PERSONALITY VULNERABILITY, LOW SOCIAL SUPPORT, AND MALADAPTIVE COGNITIVE EMOTION REGULATION UNDER ONGOING EXPOSURE TO TERRORIST ATTACKS

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In two consecutive cross-sectional independent samples, we examined the relationship between the personality vulnerability dimensions of the trait Dependency and the trait Self-Criticism and the severity of traumatic stress-related mental health symptoms within a population of Israeli adults who had been directly exposed to ongoing rocket-fire on their homes in Sderot and other Gaza-Bordering Communities (GBC); a sample of individuals who had been indirectly exposed to these attacks served as a comparison group. Study 1 indicates significantly elevated levels of PTSD-Severity and stress in the GBC sample, as well as significant associations between Dependency and PTSD-Severity scores. In the indirectly exposed group, there were significant associations between Self-Criticism and PTSD-Severity scores. Study 2 confirmed these findings and also demonstrated that the associations between Dependency and PTSD-Severity and distress symptoms among individuals directly exposed to prolonged communal life-threatening situations are significantly mediated by low levels of perceived availability of social support and by increased use of maladaptive cognitive emotional regulation (MCER) response styles. Theoretical and clinical implications are discussed.

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Researchers have identified Israel as a natural laboratory for studying stress and its effects in a context of terrorism and war (e.g., Itzhaky & York, 2005). Exposure to acts of terrorism has been shown to adversely affect mental health by creating significant levels of distress and depression in the general population (e.g., Galea et al., 2002) and has been consistently associated with significant mental health problems (for reviews, see Galea, Nandi, & Vlahov, 2005; Neria, Nandi, & Galea, 2008; Norris et al., 2002), including high levels of posttraumatic stress disorder (PTSD; American Psychological Association, 2000) among Israeli populations facing terror attacks (e.g., Bleich, Gelkopf, & Salomon, 2003; Hobfoll et al., 2008; Shalev & Freedman, 2005; Shalev, Tuval, Frenkiel-Fishman, Hadar, & Eth, 2006). To date, few studies have examined the mental health impact of life-threatening terrorism among civilian populations experiencing continuous exposure to repeated attacks (Hobfoll et al., 2009) and little is known about the role of personality vulnerabilities in cases of ongoing exposure to terror and war. The present study intends to address some of these issues and is based on previous findings showing that specific intrapersonal variables related to personality traits may shape individuals’ perceptions and reactions to traumatic events, as well as their coping styles after exposure to trauma; these variables play a significant role in vulnerability to and the development and persistence of PTSD (e.g., Cox, MacPherson, Enns, & McWilliams, 2004; Miller, 2004). The current study focused on the adult population of the town of Sderot (S’de-rote) and it’s other surrounding Gaza Bordering Communities (GBC), located approximately seven kilometers from the Israel-Gaza border in southern Israel. This population has endured nearly eight years (2000 to 2008) of exposure to rocket and mortar fire from Hamas and Islamic Jihad forces operating from the Gaza Strip. Over 6,000 rockets and 2,500 mortar shells have been launched into this area during this time, threatening personal and family safety in the small and interconnected communities of the area, resulting in the loss of lives and many injuries as well as a considerable destruction of property. These events challenge any assumptions about safety, comprehensibility, and controllability. Moreover, the community’s natural support systems may be severely disrupted due to the nature of the event. Friends or family members may have abandoned

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1. More details on Qassam rocket fire against Sderot and the western Negev can be found at the Sderot Media Center at: http://www.sderotmedia.com/
the area and long-lasting difficulties in social and family function-
ing are to be expected.

Traumatic experiences resulting from natural and man-made
disasters mobilize internal and external resources for coping with
stress, and they place people at risk for short- and long-term men-
tal health and adjustment problems (see Horowitz, 1982, for a re-
view). In some cases, the emotional balance is restored shortly after
a traumatic event ends, but in other cases there may be profound
and prolonged mental health sequelae. These may include PTSD,
defined as the persistent re-experiencing of the traumatic event,
avoidance of stimuli associated with the trauma, and numbing of
general responsiveness, as well as symptoms of increased arousal
(for a detailed criteria, see the DSM-IV-TR; American Psychiatric
Association, 2000).

Research has shown that the negative effects of national trauma
are not limited to those directly affected by the trauma, and PTSD
symptoms have also been documented among people who were
only exposed to attacks through the media (e.g., Bleich et al., 2003).

With today’s constant, up-to-the-minute television and Internet
news reports, susceptible individuals far away from actual events
have been found to develop substantial symptoms of distress. Stud-
ies conducted after the terror attack on the World Trade Center, for
example, identified a high level of distress among persons living
outside of New York City and its environs (e.g., Marshall et al., 2007).
These findings indicate that the subjective experience of the event,
as manifested in feelings of threat, is the most significant predictor
of posttraumatic stress symptoms (e.g., Gavrilovic, Leric-Tosevski,
Knezevic, & Priebe, 2002).

Previous research focused on singular traumatic events (e.g.,
9/11 attacks), and the mental health impact of continuous expo-
sure to terrorism has only rarely been examined (e.g., Bleich et al.,
2003; Hobfoll et al., 2008; Hobfoll et al., 2009; Shalev & Freedman,
2005; Shalev et al., 2006). Because direct and prolonged exposure
to extreme traumatic events may threaten core safety and security
schemas, increasing human vulnerability to trauma-related mental
health problems, we were interested in conducting a study com-
paring directly exposed individuals with those who had been only
indirectly exposed to the same events.

Individual differences in susceptibility to PTSD under these con-
ditions evoke explanations of psychopathology as a result of the
activation of internal factors by external events. Contemporary
Personality and ongoing exposure to terrorist attacks

Empirical studies have found that specific personality traits may shape individuals’ perceptions of and reactions to traumatic events, as well as their coping style after exposure to trauma (e.g., Cox et al., 2004; Miller, 2004). Traumatic events may have a considerable effect on the individual’s interpersonal relationship patterns (e.g., McFarlan & Bookless, 2001) and a continuous threat to one’s security may affect an individual’s personal identity, leading to feelings of self-devaluation, failure, shame, and self-blame (e.g., Carlson & Dallenberg, 2000).

