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**To cite this article:** Orit Nuttman-Shwartz (2014) Fear, Functioning, and Coping During Exposure to a Continuous Security Threat, *Journal of Loss and Trauma*, 19:3, 262-277, DOI: [10.1080/15325024.2013.763551](https://doi.org/10.1080/15325024.2013.763551)

**To link to this article:** <http://dx.doi.org/10.1080/15325024.2013.763551>



Accepted author version posted online: 11 Jan 2013.  
Published online: 11 Jan 2013.



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## **Fear, Functioning, and Coping During Exposure to a Continuous Security Threat**

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*This study focused on the contribution of fear to mediating stress, as manifested in general stress reactions and impaired functioning resulting from exposure to a continuous security threat among 451 students from a college located in a confrontation zone. The findings indicated that the contribution of fear reactions was more significant than actual exposure. Married participants felt higher levels of fear than did single participants, and women were able to function despite their fear. In addition, coping patterns were both directly and indirectly related to all stress measures. The results are discussed in light of the literature on stress reactions, and practical recommendations for working in continuous threat situations are proposed.*

*KEYWORDS* continuous trauma, ongoing exposure, fear, impaired functioning

Since 2001, the southern region of Israel has been the target of Qassam rocket and mortar attacks. Qassam rockets are simple steel artillery rockets developed and deployed by the military arm of Hamas. Although they have mainly caused damage to property, 25 Israeli residents, including children, have been killed in direct rocket and mortar hits ([http://www.btselem.org/israeli\\_civilians/qassam\\_missiles](http://www.btselem.org/israeli_civilians/qassam_missiles)). Moreover, approximately one-quarter of the residents of Sderot, Israel, examined in recent studies have met the criteria for posttraumatic stress disorder (PTSD) (Besser & Neria, 2009; Dekel & Nuttman-Shwartz, 2009), as well as exhibiting considerable uncertainty and anxiety (Dekel & Nuttman-Shwartz, 2009). In situations of continuous threat, there is a need to deal both with physical and emotional damage in the

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Received 9 September 2012; accepted 23 December 2012.

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immediate aftermath of the event, as well as with the persistent stress caused by the threat that is constantly looming (Baum, 2012; Diamond, Lipsitz, Fajerman, & Rozenblat, 2010; Kline & Mone, 2003).

Most of the studies dealing with exposure to the threat of terror are based on the cognitive appraisal model (Lazarus & Folkman, 1984). These studies have found that fears and worries are significant predictors of post-traumatic stress, but also that emotional responses do not always correlate with the number of objective events that a person is exposed to (Berntsen, Willert, & Rubin, 2003; Pfefferbaum et al., 2003). Moreover, several studies have illuminated the predominant contribution of fear regardless of objective exposure (Braun-Lewensohn et al., 2009).

Another approach to conceptualizing reactions to situations of prolonged and continuous threat (henceforth “prolonged threat”) is based on consideration of clinical experiences. Diamond et al. (2010) proposed the term ongoing traumatic stress reaction to describe clients who have experienced clinically significant levels of anxiety symptoms and who have described their symptoms as increasing gradually over time. They tend to focus on fears associated with day-to-day activities, as well as on hyperarousal symptoms. Their fears and patterns of avoidance are typically based on reality; hence, they are reasonable and can be considered as normal and adaptive in such conditions (Shalev, Tuval, Frenkiel-Fishman, Hader, & Eth, 2006).

In addition, these clients have reported a substantial decline in symptoms or even complete amelioration of symptoms when there is an extended lull in the violence or when they are out of the range of missiles. Thus, the present study focused on the role of fear reactions in situations of prolonged exposure to threat.

## FEAR REACTIONS

Fear is one of the primary DSM-IV A2 criteria (American Psychiatric Association, 2000) that signify an event as traumatic, and it is often used as a predictor of pathological responses, mainly PTSD.

Researchers have shown that people who show fear reactions are most at risk for developing anxiety-related behavior (Buss, Davidson, Kalin, & Goldsmith, 2004), health problems (Bonanno, Brewin, Kaniasty, & La Greca, 2010), and PTS symptoms. Studies have revealed that all of these reactions correlate with decreased academic achievement and attendance rates (Broberg, Dyregrov, & Lars, 2005; Saltzman, Pynoos, Layne, Steinberg, & Aisenberg, 2001), as well as with reduced coping ability and impaired functioning during and after exposure to traumatic events (Davis, Grills-Taquechel, & Ollendick, 2010; Kruczek & Salsman, 2006).

