbaum 2002).

Overall, the current study sheds light on the adaptive value of reacting to competing threats differentially rather than globally. In terms of resource theory (Hobfoll 2002), it is more parsimonious to manage a multiple-stressor situation by responding to the highly relevant threat than by wasting resources through overgeneralized reactions. Also, by selectively addressing the more relevant threat, people employ a more refined appraisal strategy that facilitates better coping (Maguen et al. 2008). As global reactions were found contoured by particularly salient risk factors of social positions and personality makeup, the current message for practitioners tackling warfare threats in communities is to attend not only to general procedures of stress

management but also to the specificity of vulnerable, or adaptable, attributes of the individuals involved (Foa et al. 2005). Further research is needed to substantiate a multi-stress perspective where global and differential reactions of individuals to threats can be disentangled. The worldwide plague of terrorism and the ever-recurring menace of war unfortunately provide pertinent arenas for such research.

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References

- Adler, N. E., Boyce, T., Chesney, M. A., Cohen, S., Folkman, S., Kahn, R. L., et al. (1994). Socioeconomic status and health: The challenge of the gradient. *American Psychologist*, *49*, 15–24.
- Bleich, A., Gelkopf, M., & Solomon, Z. (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*, 612–620.
- Bonanno, G. A., Galea, S., Bucchiarelli, A., & Vlahov, D. (2006). Psychological resilience after disaster. *Psychological Science*, *17*, 181–186.
- Bradburn, N. M. (1969). *The structure of psychological well-being*. Chicago: Aldine.
- Dekel, R., & Hobfoll, S. E. (2007). The impact of resource loss on Holocaust survivors facing war and terrorism in Israel. *Aging and Mental Health*, *11*, 159–167.
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, *49*, 71–75.
- Easterbrook, J. A. (1959). The effect of emotion on cue utilization and the organization of behavior. *Psychological Review*, *66*, 183–201.
- Ferraro, K. F., & Farmer, M. M. (1999). Utility of health data from social surveys: Is there a gold standard for measuring morbidity? *American Sociological Review*, *64*, 303–315.
- Foa, E. B., Cahill, S. P., Boscarino, J. A., Hobfoll, S. E., Lahad, M., McNally, R. J., et al. (2005). Social, psychological, and psychiatric interventions following terrorist attacks: Recommendations for practice and research. *Neuropsychopharmacology*, *30*, 1806–1817.
- Fredrickson, B. L., Tugade, M. M., Waugh, C. E., & Larkin, G. (2003). What good are positive emotions in crises?: A prospective study of resilience and emotions following the terrorist attacks on the United States on September 11th, 2001. *Journal of Personality and Social Psychology*, *84*, 365–376.
- Galea, S., Ahern, J., Resnick, H., Kilpatrick, D., Bucuvalas, M., Gold, J., et al. (2002). Psychological sequelae of the September 11 terrorist attacks in New York City. *New England Journal of Medicine*, *346*, 982–987.
- Gilat, I., & Latzer, Y. (2007). Characteristics of calls to the Israeli hotline during the Intifada. *Community Mental Health Journal*, *45*, 401–420.
- Gunther, K. C., Cohen, L. H., & Armeli, S. (1999). The role of neuroticism in daily stress and coping. *Journal of Personality and Social Psychology*, *77*, 1087–1100.
- Hobfoll, S. E. (2002). Social and psychological resources and adaptation. *Review of General Psychology*, *6*, 307–324.
- Hobfoll, S. E., Canetti-Nisim, D., Johnson, R. J., Palmieri, P. A., Varley, J. D., & Galea, S. (2008). The association of exposure,