Blatt (1991, 2008) proposed a model of personality vulnerability traits most relevant to the study if the individuals’ perceptions and reactions to traumatic events. This model characterizes personality development as the integration of a person’s capabilities for self-definition (self-criticism) and interpersonal relatedness (dependency). The self-definition process relates to the development of a positive and integrated sense of identity. The interpersonal-relatedness process relates to the ability to establish and maintain reciprocal, mature, and satisfying interpersonal relationships. Individual differences in the relative emphases on processes of relatedness and self-definition delineate two fundamental personality styles, each with favored modes of cognition and coping strategies (Besser, Guez, & Priel, 2008; Besser & Priel, 2003a; Blatt, 1991, 2008; Blatt, Quinlan, Chevron, McDonald, & Zuroff, 1982). Adequate coordination between interpersonal relatedness and self-definition is the hallmark of optimal development and is assumed to reduce stress and lead to physical and psychological well-being (Blatt & Zuroff, 1992).

We studied two independent samples, exploring first the associations between Dependency and Self-Critical vulnerabilities and PTSD symptoms under direct and indirect prolonged exposure to life threatening trauma (Study 1) and then the possible mechanisms involved in these processes (Study 2).

**STUDY 1**

The aim of this first study was to investigate the role of the personality vulnerability dimensions of Dependency and Self-Criticism in the mental health of individuals affected by prolonged direct and indirect exposure to ongoing terror attack-related trauma.
In the context of Blatt’s theoretical model of personality vulnerabilities, we assumed that individuals with high levels of Dependency are at risk for developing negative affectivity when they perceive disruptions in their relationships with others, interpersonal loss, or social rejection. Individuals with high levels of Self-Criticism are hypothesized to be at risk for developing negative affectivity when they perceive that they are not meeting their own high standards (e.g., Besser, 2004; Besser & Priel, 2003b, 2005a, b). It is important to note here that previous research has shown that Self-Criticism, not Dependency, constitutes the main vulnerability factor in community samples experiencing stressful life events, such as the transition to parenthood and postpartum depression (e.g., Besser & Priel, 2003a; Priel & Besser, 1999, 2000). This same pattern was observed in the few existing studies within the context of PTSD, which focused on Vietnam veterans (Southwick, Yehuda, & Giller, 1991), Holocaust survivors (Yehuda, Kahana, Southwick, & Giller, 1994), and victims of domestic violence (Sharhabani-Arzy, Amir, & Swisa, 2005). Nonetheless, to date, no research has examined the roles of Self-Criticism and Dependency in the individual’s response to direct and ongoing exposure to life threatening traumatic events. In the present study, we hypothesized that ongoing exposure to life-threatening experiences related to terrorist attacks may produce a progressive avoidance of interpersonal relationships and reduce interpersonal communication (e.g., McFarlan & Bookless, 2001) that may be especially detrimental among dependent individuals. Accordingly, under the conditions studied, Dependency might also constitute a serious vulnerability factor.

The following main hypotheses are tested in Study 1: Based on previous findings, Self-Criticism was hypothesized to constitute the main vulnerability factor for PTSD under both direct and indirect exposure. In addition, Dependency was hypothesized to constitute a vulnerability factor under direct and prolonged exposure to trauma.

METHOD

Participants

Data were collected between October 2007 and April 2008. The sample was composed of two groups: (a) A study group including
129 adult community volunteers who were residents of Sderot and smaller communities of the GBC, all of whom had been exposed to the threat of rockets landing on their small town, village, or kibbutz for more than seven years; and (b) a comparison group including 155 adult community volunteers living in a distant geographic area in southeastern Israel (Eilat and its surrounding communities) located about 350 km from the GBC community. These participants matched those of the study group in terms of sociodemographic characteristics and type of community (e.g., size of town), but had never been directly exposed to life-threatening experiences related to terrorism or war and had no relatives, personal friends, or acquaintances living in the GBC area, since geographic proximity or psychological closeness to victims is known to increase the risk of developing posttraumatic symptoms (e.g., Weisenberg, Schwartzwald, Wysman, Solomon, & Klingman, 1993). However, these participants had been exposed to these attacks through the media.

Sampling

We have employed a stratified sampling probability method followed by a multistage cluster sampling (detailed information on the sampling is available from the corresponding author upon request). We 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 samples, we limited this final stage to Jewish Israelis aged 20 or older; who fluently read and comprehended Hebrew; had been permanent residents of the area for at least 10 years; were not currently undergoing counseling, psychological treatment or psychiatric treatment; and had no psychiatric history. In addition, we kept gender balanced over the entire samples.

MEASURES

Personality Vulnerability Measure

Self-Criticism and Dependency. The Depressive Experiences Questionnaire (DEQ; Blatt, D’Afflitti, & Quinlan, 1976) is a 66-item scale that yields orthogonal factors for Dependency and Self-Criticism. The Dependency factor reflects a preoccupation with abandonment and separation, feelings of being unloved, and fear of loss. The Self-
Criticism factor reflects concerns about failure and guilt, self-criticism, and being unable to meet high standards set by the self and by others. Internal consistency and test-retest reliability are adequate (see Blatt, 2008). Items were converted to $z$-scores and multiplied by the factor weight coefficient, according to national norms (Priel, Besser, & Shahar, 1998).

**Measures of Responses to the Threat of Rocket Fire**

*The Severity of Symptoms Related to PTSD.* The severity of the individual participants’ PTSD-related symptoms was measured using the Impact of Event Scale-Revised (IES-R; Weiss & Marmar, 1997). The IES-R has 22 items, designed to assess current subjective distress associated with any specific life event and is comprised of three subscales, hyperarousal, intrusion, and avoidance, which parallel the DSM-IV criteria for PTSD. Respondents are 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 their experiences over the past seven days. Weiss and Marmar (1997) reported that the internal consistency of the three subscales was found to be very high and to have good criterion predictive, content, and construct validities.

*Stress Arousal Checklist.* The SACL (Mackay, Cox, Burrows, & Lazzerini, 1978) is a 30-item instrument designed to assess a person’s psychological experience in response to the external environment, and is comprised of two factors, stress and arousal. The SACL gives an assessment of both momentary stress and arousal at the time of the completion of the questionnaire. Adjectives associated with the stress subscale (descriptors that range from pleasant to tense) or with the arousal subscale (consists of descriptors ranging from lively to drowsy) are rated on an ordered 4-point response scale, ranging from definitely feel through definitely do not feel. Items were given a score of 1 when respondents felt the adjective definitely or slightly described their feelings, and 0 when they were either undecided or the adjective did not describe their feelings. Eighteen of the stress-related items contributed to the stress subscale score, which could range from 0 to 18, and was used in the present study (ranging from 0 to 12).