Despite the emotional reactions described above, many people do not experience enduring psychological dysfunction (Bonanno et al., 2010;

Quarantelli & Dynes, 1985). Rather, most of them show clear evidence of resilience in the face of potential trauma (Bonanno, Papa, Lalande, Westphal, & Coifman, 2004; Ungar, 2008). Thus, it is also important to explore the relationships between fear reactions and the ability to cope with continuous threat over an extended period of time.

### FEAR AND COPING PATTERNS: THE PROLONGED EXPOSURE MODEL

Recent research has shown that preexposure fear mediates the relationship between trauma exposure and the severity of posttraumatic stress (PTS) symptoms (Feldner, Lewis, Leen-Feldner, Schnurr, & Zvolensky, 2006; Osei-Bonsu et al., 2012; Rubin, Berntsen, & Johansen, 2008).

In situations of prolonged exposure to a potential threat, the coping patterns that individuals adopt (Skinner & Zimmer-Gembeck, 2007) might be related to fear reactions, and these styles can shed light on how people continue functioning in an emergency routine (Baum, 2012; Dickstein et al., 2011). Based on the approach of Rosenberg, Heimberg, Solomon, and Levin (2008), I conceptualized prolonged exposure to threat as a circular process that results from continuous and repeated traumatic experiences over a long period of time, where the cumulative effects of these experiences are expressed in symptomatology and/or impaired functioning. The ability to carry on with everyday life under these circumstances raises questions about the ways that people adapt or function in the face of prolonged exposure to threat. Thus, in such situations, it is important to assess fear reactions in relation to coping patterns that the individual chose to adopt in previous situations of exposure to traumatic events, which might mediate stress reactions.

The area which the current research was conducted has been continuously exposed to missile attacks for more than a decade. However, to my knowledge, the studies conducted to date in Sderot and in the Israeli localities surrounding Gaza (e.g., Dekel & Nuttman-Shwartz, 2009; Henrich & Shahar, 2008; Sagy & Braun-Lewensohn, 2009) have not emphasized the role of fear reactions in mitigating or exacerbating stress reactions in those situations.

To fill that gap, the present study examined the effects of exposure to continuous threat on psychological distress among students in the Israeli localities surrounding Gaza. The study was conducted among a sample of students from a college located in the danger zone. The research goals were as follows:

1. To enhance understanding of what happens to students enrolled at a college campus in a war zone (a nonclinical population) when they have experienced prolonged exposure to threat.

2. To use the findings obtained from the students as a basis for examining the broader population of residents of the region who have to live in an "emergency routine."

## RESEARCH ASSUMPTIONS AND HYPOTHESES

The study aimed to examine fear reactions, on the assumption that these reactions would be related to students' general stress reactions (GSR) and impaired functioning in a continuous traumatic reality. In addition, the study aimed to examine how sociodemographic variables and levels of exposure are related to measures of fear and of stress reactions (GSR and impaired functioning) as well as to assess the relationship between coping patterns and these measures. It was assumed that in a situation of continuous trauma, patterns of coping with exposure are related to fear, general stress reactions, and impaired functioning. I hypothesized that sociodemographic variables would be related to fear, GSR, and impaired functioning. Accordingly, I predicted that women would report higher levels of emotional vulnerability, whereas people with families would report lower levels of stress. In addition, I hypothesized that levels of exposure to threat would be related to fear, GSR, and impaired functioning: Higher levels of exposure would correlate with higher levels in all measures of stress. I also hypothesized that fear reactions would correlate with other stress reactions: The higher the levels of fear reactions, the higher the levels of all stress reactions. Finally, I hypothesized that coping patterns would correlate with stress reactions: The more coping patterns a person uses, the higher the levels of fear reactions and stress reactions will be.

## METHOD

### Sample and Data Collection

The participants in the study were 451 students at a community college located in a confrontation zone. Most of the participants (62.7%,  $n = 283$ ) indicated that they had been directly exposed to Qassam rockets either at the college or at home. Regarding sociodemographic characteristics, most of the participants were women (70%,  $n = 316$ ), and they ranged from 18 to 40 years of age ( $M = 24.08$ ,  $SD = 3.26$ ). The majority were Israeli-born (81.6%,  $n = 368$ ), and 18.4% were immigrants ( $n = 83$ ); 88.2% ( $n = 368$ ) were single and 11.8% ( $n = 83$ ) were married. In addition, 70% ( $n = 312$ ) were first-year students at the college, and 30% ( $n = 135$ ) were second- or third-year students. A total of 45.3% ( $n = 204$ ) of the students were employed full time, 41.3% ( $n = 186$ ) were employed part time, and 13.5% ( $n = 61$ ) were

unemployed; 63.4% ( $n = 286$ ) assessed their income as average, 20.4% ( $n = 92$ ) assessed their income as below average, and 16.2% ( $n = 73$ ) assessed their income as above average.