- risk, and resiliency factors with PTSD among Jews and Arabs exposed to repeated acts of terrorism in Israel. *Journal of Traumatic Stress*, 21, 9–21.
- Hobfoll, S. E., Dunahoo, C. A., & Monnier, J. (1995). Conservation of resources and traumatic stress. In J. R. Freedy & S. E. Hobfoll (Eds.), *Traumatic stress: From theory to practice* (pp. 29–47). New York: Plenum.
- Hobfoll, S. E., Tracy, M., & Galea, S. (2006). The impact of resource loss and traumatic growth on probable PTSD and depression following terrorist attacks. *Journal of Traumatic Stress*, 19, 867–878.
- Israel Defense Forces. (2004). Official website at: <http://www1.idf.il/dover/site/homepage.asp>. Retrieved August 1, 2004.
- Israel Central Bureau of Statistics. (2007). *Statistical abstract of Israel* (Vol. 58). Jerusalem: Author.
- John, O. P. (1990). The “Big five” factor taxonomy: Dimensions of personality in the natural language and in questionnaires. In L. A. Pervin (Ed.), *Handbook of personality: Theory and research* (pp. 66–100). New York: Guilford.
- John, O. P., & Srivastava, S. (1999). The Big five trait taxonomy: History, measurement, and theoretical perspectives. In L. A. Pervin & O. P. John (Eds.), *Handbook of personality: Theory and research* (2nd ed., pp. 102–139). New York: Guilford.
- Keinan, G. (1994). Effects of stress and tolerance of ambiguity on magical thinking. *Journal of Personality and Social Psychology*, 67, 48–55.
- Keinan, G., Friedland, N., & Arad, L. (1991). Chunking and integration: Effects of stress on the structuring of information. *Cognition and Emotion*, 5, 133–145.
- Keinan, G., Sadeh, A., & Rosen, S. (2003). Attitudes and reactions to media coverage of terrorist acts. *Journal of Community Psychology*, 31, 149–165.
- Keinan, G., & Sivan, D. (2001). The effects of stress and desire for control on the formation of causal attributions. *Journal of Research on Personality*, 35, 127–137.
- Keyes, C. L. M., Shmotkin, D., & Ryff, C. D. (2002). Optimizing well-being: The empirical encounter of two traditions. *Journal of Personality and Social Psychology*, 82, 1007–1022.
- Klar, Y., Zakay, D., & Sharvit, K. (2002). ‘If I don’t get blown up...’: Realism in face of terrorism in an Israeli nationwide sample. *Risk Decision and Policy*, 7, 203–219.
- Krippner, S., & McIntyre, T. M. (Eds.). (2003). *The psychological impact of war trauma on civilians: An international perspective*. Westport, CT: Praeger/Greenwood.
- Kutz, I., & Dekel, R. (2006). Follow-up of victims of one terrorist attack in Israel: ASD, PTSD and the perceived threat of Iraqi missile attacks. *Personality and Individual Differences*, 40, 1579–1589.
- Lomranz, J., Hobfoll, S. E., Johnson, R., Eyal, N., & Zemach, M. (1994). A Nation’s response to attack: Israelis’ depressive reactions to the Gulf War. *Journal of Traumatic Stress*, 7, 55–69.
- Lucas, R. E., Diener, E., Grob, A., Suh, E. M., & Shao, L. (2000). Cross-cultural evidence for the fundamental features of extraversion. *Journal of Personality and Social Psychology*, 79, 452–468.
- Maguen, S., Papa, A., & Litz, B. T. (2008). Coping with the threat of terrorism: A review. *Anxiety, Stress, & Coping*, 21, 15–35.
- Marsella, A. (2004). Reflections on international terrorism: Issues, concepts, and directions. In F. M. Moghaddam & A. J. Marsella (Eds.), *Understanding terrorism: Psychological roots, consequences, and interventions* (pp. 11–47). Washington, DC: American Psychological Association.
- McAdams, D. P. (1996). Personality, modernity, and the storied self: A contemporary framework for studying persons. *Psychological Inquiry*, 7, 295–321.
- McCrae, R. R., & Costa, P. T., Jr. (1991). Adding *Liebe und Arbeit*: The full five-factor model and well-being. *Personality and Social Psychology Bulletin*, 17, 227–232.
- McCrae, R. R., & Costa, P. T., Jr. (1996). Toward a new generation of personality theories: Theoretical contexts for the five-factor model. In J. S. Wiggins (Ed.), *The five-factor model of personality: Theoretical perspectives* (pp. 51–87). New York: Guilford.
- McCrae, R. R., & Costa, P. T., Jr. (2003). *Personality in adulthood: A five-factor theory perspective* (2nd ed.). New York: Guilford.
- Milgram, N. (1993). Stress and coping in Israel during the Persian Gulf War. *Journal of Social Issues*, 4, 103–123.
- Moen, P. (1997). Women’s roles and resilience: Trajectories of advantage or turning points? In I. H. Gotlib & B. Wheaton (Eds.), *Stress and adversity over the life course: Trajectories and turning points* (pp. 133–156). Cambridge, UK: Cambridge University Press.
- Moos, R. H., & Schaefer, J. A. (1993). Coping resources and processes: Current concepts and measures. In L. Goldberger & S. Breznitz (Eds.), *Handbook of stress* (pp. 234–257). New York: Free Press.
- Norris, F. H., Foster, J. D., & Weisshaar, D. L. (2002). The epidemiology of sex differences in PTSD across developmental, societal, and research contexts. In R. Kimerling, P. Ouimette, & J. Wolfe (Eds.), *Gender and PTSD* (pp. 3–42). New York: Guilford.
- North, C. S., & Pfefferbaum, B. (2002). Research on the mental health effects of terrorism. *Journal of the American Medical Association*, 288, 633–636.
- Penley, J. A., & Tomaka, J. (2002). Associations among the Big Five, emotional responses, and coping with acute stress. *Personality and Individual Differences*, 32, 1215–1228.
- Pyszczynski, T., Solomon, S., & Greenberg, J. (2003). *In the wake of 9/11: The psychology of terror*. Washington, DC: American Psychological Association.
- Radloff, L. S. (1977). The CES-D scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement*, 1, 385–401.
- Reich, J. W., Zautra, A. J., & Davis, M. (2003). Dimensions of affect relationships: Models and their integrative implications. *Review of General Psychology*, 7, 66–83.
- Ryff, C. D., Singer, B. H., & Palmersheim, K. A. (2004). Social inequalities in health and well-being: The role of relational and religious protective factors. In O. G. Brim, C. D. Ryff, & R. C. Kessler (Eds.), *How healthy are we? A national study of well-being at midlife* (pp. 90–123). Chicago: University of Chicago Press.
- Schlenger, W. E., Caddell, J. M., Ebert, L., Jordan, B. K., Rourke, K. M., Wilson, D., et al. (2002). Psychological reactions to terrorist attacks: Findings from the national study of Americans’ reactions to September 11. *Journal of American Medical Association*, 288, 581–588.
- Schuster, M. A., Stein, B. D., Jaycox, L. H., Collins, R. L., Marshall, G. N., Elliott, M. N., et al. (2001). A national survey of stress reactions after the September 11, 2001 terrorist attacks. *New England Journal of Medicine*, 345, 1507–1512.
- Shalev, A. Y., & Solomon, Z. (1996). The threat and fear of missile attack: Israelis in the Gulf War. In R. J. Ursano & A. E. Norwood (Eds.), *Emotional aftermath of the Persian Gulf War: Veterans, families, communities, and nations* (pp. 143–160). Washington, DC: American Psychiatric Association.
- Shirom, A., Toker, S., Shapira, I., Berliner, S., & Melamed, S. (2008). Exposure to and fear of terror as predictors of self-rated health among apparently healthy employees. *British Journal of Health Psychology*, 13, 257–271.
- Shmotkin, D. (2005). Happiness in face of adversity: Reformulating the dynamic and modular bases of subjective well-being. *Review of General Psychology*, 9, 291–325.