The Cronbach’s $\alpha$ values obtained in the present study for the multi-item scales are reported in Table 2.
Procedure

Potential participants were asked if they would be willing to complete a questionnaire about personality and mood. All participants were reminded of their right to withdraw from the study should they feel uncomfortable; none chose to do so. All questionnaires were administered in Hebrew. Potential order effects were controlled by means of a randomized presentation of the questionnaires within and between participants. Participants were recruited and data were collected simultaneously for both samples (see Table 1). After they had completed the DEQ and IESI-R questionnaires and the SACL stress scale, the participants were given a written debriefing.

RESULTS AND DISCUSSION

Group Differences

Results indicated no significant age or education differences. However, participants in the GBC sample reported significantly higher...
levels of Dependency, PTSD-Severity, and stress scores (for M, SD, and F values, see Table 1). It is important to note here that although mean Dependency was significantly higher among the GBC sample, the distribution of Dependency scores was not significantly different from the normal distribution curve.

**Relationships Between Self-Criticism, Dependency, and PTSD-Severity and Stress**

The associations between Self-Criticism and Dependency and PTSD-Severity were examined using an SEM (Hoyle & Smith, 1994) strategy that assessed measurement errors in the dependent and independent variables. Multiple-group SEM analysis was performed with AMOS software (Version 4.01; Arbuckle, 1999), using the maximum likelihood method.2 Table 2 lists the first-order correlations between all of the observed variables that were used as indicators of the latent construct used in the model. There were highly significant correlations among PTSD subscale scores in both groups.

A model including Self-Criticism and Dependency and their associations with PTSD-Severity was specified and estimated simul-

### Table 2. Zero-Order Correlations

<table>
<thead>
<tr>
<th>Variable</th>
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<td>.10</td>
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<td>3. Stress</td>
<td>.31***</td>
<td>.22**</td>
<td>—</td>
<td>.03</td>
<td>.14</td>
<td>.20*</td>
<td>.88</td>
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<td>4. Avoidance</td>
<td>.18</td>
<td>.32***</td>
<td>.32***</td>
<td>—</td>
<td>.59***</td>
<td>.56***</td>
<td>.78</td>
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<tr>
<td>5. Intrusion</td>
<td>.16</td>
<td>.38***</td>
<td>.40***</td>
<td>.71***</td>
<td>—</td>
<td>.87***</td>
<td>.83</td>
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<tr>
<td>6. Hyperarousal</td>
<td>.12</td>
<td>.38***</td>
<td>.50***</td>
<td>.71***</td>
<td>.85***</td>
<td>—</td>
<td>.82</td>
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<td>α</td>
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</table>

Note. The directly-exposed-to-trauma (GBC) sample (N = 129) is represented below the diagonal and the sample indirectly exposed to trauma (N = 155) is represented above the diagonal. *p < .05; **p < .01; ***p < .001.

2. The following fit indices were used: the chi-square/df ratio, the Root Mean Square Error of Approximation (RMSEA), the Comparative Fit Index (CFI), and the Non-Normed Fit Index (NNFI). A model in which χ²/df was ≤ 2, CFI and NNFI were greater than .90, and the RMSEA index was between .00 and .06 with confidence intervals between .00 and .08 (Hu & Bentler, 1999) was deemed acceptable. These moderately stringent acceptance criteria clearly reject inadequate or poorly specified models, while accepting for consideration models that meet real-world criteria for reasonable fit and representation of the data (Kelloway, 1998).
Simultaneously for both groups using SEM multiple-group analysis with all parameters left free to be estimated. This model (see Figure 1) was found to fit the observed data very well, $\chi^2(8) = 3.65, p = .89, \chi^2/df = .46, \text{NNFI} = .99, \text{CFI} = 1.0, \text{RMSEA} = .000 \text{ (C.I.} .000, .03)\text{).}

As can be seen in Figure 1, a significant association between Dependency and PTSD-Severity was found in the GBC group only, and a significant association between Self-Criticism and PTSD-Severity was found in the indirectly exposed group only. According to the Critical Ratio criteria for comparing parameters, the difference between the associations of Self-Criticism and Dependency with PTSD-Severity in the two groups was found to be significant for Dependency associations ($t = -3.46; p < .001$). This finding indicates that prolonged direct exposure to stress significantly exacerbated the association between Dependency and PTSD-Severity. Specifical-
ly, our findings suggest that among individuals in the GBC group (but not among individuals in the indirect exposure group), a high level of Dependency was significantly associated with increased PTSD-Severity (see Figure 1).

Since this is a cross-sectional study based on self reports of both levels of PTSD and personality vulnerability scores, it may be argued that results are affected by participants’ current perceived stress levels. We, therefore, examined whether the significant associations that were observed persist when stress levels are controlled for (i.e., the effects of personality on PTSD are free of the shared variance with stress). Accordingly, we added stress levels and their associations with Self-Criticism and Dependency and the association between stress and PTSD-Severity to the model. This expanded model was found to fit the observed data well, \( \chi^2(12) = 17.51, p = .13, \chi^2/df = 1.46, \text{NNFI} = .98, \text{CFI} = .99, \text{RMSEA} = .04 \) (C.I. .000, .07).

When we controlled for the effects of stress levels, the significant and nonsignificant effects for each group, as presented in Figure 1, were not altered. Moreover, results indicated that levels of stress in the GBC group were significantly associated with PTSD-Severity (\( \beta = 0.41, t = 4.71, p < .0001 \)); whereas levels of stress were not significantly related to PTSD-Severity in the indirectly exposed group (\( \beta = 0.04, t = .47, ns \)). According to the Critical Ratio criteria for parameter comparisons, the difference between groups concerning the associations between stress levels and PTSD-Severity was found to be significant (\( t = -3.61; p < .001 \)).

The results of Study 1 show that there were higher levels of stress and PTSD-Severity in the directly exposed group (the GBC sample); in this group, stress levels were significantly related to high PTSD-Severity. Regarding vulnerability traits, our findings indicate that Dependency, but not Self-Criticism, is associated with higher levels of PTSD-Severity among individuals directly exposed to life-threatening events; whereas Self-Criticism, but not Dependency, is related to levels of PTSD-Severity under conditions of indirect exposure to these events. Thus, while issues of interpersonal relatedness are of main concern under direct exposure to threat, it seems that among the population indirectly exposed to trauma, issues of self-definition and identity play a major role. Self-critical individuals, who may be less socially active or involved, present lower levels of PTSD. These findings also suggest that the deterioration of personal resources associated with direct and prolonged life-threatening stress might increase individuals’ Dependency levels, as well as their maladap-
tive emotional reactions. We conducted a second study based on a new independent sample to further investigate the mechanisms underlying the vulnerability of dependent and self-critical individuals under direct and indirect exposure to prolonged stress.