## Procedure

Research assistants distributed questionnaires at the beginning of class. Out of 613 students who received the questionnaires, 451 completed them (a 74% response rate). Participants were told that the study aimed to examine students' responses to the current situation and ways of coping with it. Their informed consent was obtained, and the research was approved by the ethics committee of the academic institution.

## Measures

### SOCIODEMOGRAPHIC CHARACTERISTICS

The measures included questions about the participants' gender, age, marital status, religiosity, level of education, self-assessed income, self-assessed health, and place of residence.

### EXPOSURE TO QASSAM ROCKETS

Participants were asked to indicate whether they had been exposed to Qassam rockets (yes/no) and to evaluate their proximity to the rockets that landed (e.g., "The Qassam fell ... right at my apartment, near my home, near me ..."). A 4-point scale of exposure was derived on the basis of the participants' responses to this item (1 = no exposure, 4 = high exposure).

### COPING PATTERNS

This variable was assessed on the basis of a modified version of the COPE questionnaire (Carver, 1997). The scale has been used in previous studies in Israel (Nuttman-Shwartz & Dekel, 2009) and combines three factors: support-seeking activities, distraction, and acceptance of the situation. Participants were asked to indicate how often they used each coping pattern on a 5-point scale ranging from 0 (not at all) to 4 (a great deal). A principal component analysis revealed three distinct factors that explained 58.5% of the variance in coping patterns. The first factor tapped support-seeking activities, and included five items whose loading was over .49 (e.g., talking with others about the situation, gathering information; Cronbach's  $\alpha = .72$ ). The second factor, distraction, tapped use of alcohol and medications. This factor included two items, which related to use of medications and/or alcohol ( $r = .38, p < .001$ ). The third factor related to acceptance of the situation and

included two items: accepting the situation and continuing to live as if there is no danger ( $r = .35, p < .001$ ).

#### FEAR

This was a self-report scale developed by the researchers for the present study. The scale consisted of 11 statements relating to fear of harm or death (e.g., "Do you fear that you will be mentally harmed by exposure to missiles?" "Do you fear being physically hurt by exposure to the missiles?" "Are you afraid of waiting at a bus stop?" "Are you afraid of sitting outside?"). For each statement, participants were asked to indicate whether they had experienced the symptom on a scale ranging from 0 (not at all) to 4 (very often). The internal consistency (Cronbach's alpha) of the questionnaire used in the current study was .95. One global score was derived for each participant by computing the mean of the scores on all of the 12 questionnaire items. A high score on the questionnaire reflected a high level of fear of being hurt as a result of Qassam rocket attacks.

#### IMPAIRED DAILY FUNCTIONING

This was a specific self-report scale developed by the researchers for the purposes of the present study. It consisted of 12 statements that tap various aspects of daily functioning throughout the life span, such as academic functioning (studying and taking exams) and social functioning (e.g., mutual relations with friends and family). Because the study was conducted at a college campus in a confrontation zone where the students had been exposed to a continuous threat, participants were asked to indicate for each statement whether the Qassam rocket attacks had disrupted their daily functioning. The scale of responses ranged from 0 (not at all) to 4 (extreme disruption). The internal consistency (Cronbach's alpha) of the questionnaire used in the current study was .98. One global score was derived for each participant by computing the mean of the scores on all 13 questionnaire items. A high score on the questionnaire reflected a high level of impairment and functional difficulties as a result of the Qassam rocket attacks.

#### GENERAL STRESS REACTIONS

These reactions were assessed through the Brief Symptom Inventory (BSI) (the Hebrew version of the Derogatis, 1993, scale, adapted by Dekel, Ginsburg, & Hantman, 2004). This is a self-report measure that inquires about the experience of 53 psychiatric symptoms during the 2 weeks preceding the assessment. The scale includes nine categories of symptoms. Each item on the BSI was rated on a 5-point scale of perceived distress ranging from 1 (not at all) to 5 (to a great extent). The scale has been used widely

among various Israeli populations. The internal consistency (Cronbach's alpha) of the questionnaire used among the current sample was .96.