- Shmotkin, D., Blumstein, T., & Modan, B. (2003). Tracing long-term effects of early trauma: A broad-scope view of Holocaust survivors in late life. *Journal of Consulting and Clinical Psychology, 71*, 223–234.
- Shmotkin, D., & Lomranz, J. (1998). Subjective well-being among Holocaust survivors: An examination of overlooked differentiations. *Journal of Personality and Social Psychology, 75*, 141–155.
- Silver, R. C., Holman, A., McIntosh, D. N., Poulin, M., & Gil-Rivas, V. (2002). Nationwide longitudinal study of psychological responses to September 11. *Journal of the American Medical Association, 288*, 1235–1244.
- Solomon, Z. (1995). *Coping with war-induced stress: The Gulf War and the Israeli response*. New York: Plenum.
- Solomon, Z., & Prager, E. (1992). Elderly Israeli Holocaust survivors during the Persian Gulf War: A study of psychological stress. *American Journal of Psychiatry, 149*, 1707–1710.
- Tamres, L. K., Janicki, D., & Helgeson, V. S. (2002). Sex differences in coping behavior: A meta-analytic review and an examination of relative coping. *Personality and Social Psychology Review, 6*, 2–30.
- Taylor, S. E. (1991). Asymmetrical effects of positive and negative events: The mobilization-minimization hypothesis. *Psychological Bulletin, 110*, 67–85.
- van Ijzendoorn, M. H., Bakermans-Kranenburg, M. J., & Sagi-Schwartz, A. (2003). Are children of Holocaust survivors less well-adapted? A meta-analytic investigation of secondary traumatization. *Journal of Traumatic Stress, 16*, 459–469.
- Wayment, H. A. (2004). It could have been me: Vicarious victims and disaster-focused distress. *Personality and Social Psychology Bulletin, 30*, 515–528.
- Zeidner, M. (2006). Individual differences in psychological reactions to terror attack. *Personality and Individual Differences, 40*, 771–781.