**STUDY 2**

In contrast to the findings of previous studies of individual post-trauma reactions, the results of Study 1 indicate that under conditions of communal prolonged life-threatening stress, Dependency, but not Self-Criticism, is associated with higher levels of PTSD-Severity; whereas Self-Criticism, but not Dependency, is related to levels of PTSD-Severity under conditions of indirect exposure to these events. Using an independent sample, a second study was conducted to explore the mechanisms involved in the dependent and self-critical vulnerabilities confronting ongoing direct and indirect exposure to terrorist attacks.

Perceived social support has consistently been positively associated with psychological well-being in times of stress (Norris & Kaniasty, 1996) and is generally considered to be a protective factor for individuals who have experienced a disaster (Norris et al., 2002) or terror attack (e.g., Hobfoll, Canetti-Nisim, & Johnson, 2006); individuals who sustain supportive social relationships are more resilient in the face of life-threatening conditions (Galea et al., 2002; Norris & Kaniasty, 1996; Shalev, Tuval-Mashiach, & Hadar, 2004). Ozer, Best, Lipsey, and Weiss (2003) conducted a meta-analysis of risk factors for PTSD and found that the most important risk factors are the severity of the trauma, ongoing stress, and a lack of, or impaired social support. Interpersonal resources are a main resource that may have been lost by many Sderot and GBC residents, who are likely to have overtaxed their own resources and have few to share. Also, friends and family may not want to tax loved ones living nearby, as they know the burden they are already under. This situation may aggravate one’s negative mood, since others are in a similar situation of shared fears and worries and thus are not available for support.

We assumed that under conditions of prolonged and continuous objective danger affecting the entire community, the inevitable loss of social support might have a deleterious effect on all individuals, especially the more dependent ones. Prior research has found that
high levels of Dependency under high stress conditions may result in extreme demands for care, and that extreme neediness leads to interpersonal conflict, which in turn leads to increased vulnerability in dependent individuals (Besser, Priel, Flett, & Wiznitzer, 2007). Increased demands for care seem to impair the ability of dependent individuals to efficiently use social support, which results in maladaptation (Cohen, 1993). Indeed, previous studies have demonstrated the role of perceived support as mediator in the Dependency/psychopathology association (see e.g., Priel & Besser, 2000). Among self-critical individuals, however, the loss of social support resources may have only limited effects. Self-critical individuals have been found to be reserved, to be cold in their interpersonal relationships, and to feel uncomfortable socially; these individuals tend to avoid intimate relationships, to be distrustful, to perceive others as critical and unsupportive, and to avoid turning to others for help (see Blatt, 2008).

In the present study, we aimed to explore the hypothesis that levels of PTSD-Severity and distress symptoms among highly dependent individuals, but not among self-critical individuals, directly experiencing prolonged communal exposure to trauma are mediated by the perceived availability of social support. This mediational model integrates theoretical assumptions and empirical evidence into the association between personality and social support, as well as findings concerning the role of social support and well-being under conditions of prolonged stress. Moreover, existing research (e.g., B.R. Sarason et al., 1991) has confirmed that perceived social support is associated with personality characteristics, rather than with the actual helpfulness of others in moments of need. These studies emphasize the role played by personal beliefs regarding the risks and advantages of seeking help, and the effects of these beliefs on the development and use of support resources (Vaux, 1992). As noted in previous studies, Dependency has not been associated with PTSD, possibly because Dependency is generally positively associated with the ability to recruit and maintain social support (Mongrain, 1998; Priel & Besser, 2000; Priel & Shahar, 2000).

In addition, we assumed that cognitive emotion regulation strategies may also play an important role in the well-being of Sderot and GBC populations. Cognitive emotional regulation strategies can be defined as the conscious mental strategies individuals use to handle the intake of emotionally arousing information (e.g., Bryant, Moulds, & Guthrie, 2001). These strategies have been shown
to play a vital role in the development of emotional and behavioral problems following exposure to stressful events (e.g., Garnefski, Boon, & Kraaij, 2003; Kraaij & Garnefski, 2006). Psychopathological responses to stressors have been found to be strongly mediated by perceptions of a traumatic event and its aftermath (e.g., Ehlers & Clark, 2000).

General population studies on the relative influence of cognitive emotion regulation strategies on the reporting of symptoms of depression and anxiety have shown that the strategies of blame, rumination, and catastrophizing are related to the reporting of more symptomatology (e.g., Garnefski et al., 2003). Catastrophic appraisals (e.g., Engelhard, van den Hout, Arntz, & McNally, 2002) attributing responsibility to another person (other-blame) (e.g., Delahanty et al., 1997), and rumination (e.g., Michael, Halligan, Clark, & Ehlers, 2007) have been associated with PTSD Severity. Finally, strong relationships have been found between specific cognitive emotion regulation strategies and posttraumatic stress; rumination and catastrophizing have been shown to be related to the reporting of more symptomatology (Amone-P’Olak, Garnefski, & Kraaij, 2007).

The present study aimed to explore intrapersonal and interpersonal mechanisms mediating the association between Dependency and Self-criticism levels and symptomatic behavior found in Study 1. We hypothesized that maladaptive emotional regulation (intrapersonal) and low levels of social support (interpersonal) each mediate the associations between the Dependency personality vulnerability factor and symptomatic behavior among individuals exposed to direct threat. We also assumed that maladaptive emotional regulation strategies will mediate the associations between self-critical vulnerability and symptomatic behavior among individuals exposed to indirect threat. In this study, we extended the assessment of symptomatic behavior to include different aspects of individuals’ distress reactions; in addition to PTSD severity levels, we also assessed negative mood state (dysphoria, anxiety, and hostility), anger, and somatic symptoms.

METHOD

Participants

As in Study 1, two samples were investigated: a community sample of 119 adult volunteers from Sderot and GBC, as well as a compari-
### TABLE 3. Zero-Order Correlations

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*Note.* The directly-exposed-to-trauma (GBC) sample (N = 119) is represented below the diagonal and the sample indirectly exposed to trauma (N = 127) is represented above the diagonal. *p < .05. **p < .01. ***p < .001.
Personality and ongoing exposure to terrorist attacks

Son community sample of 127 volunteer subjects. The criteria for inclusion, sampling method, and procedures were the same as described for Study 1.

Measures and Procedures

Procedures and measures of Self-Criticism and Dependency, as well as measures of stress level and PTSD-Severity were the same as in Study 1. In Study 2 additional measures were given.