## RESULTS

The results relating to measures of distress revealed that among the sample as a whole, mean scores for fear reactions, levels of GSR, and impaired functioning were 1.44 ( $SD=1.20$ ), 0.64 ( $SD=0.67$ ), and 0.54 ( $SD=0.71$ ), respectively.

### Associations Between Sociodemographic Variables and Stress Reactions

Pearson's correlations were carried out to examine the associations between the sociodemographic variables (gender, marital status, religiosity, and self-assessed health) and measures of stress reactions (fear, GSR, and impaired functioning). The results of these analyses revealed that marital status correlated negatively and significantly with measures of stress reactions ( $p < .05$ ; see Table 1). Specifically, the married participants felt higher levels of stress than did the single participants. However, no significant correlation was found between religiosity and measures of stress reactions ( $p > .05$ ).

In addition, the findings revealed significant differences in measures of stress reactions by gender,  $F(3, 446) = 14.13$ ,  $p < .001$ ,  $\eta^2 = .09$ . Specifically, a significant positive association was found between the participants' gender and fear: Women reported higher levels of fear than did men.

When separate ANOVAs were conducted for each measure, a significant difference was found between the male and female students in the measures of stress reactions (fear, GSR, and impaired functioning). The findings indicate that the female students also had higher levels of GSR than did the male students, whereas no significant gender differences were found with regard to impaired functioning.

### Associations Between Exposure to Qassam Rocket Attacks and Measures of Stress Reactions

The relationships between exposure to Qassam rocket attacks and the measures of stress reactions (fear, GSR, and impaired functioning) were examined on the basis of Pearson's correlations. The results revealed significant correlations between exposure to Qassam rocket attacks and fear ( $r = .16$ ,  $p < .001$ ), impaired functioning ( $r = .23$ ,  $p < .01$ ), and GSR ( $r = .24$ ,  $p < .001$ ). These correlations indicate that participants with high levels of exposure had higher levels of fear and GSR and lower levels of functioning.



**TABLE 1** Gender Differences in Stress Reactions and Their Associations With Sociodemographic Variables and Ways of Coping.

Measures	Gender		Ways of coping							
	Male		Female		Marital status	Religiosity	Health	ACT	DIS	ACC
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>						
Fear	1.06	1.12	1.63	1.20	-.03	-.06	-.25***	.36***	.35***	.16**
GSR	1.59	0.77	1.68	0.64	-.10*	-.08	-.03	.24***	.51***	.19***
Impaired functioning	1.57	0.82	1.53	0.66	-.00	-.02	-.14**	.23***	.56***	.15**

*Note.* GSR:  $F(1, 448) = 1.52, \eta^2 = .00$ ; fear:  $F(1, 448) = 22.07, p < .001, \eta^2 = .05$ ; impaired functioning:  $F(1, 448) = .30, \eta^2 = .00$ . ACT = active coping; DIS = distractive coping; ACC = acceptance coping.  
 \*\* $p < .01$ ; \*\*\* $p < .001$ .

## Associations Between Coping Patterns and Measures of Stress Reactions

To identify the factors that were related to stress reactions, Pearson's correlations between the students' coping patterns and the measures of stress reactions were calculated (Table 1). Table 1 shows significant positive correlations between all of the coping patterns and the measures of stress reactions (fear, GSR, and impaired functioning). That is, the more the participants used the patterns of active coping, distraction, and acceptance of the situation, the higher their levels of fear, GSR, and impaired functioning.

To examine the contribution of the research variables to explaining the variance in measures of stress reactions, two hierarchical regressions were conducted. In the first regression, GSR was examined as a dependent variable, and in the second regression, impaired functioning was examined as a dependent variable. The regression analyses revealed that 50% of the variance in GSR was explained by the research variables (see Table 2).

Table 2 shows that in the first step, when the participants' personal characteristics were entered, the only variable that contributed significantly to explaining the variance in GSR was self-assessed health: The higher the participants' self-assessments of their health, the lower their levels of GSR. In the second step, exposure to rocket attacks contributed significantly to explaining the variance in GSR, although the percentage of explained variance was relatively low (6%). In the third step, however, the contribution of the coping patterns was relatively high (25%), but only two styles—distraction and acceptance of the situation—contributed significantly to explaining the variance in GSR. In addition, in the fourth step the contribution of fear reactions was moderate (9%). Based on the literature review, I examined the interaction between exposure to threats and fear reactions