TABLE 4. Mean Differences

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<tr>
<th>Variable</th>
<th>Group</th>
<th>M</th>
<th>SD</th>
<th>M</th>
<th>SD</th>
<th>F(1,244)</th>
<th>Effect Size</th>
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<td>Direct Exposure N = 119</td>
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<td>Other-Blame</td>
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<td>5.07</td>
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</table>

*p < .05; **p < .01; ***p < .001.
FIGURE 2. The direct association between Dependency and PTSD-Severity and Distress in the direct-exposure sample, and the direct association between Self-Criticism and PTSD-Severity and Distress in the indirect-exposure sample. Note. The direct association between Dependency and PTSD-Severity and Distress in the direct exposure sample, and the direct association between Self-Criticism and PTSD-Severity and distress in the indirect exposure sample. Rectangles indicate measured variables and large circles represent latent constructs. Small circles reflect residuals (e) or disturbances (d); bold numbers above or near endogenous variables represent the amount of variance explained (R²). Unidirectional arrows depict hypothesized directional or “causal” links. Standardized maximum likelihood parameters are used. Bold estimates are statistically significant. *p < .05. **p < .01. ***p < .001.
Additional Measures

Cognitive Emotion Regulation Questionnaire (CERQ). The CERQ (Garnefski, Kraaij, & Spinhoven, 2002) is a 36-item questionnaire, consisting of nine conceptually distinct subscales, each consisting of four items and each referring to cognitive strategies that characterize the individual’s style after experiencing threatening or stressful events. In the present study, the three styles assessed were: Ruminating, Other-Blame, and Catastrophizing. Items were measured on a 5-point Likert scale, ranging from 1 (never or almost never) to 5 (always or almost always). The psychometric properties of the CERQ have been proven to be good (e.g., Garnefski, Baan, & Kraaij, 2005).

Negative State Mood. State negative mood over the past seven days was measured using the three negative affective state scales of the VAS (Albersnagel, 1988). These scales include 14 negative mood adjectives. Participants were asked to indicate how they had been feeling over the past seven days by placing a vertical mark on each 80-mm line anchored at 0% and 100%, with opposing labels for each adjective (e.g., not at all sad to extremely sad). The three affective states assessed were Dysphoria (depressed, sad, blue, despondent, tormented, and lost), Hostility (hostile, irritable, annoyed, and disagreeable), and Anxiety (anxious, nervous, uneasy, and tense).

Anger Responses. State anger intensity over the past seven days was measured using the State Anger Scale (STAS; Spielberger, Jacobs, Russell, & Crane, 1983). The STAS is a 15-item scale that uses a 4-point Likert format. Items were rated for intensity of current feelings and experiences, from 1 (not at all) to 4 (very much). Participants were asked to indicate how they had felt over the past seven days. Scores are the sums of the responses to the state-anger items. High scores indicate that a person is more likely to respond with elevated levels of transient anger. For reliability and validity information for this measure, see Spielberger et al. (1983).

Somatic Symptoms. The somatic subscale of the Somatic, Cognitive, and Behavioral Anxiety Inventory was used to measure state somatic symptoms (SCBAI-Somatic Subscale; Lehrer & Woolfolk, 1982). The SCBAI assesses the level and type of uncomfortable feelings participants are experiencing. The somatic subscale of the SCBAI includes 16 items concerning somatic expressions of distress, which are evaluated using a 9-point Likert scale. Participants were asked
to indicate how they had felt over the past week. For reliability and validity information for this scale, see Lehrer & Woolfolk (1982).

**Perceived Social Support.** The Multidimensional Scale of Perceived Social Support (MSPSS; Canty-Mitchell & Zimet, 2000) was used to assess self-reported amounts of social support. The MSPSS is a 12-item questionnaire containing three subscales, each consisting of four items, measuring perceived availability of social support from friends, family, and one’s significant other. Items are scored on a 7-point Likert-type scale, ranging from 1 (very strongly disagree) to 7 (very strongly agree) for each item. For this study, we calculated an overall MSPSS score.

The Cronbach’s α values obtained in the present study for the multi-item scales are reported in Table 3.

RESULTS AND DISCUSSION

**Analytic Strategy**

We first tested group differences regarding age and education. Then, we compared the study variables (personality vulnerability factors, stress levels, PTSD-Severity scores, Distress measures, perceived social support, and Maladaptive Emotional Regulation scores) in the two groups. Next, our analyses focused on tests of mediational associations. Specifically, we examined whether MCER (a latent construct defined using the Rumination, Catastrophizing, and Other-Blame scales’ scores as its indicators) or perceived social support mediate the associations between the personality vulnerability factors and PTSD-Severity (avoidance, intrusion, and hyperarousal) and Distress (dysphoria, anxiety, hostility, anger, and somatic symptoms). We explored this question using an SEM (Hoyle & Smith, 1994) strategy, which was carried out with the AMOS software (Version 4.01; Arbuckle, 1999) using the maximum-likelihood method.

We conducted the SEM analysis in three stages. First, to test the overall fit of the CFA model, we performed a multiple-group Confirmatory Factor Analysis (Anderson & Gerbing, 1988) that revealed the accuracy of the underlying structure of the latent variables used (PTSD-Severity, Distress, and MCER). Table 3 lists the correlations between all of the study variables. These data depict the first-order correlations among the separate observed indicator variables that are not available through the assessment of the relations among the
FIGURE 3. The direct and indirect associations between Dependency and PTSD-Severity and Distress in the direct-exposure sample, and the direct and indirect associations between Self-Criticism and PTSD-Severity and Distress in the indirect-exposure sample.

Note. The direct and indirect associations between Dependency and PTSD-Severity and Distress in the direct-exposure sample, and the direct and indirect associations between Self-Criticism and PTSD-Severity and Distress in the indirect-exposure sample. Rectangles indicate measured variables and large circles represent latent constructs. Small circles reflect residuals (e) or disturbances (d); bold numbers above or near endogenous variables represent the amount of variance explained (R²). Unidirectional arrows depict hypothesized directional or “causal” links. Standardized maximum likelihood parameters are used. Bold estimates are statistically significant. *p < .01.
latent construct and observed measures examined in the structural models. Only after we had demonstrated the acceptability of the underlying constructs did we proceed to investigate the structural models.

Second, we employed a multiple-group SEM to examine the direct association between the effects of Self-Criticism and Dependency on PTSD-Severity. Finally, in the third stage, we employed SEM to examine the proposed mediating model, in which we specified MCER and social support (each one) as mediators of the association between Dependency or Self-Criticism and PTSD-Severity and Distress scores in the GBC sample and the sample indirectly exposed to trauma, respectively (Figures 2 and 3). We specified these mediation paths beyond the associations among PTSD-Severity and Distress, as well as the associations between personality variables and stress scores and the association between stress scores and mediators and outcome variables. We conducted the analyses using the AMOS 4.01 program (Arbuckle, 1999) and the maximum likelihood method.