**TABLE 2** Beta Coefficients and Percentage of Variance Predictors of GSR.

Predictor	1	2	3	4	5
Gender	.06	.07	-.05	-.03	-.02
Marital status	-.07	-.06	-.03	-.05	-.06
Religiosity	-.04	-.05	-.01	.02	.01
Health	-.26***	-.25***	-.23***	-.22***	-.22***
Level of exposure		.23***	.16***	.12**	.10
Ways of coping					
Active			.14*	.04	.03
Distractive			.43***	.31***	.30***
Acceptance			.04	.05	.04
Fear				.39***	.38***
Level of Exposure × Fear					.16***
$R^2$	.08***	.14***	.39***	.48***	.50***
$\Delta R^2$	.08***	.06***	.25***	.09***	.02***

\*\* $p < .01$ ; \*\*\* $p < .001$ .

and found that the level of the participants' exposure to Qassam rocket attacks interacted significantly with fear (2%). Among participants with higher levels of exposure to threat, the association between fear and GSR was stronger ( $\beta = .35, p < .001$ , and  $\beta = .57, p < .001$ , respectively). These regressions indicate that after coping patterns and fear were entered, the contribution of exposure to Qassam rocket attacks to explaining the variance in GSR declined. Sobol's analyses revealed that fear reactions mediated between levels of exposure to Qassam rocket attacks and GSR ( $Z = 3.40, p < .001$ ), as well as between the distractive coping pattern and GSR ( $Z = 6.38, p < .001$ ).

One more regression analysis revealed that the research variables explained 49% of the variance in impaired functioning. Table 3 shows that in the first step, when the participants' personal characteristics were entered, the only variable that contributed significantly to explaining the variance in impaired functioning was self-assessed health: The higher the participants' self-assessed health, the less their functioning was impaired. In the second step, exposure to Qassam attacks contributed significantly to explaining the variance in impaired functioning, although the percentage of explained variance was relatively low (5%). In the third step, the contribution of coping patterns was relatively high (32%). Again, however, only active coping and distraction were predictors of impaired functioning. In the fourth step, the contribution of fear reactions was moderate (12%) and reduced the beta coefficient of the coping patterns. In this case, too, the contribution of exposure to Qassam rocket attacks to explaining the variance in impaired daily functioning declined. Sobol's analyses revealed that fear mediated between levels of exposure to Qassam rocket attacks and impaired functioning ( $Z = 3.04, p < .001$ ) as well as between the distractive coping pattern and impaired functioning ( $Z = 6.32, p < .001$ ).

**TABLE 3** Beta Coefficients and Percentage of Variance Predictors of Impaired Functioning.

Predictor	1	2	3	4
Gender	.00	.01	.00	.01
Marital status	-.01	.01	.04	.01
Religiosity	.01	.01	.07	.09
Health	-.14**	-.13**	-.10*	-.09
Level of exposure		.22***	.14**	.01
Ways of coping				
Active			.15**	.03
Distractive			.50***	.37***
Acceptance			-.01	.00
Fear				.43***
$R^2$	.02	.07***	.37***	.49***
$\Delta R^2$	.02	.05***	.32***	.12***

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

MANOVAs were conducted to examine the differences between married and unmarried participants in measures of GSR and impaired functioning, and the results revealed a significant difference,  $F(2, 253) = 3.20, p < .05, \eta^2 = .01$ . However, because marital status contributed to explaining only 1% of the variance, I decided not to enter it into the regression for predicting GSR and impaired functioning.

## DISCUSSION

The present study dealt with the implications of living in the shadow of a continuous security threat. The findings revealed that although continuous exposure to Qassam rocket attacks has unique characteristics that can be distinguished from one-time exposure to traumatic events such as terror attacks, levels of GSR, fear reactions, and impaired functioning among the participants in this study were relatively low. Hence, the findings raise questions about the psychological effects of continuous exposure to threat, as well as questions relating to resiliency. Nonetheless, studies have revealed several predictors that can contribute to identifying populations at risk for stress reactions and to designing interventions that can prevent the development of stress reactions in those situations (Diamond et al., 2010).

Contrary to the results of existing studies presented in the literature review (Korn & Zukerman, 2011), continuous exposure to Qassam rocket attacks contributed minimally to explaining the variance in fear. This finding might be attributed to the persistent knowledge that the Qassam attacks can recur, even when there is no actual attack. Thus, after the participants resumed their normal routine and were not actually exposed to a threat, they continued to fear that another rocket attack might occur at any given time and place. In that situation, even after the physical and mental damage incurred by the attack had been repaired, there was a need to deal with the constant stress involved in the threat that still looms (Kline & Mone, 2003).