**Group Differences**

We first analyzed differences in mean age; education; mean ratings of DEQ Self-Criticism and Dependency; IES-R avoidant, hyperarousal, and intrusion scores; mean ratings of SACL stress scores; levels of Distress (VAS negative affective scales, STAS anger responses, and SCBAI somatic symptoms scales); the MSPSS Perceived Social Support measure; and the CERQ Maladaptive Emotional Regulation scales (Rumination, Other-Blame, and Catastrophizing) in the GBC sample and the indirectly exposed sample.

Results indicated no significant age or education differences between the two samples. As in Study 1, participants in the GBC sample reported significantly higher levels of Dependency, PTSD-Severity, and stress. In addition, in Study 2, participants in the GBC sample also reported significantly higher levels of Distress (higher levels of anxiety, hostility, and dysphasia, as well as higher levels of somatic symptoms and anger). Finally, participants in the GBC sample reported significantly higher use of maladaptive emotional regulation strategies (for $M$, $SD$, and $F$ values, see Table 4). It is important to note here that although Dependency levels were significantly higher in the GBC sample, the distribution of Dependency scores in this group was not significantly different from the normal curve.
SEM Analyses

_CFA Measurement Models._ Before testing a structural model for mediation, we defined multiple-group CFA models, with parameters free to be estimated. As shown in Table 3, strong and significant correlations were observed among the subscales of the PTSD, among the MCER subscales, and among the Distress scales. We specified three latent constructs: PTSD-Severity, Distress, and MCER. The specified CFA model had a plausible fit to the observed data (see Table 5). All of the factor indicators and path loadings were substantial and statistically significant in the expected directions.

We then examined whether we could rule out the possibility of subsuming PTSD-Severity and Distress into one large symptomatology construct. This two-latent-constructs model did not fit the data well (see Table 5) and was significantly less representative of the empirical data than the three-latent-constructs model, \( \chi^2 (4) = 360.89, p < .0001 \).

Finally, we examined whether all three construct indicators could be subsumed into one large latent construct. This one-latent-construct model did not fit the data well (see Table 5) and was significantly less representative of the empirical data than the three-latent-constructs model, \( \chi^2 (6) = 402.56, p < .0001 \). After verifying the acceptability of the three-latent-constructs solution, we proceeded to test structural models.

Mediational Models

In order to explore the hypothesis that MCER and perceived social support mediate the association between Dependency and PTSD-Severity and Distress we initially followed Baron and Kenny’s (1986) criteria for mediation. Using this strategy, we first analyzed the direct associations of Self-Criticism and Dependency with PTSD-Severity. Then, we specified the associations between Dependency and PTSD-Severity and between Dependency and Distress, while controlling for stress levels. Finally, we specified the models of the direct and indirect associations of the Dependency scores with the PTSD-Severity and Distress scores (see Figures 2 and 3).
Although Baron and Kenny’s (1986) recommendations are influential and extensively cited, some recent criticisms have been raised (see MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002), especially concerning their use of Sobel’s (1982) large sample test to evaluate the significance of indirect associations. Therefore, we evaluated the proposed mediational model by studying the sampling variability of estimates of the indirect association using the bootstrap framework that Shrout and Bolger (2002) and Mallinckrodt, Abraham, Wei, & Russell, (2006) recently implemented for mediation in SEM. Using options in AMOS, we implemented this procedure in the mediational models, which involved drawing 1,000 bootstrapping samples. We found that 100% of the bootstrap samples converged for all of the models analyzed. The 95% confidence intervals and the confidence intervals based on the bias-corrected bootstrap for the direct and indirect associations in our models are consistent with the conclusion that the direct and indirect associations are significantly different from zero (SE and C.I. based on the bias-corrected bootstrap are reported in parentheses). These results suggest that our procedure led to a stable estimate of the distributions.

**Direct Association Models.** We first confirmed the existence of a significant direct relation between Dependency and PTSD-Severity in the GBC sample and the existence of a relation between Self-Criticism and PTSD-Severity in the sample indirectly exposed to trauma. A model including Self-Criticism and Dependency and the associations of these factors with PTSD-Severity was specified and estimated simultaneously for both groups using SEM multiple-group analysis, with parameters left free to be estimated. This model fit the observed data well (see Table 5). As expected, in the GBC sample, Dependency was significantly associated with high levels of PTSD-Severity, $\beta = 0.28, t = 2.970, p < .003; SE = 0.085, C.I. (.12, .422), p < .001$, while Self-Criticism was not ($\beta = 0.11, ns$). Also as predicted, in the sample indirectly exposed to trauma, Self-Criticism was significantly associated with high levels of PTSD-Severity, $\beta = 0.20, t = 2.220, p < .02; SE = 0.052, C.I. (.01, .241), p < .03$, while Dependency was not ($\beta = 0.13, ns$). These associations were not altered when we controlled for levels of stress (stress associations with Self-Criticism and Dependency and the association between stress and PTSD-Severity). As in Study 1, stress level was significantly associated with PTSD-Severity in the GBC sample, but not in the sample indirectly
## Table 5. Fit Indices for Models Examined in Study 2

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<th>Model</th>
<th>$\chi^2$(df)</th>
<th>$p$</th>
<th>$\chi^2$/df</th>
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<th>CFI</th>
<th>RMSEA (C.I)</th>
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<td>.73</td>
<td>.14 (.13, .15)</td>
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<td>.71</td>
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<td>.97</td>
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<td>.91</td>
<td>.95</td>
<td>.06 (.04, .08)</td>
</tr>
<tr>
<td><strong>Mediational association models (Figure 3)</strong></td>
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<tr>
<td>GBC sample</td>
<td>$\chi^2$(58) = 57.96</td>
<td>.48</td>
<td>.99</td>
<td>.94</td>
<td>1.00</td>
<td>.000 (.000, .06)</td>
</tr>
<tr>
<td>Indirectly exposed sample</td>
<td>$\chi^2$(58) = 88.16</td>
<td>.007</td>
<td>1.52</td>
<td>.87</td>
<td>.95</td>
<td>.06 (.03, .08)</td>
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</table>
exposed to trauma, and the difference between these associations was found to be significant.

The findings of both Study 1 and 2 demonstrate that among participants in the GBC-prolonged direct exposure group high levels of Dependency significantly associated with increased PTSD-Severity, beyond the association of stress with Dependency and with PTSD-Severity. However, this was not the case among participants in the indirect exposure group.

Next, we examined whether the association between Dependency and PTSD-Severity in the GBC group and the association between Self-Criticism and PTSD-Severity in the sample indirectly exposed to trauma would remain significant when we controlled for the shared measurement error terms (disturbance terms) among PTSD-Severity and Distress levels. These models (see Figure 2) fitted the observed data very well (see Table 5). In the GBC group, Dependency was significantly associated with high levels of PTSD-Severity, $SE = .083, C.I. (.08, .39)$ and Distress, $SE = 2.24, C.I. (.92, 10.10).$ In the sample indirectly exposed to trauma, Self-Criticism was significantly associated with high levels of PTSD-Severity $[SE = 0.053, C.I. (.014, .24)]$ and Distress, $SE =1.39, C.I. (4.02, 11.05).$ These associations were not altered when we controlled for levels of stress and their associations with personality variables and outcomes.

**Mediational Association Models.** Finally, we tested whether the indirect relations between personality factors and outcomes through perceived social support and through MCER (mediators) significantly reduced (accounted for) the significant direct relation between Dependency and PTSD-Severity and Distress (outcomes) in the GBC sample and the direct relation between Self-Criticism and these outcomes in the group indirectly exposed to trauma. We, therefore, specified a model in which we defined Dependency in the GBC sample and Self-Criticism in the group indirectly exposed to trauma (see Figure 3) as having direct paths to PTSD and Distress, and indirect paths, one through perceived support and one through MCER.

The mediating model for Dependency in the GBC sample fitted the observed data very well (see Table 5). As noted earlier, in the GBC sample, the direct paths from Dependency to PTSD-Severity and Distress were significant. However, these paths approached zero (see Figure 3). As shown in Figure 3, Dependency was significantly associated with Maladaptive Regulation $[SE =3.127, C.I.$
Personality and ongoing exposure to terrorist attacks (.52, 1.93), which, in turn, was associated with PTSD-Severity \( SE = .03, C.I. (.14, .27) \) and Distress \( SE = .76, C.I. (2.65, 5.32) \). Dependency was also significantly associated with social support \( SE = 2.51, C.I. (-16.61, -6.47) \), which, in turn, was associated with PTSD-Severity \( SE = .002, C.I. (-.010, -.001) \) and Distress \( SE = .070, C.I. (-.375, -.088) \).

Overall, our analyses indicated that the associations between Dependency and PTSD-Severity and Distress are significantly mediated by low levels of social support scores, \( SE = 0.042, C.I. (.010, .17), p < .02 \) for PTSD-Severity and \( SE = 1.29, C.I. (.84, 5.99), p < .002 \) for Distress and by high levels of Maladaptive Emotional Regulation, \( SE = .081, C.I. (.085, 0.41), p < .002 \) for PTSD-Severity and \( SE = 1.66, C.I. (1.80, 8.26), p < .002 \) for Distress. Both social support and the Maladaptive Emotional Regulation construct each mediated the associations between Dependency and both PTSD-Severity and Distress in the GBC sample. It is important to note here that these results were not altered when we controlled for stress levels and the associations between stress levels and predictors, mediators, and outcomes.

The mediating model for Self-Criticism in the sample that was indirectly exposed to trauma fit the observed data well (see Table 5). As noted earlier, in the sample indirectly exposed to trauma, the direct paths from Self-Criticism to PTSD-Severity and Distress were significant. However, the significance of the path from Self-Criticism to PTSD-Severity approached zero (see Figure 3). On the other hand, the path from Self-Criticism to Distress remained significant, \( SE = 1.520, C.I. (1.57, 9.12) \). As shown in Figure 3, Self-Criticism was significantly associated with Maladaptive Regulation, \( SE = .276, C.I. (.096, 1.73) \), which, in turn, was associated with PTSD-Severity, \( SE = 0.043, C.I. (.079, 0.338) \) and Distress, \( SE = 0.87, C.I. (1.322, 5.402) \). Self-Criticism was also significantly associated with social support, \( SE = 1.041, C.I. (-5.059, -0.885) \), but social support was not associated with PTSD-Severity or Distress.

Overall, in the sample indirectly exposed to trauma, our analyses indicate that the associations between Self-Criticism and PTSD-Severity are significantly mediated by the Maladaptive Emotional Regulation construct, \( SE = .057, C.I. (.039, .278), p < .007 \). Self-Criticism has a significant direct association, as well as an indirect association, with Distress through the Maladaptive Emotional Regulation construct. However, social support scores were not significant-
ly associated with PTSD-Severity or Distress scores in the indirectly exposed sample.

The findings of Study 1 and Study 2 indicate that GBC participants experience high levels of stress and PTSD symptoms and that their levels of stress are significantly associated with high levels of PTSD-Severity. Moreover, the results also indicate that Dependency, but not Self-Criticism, is associated with higher levels of PTSD-Severity under conditions of prolonged life-threatening and traumatic stress; whereas Self-Criticism, but not Dependency, is associated with levels of PTSD-Severity under conditions of indirect exposure to this threat.

The results of Study 2 extend these associations to include Distress levels, social support, and Maladaptive Emotional Regulation. Civilians directly exposed to terrorist attacks experience high levels of dysphoria, anxiety, hostility, anger, and somatization, as well as low levels of perceived support and high levels of Rumination, Catastrophizing, and Other-Blame, compared to those indirectly exposed. Finally, in the directly exposed sample, the associations between Dependency and PTSD-Severity and Distress were mediated by perceived support and Maladaptive Emotional Regulation. In the sample indirectly exposed to trauma, both the direct and indirect associations between Self-Criticism and Distress were significant. The association of Self-Criticism with PTSD-Severity was mediated by maladaptive emotional regulation processes. Although Self-Criticism was significantly associated with low perceived support, perceived support did not mediate the associations between Self-Criticism and PTSD-Severity or between Self-Criticism and Distress in the sample that had been indirectly exposed to trauma.

**GENERAL DISCUSSION**

The current work presents the results of two studies of volunteer nonclinical community samples of Israeli adults comprised of two groups: (a) individuals who had experienced extreme and ongoing exposure to more than seven years of rocket fire on their communities, and (b) a comparison group of individuals experiencing stress while indirectly exposed to these events through the media. The work presented here addresses the role of interpersonal and intrapersonal processes in individuals’ adjustment to these ongoing, prolonged, and communal stressful situations.
DIRECT AND INDIRECT EXPOSURE TO PROLONGED LIFE THREAT

Results from the two independent studies indicate that participants experiencing direct prolonged communal exposure to trauma reported significantly higher levels of stress, PTSD-Severity (avoidance, intrusion, and hyperarousal), and Distress symptoms (dysphoria, anxiety, hostility, anger, and somatization), lower perceived availability of social support, and higher levels of MCER styles (Rumination, Other-Blame, and Catastrophizing) than participants who knew about these traumatic events, but were not directly exposed to them.

Unexpectedly, yet interestingly, our findings convey that individuals in the GBC sample had relatively higher levels of Dependency than their counterparts from non-rocket-assaulted areas. One possible explanation is that the specific communal and long-term character of this trauma has resulted in the hyperactivation of unmet interpersonal relatedness needs leading to higher Dependency scores. Longitudinal research is needed in order to examine the question of whether increased Dependency may be a consequence of individuals’ extreme and chronic exposure to trauma.4 Chronic exposure may lead to chronic activation of unmet interpersonal relatedness needs, which may result in lasting scar effects (e.g., Rhode, Lewinson, & Seeley, 1990) in that even when the exposure disappears, GBC individuals may continue to show higher levels of Dependency. Our results suggest that when the severe trauma is prolonged, an interactive pattern of relationships may develop in which trauma affects personality traits, and these traits affect the perception of additional traumatic events. However, it could also be plausibly claimed that dependent individuals are actually the ones that initially chose to live in the specific region, or did not leave as the security problems persisted. Over the years of attack, approximately 15% of the GBC population has left the area. It might be that inhabitants who choose to remain in a high risk area, or who have no other choice, are different from those who choose to leave

4. In an ancillary analysis, when the effect of severity of exposure to trauma on Dependency was reanalyzed while stress and the three PTSD-symptoms were covaried, we found that the effect of severity of exposure on Dependency remained significant beyond levels of distress. This finding might further support the potential existence of a scar effect.
for lower risk areas. Further studies should address this possibility. Yet it is important to notice that, in our samples, the distribution of Dependency was not skewed, but followed a normal curve.

PERSONALITY VULNERABILITIES IN THE FACE OF DIRECT AND INDIRECT EXPOSURE

The findings of these studies underscore the importance of individual differences in responses to prolonged life-threating trauma. Highly self-critical individuals who are far away from the actual traumatic event seem to develop substantial symptoms of secondary trauma, which is known to be manifested in symptoms similar to those of PTSD, including fear, difficulty sleeping, recurring images of the traumatic experience, and cognitive, as well as behavioral avoidance of reminders of the trauma (Boscarino, Figley, & Adams, 2004). However, self-critical individuals directly exposed to continuous life-threatening traumatic events do not seem to be particularly vulnerable to PTSD or high levels of distress. Our findings indicate that while ruminative and distracting regulation responses mediate the relation between the Self-Criticism and PTSD-Severity variables, they only partially mediate the relation between Self-Criticism and Distress. Highly dependent individuals directly exposed to prolonged life-threatening events seem the most vulnerable, suggesting that this situation may emphasize preoccupations with issues of community and interpersonal relationships. On the other hand, individuals indirectly exposed to these events appear to be preoccupied with issues of self-definition and identity, as has been previously observed in stressful contexts, in general (see e.g., Blatt, 2008) and, specifically, in the context of PTSD (Sharhabani-Arzy et al., 2005; Southwick et al., 1991; Yehuda et al., 1994).

THE MEDIATING ROLES OF SOCIAL SUPPORT AND MCER

Dependent individuals directly exposed to prolonged threat present the highest levels of MCER, as well as a deficit of perceived interpersonal support. When stress is continuous, prolonged, and shared by the entire community, highly dependent persons may lack the inner representations of security necessary for adequate distress regulation under these extreme conditions. This deficit may prevent the resolution of the trauma and enhance the likelihood of
the development of PTSD and distress symptoms. As Dependency is a personality dimension primarily related to interpersonal relationships, it seems to be most strongly affected by the perceptions of the loss of support that have been shown to accompany extremes of stress. Paradoxically, exchanges of social support in the context of shared fears and worries under chronic stressful conditions may exacerbate symptoms of distress, as suggested by the “pressure-cooker effect” (Hobfoll & London, 1986).

These findings have some clinical/practical implications. First of all, our findings suggest the importance of personality evaluations in the planning of mental health treatment and prevention programs among stressed populations in war-like situations. Moreover, our findings point to basic differences in the factors affecting populations that are directly or indirectly affected by life-threatening traumatic events. Whereas issues of self-esteem may be basic among the latter, social support seems to be the most valuable resource among the former. Mental health practitioners should consider developing social support programs, as well as improving perceptions of social support, in general, and among highly dependent individuals, in particular. In accordance with this line of thought, recent recommendations for crisis intervention programs (e.g., Litz, Gray, Bryant, & Adler, 2002) take into account the fact that the post-trauma environment has an important influence on recovery and urge that social support be facilitated, including attempts to increase community cohesion, if an entire community is affected (Meichenbaum, 1994). Thus, at the individual, as well as the community level, prevention and intervention program should be aimed at facilitating social support to limit the negative impacts of exposure to life-threatening attacks.

Limitations. This study has several limitations. First, our model cannot provide a definitive answer to the question of the direction of the observed effects. Results point to the potential coexistence of dependent personality effects on reactions to prolonged exposure to trauma, as well as to the possible effects of adults’ exposure to prolonged threats on dependent personalities. Thus, Dependency issues might be activated by the traumatic situation and its psychological consequences. This limitation is primarily related to the cross-sectional nature of our study. Nevertheless, it should be noted that the phenomenon under investigation is characterized by an unpredictable starting point that did not allow for the collection of baseline measures. Second, the self-report of traumatic exposure is
subject to recall bias and it is possible that some participants may have attributed to the attacks PTSD symptoms that are actually related to other events. Third, because our study assessed current PTSD, it may have missed participants who had experienced terror-related PTSD that was resolved prior to our data collection. In addition, further studies are encouraged to take into account variables that might be important in this context, such as religiosity, ethnicity, and community cohesion.

Despite its limitations, to our knowledge, the present study represents the first attempt to study personality vulnerability dimensions, such as Self-Criticism and Dependency, and their associations with PTSD and distress behaviors during direct and indirect exposure to continuous life-threatening attacks. Our findings also indicate the need to take both intra- and interpersonal processes into account in the investigation of responses to direct and indirect exposure to events that threaten the whole community. These findings also underscore the importance of the individuals’ perception of the availability of interpersonal resources as a main source of resilience. Finally, evidence that maladaptive emotional regulation styles mediate the association between personality vulnerabilities and PTSD-Severity points to the possibility that both Self-Criticism and Dependency include an important active intrapsychic component, which regulates person-environment interactions. Thus, the findings of this study further illustrate the need to consider personality traits within their situational context.

REFERENCES