There were specific variables that correlated with fear reactions in a situation of continuous exposure to threat: gender, self-assessed health, marital status, and coping patterns (active coping and indirect coping as reflected in distraction). In cases of continuous exposure to threat, as in the case of one-time traumatic events, women were found to show more fear reactions than men (Freedman et al., 2002; Laufer & Solomon, 2009). With regard to the contribution of marital status, the findings of the present study were surprising. Contrary to the common belief that family support is a resource that can facilitate coping with traumatic events (Hall et al., 2010; Hobfoll et al., 2008), the married participants reported stronger fear reactions than did the unmarried participants. This suggests that fear of harm might be intensified among married people. However, it is also possible that the married participants experienced more fear due to other potential types of loss and

additional consequences of personal injury (e.g., fear of injury is heightened because of the burden that it may cause to the spouse).

The importance of fear reactions is also emphasized in their contribution to explaining the variance in GSR and impaired functioning. The findings of this study revealed that fear reactions contributed most significantly to explaining the variance in those measures of stress. Moreover, the contribution of fear reactions was found to be more significant than that of actual exposure to threat. These findings are consistent with the results of other studies, which have revealed that fear reactions and the knowledge that Qassam attacks can recur at any time or place play a more significant role than actual exposure (Farnsworth & Sewell, 2011; Reuther, Davis, Matthews, Munson, & Grills-Taquechel, 2010)—although actual exposure to Qassam attacks can also increase overall levels of stress reactions.

The contribution of fear reactions is particularly noteworthy, because even though most people continue functioning in situations of continuous threat, their functioning in various areas of life is impaired (Dohrenwend et al., 2006). The present findings showed that like emotional distress, the instrumental dimension of functioning was also more strongly affected by fear reactions than by actual exposure to threat. In contrast to the gender differences that were revealed with regard to fear reactions, no differences between men and women were found with regard to impaired daily functioning. The finding that women did not have lower levels of functioning than men despite high levels of fear suggests that women are able to separate their emotional state from the need to function in a situation of prolonged exposure to threat. In addition, fear reactions mediated the impact of exposure to Qassam attacks on fear, GSR, and impaired functioning. That means that in situations of prolonged exposure to a security threat, fear reactions play a dominant role in predicting overall distress and impaired functioning.

Another aim of the present study was to examine how coping patterns contribute to alleviating fear, GSR, and impaired functioning. The findings indicate that the participants' coping patterns were both directly and indirectly related to all three of those measures of stress. Whereas two coping patterns—active coping and “indirect coping” (distraction)—contributed to explaining GSR and were associated with fear reactions, distraction was the only coping pattern that predicted impaired functioning. The two coping patterns that were associated with fear reflect the participants' recognition of the real threat of Qassam attacks to their lives and to their mental and physical health, whether they attempted to distract themselves from the sense of danger by consuming alcohol and medications or whether they actively sought help, information, and support. Thus, consistent with the results of other studies (Dekel & Nuttman-Shwartz, 2009; Dickstein et al., 2011), the pattern of distraction was associated with fear, and it explained GSR and impaired functioning. Concomitantly, active coping reflects the participants' recognition and internalization of the situation of continuous threat. It also

reflects the recognition that they need help, and that they cannot avoid the danger. Other studies conducted among residents of the same region have revealed a similar trend, where dialectic coping (help seeking and distraction) can be used (Dickstein et al., 2011). Moreover, the findings indicate that fear mediated the relationship between distraction and levels of GSR and impaired functioning. When participants used the pattern of distraction, their fear reactions had a stronger impact on GSR and impaired daily functioning.

Before concluding, several limitations of the study need to be addressed. First, students who lived in the confrontation zone while they were studying were overrepresented in relation to the total number of students in the college. Second, because students are considered a healthy population, further research should be conducted among a broader population of residents of the exposed area in order to enhance the generalizability of the results. Third, this was a cross-sectional study that was conducted at one point in time. Hence, because the threat of Qassam attacks is prolonged and continuous, it would be worthwhile to examine the extent to which the students learned to cope with the situation over time.

Despite these limitations, the findings contribute to theoretical knowledge about continuous exposure to threat. Specifically, I examined how recurrent exposure to Qassam attacks and proximity to these events affect the students' social and academic functioning and levels of emotional distress, as reflected in fear reactions and coping patterns. Thus, there is a basis for arguing that continuous exposure to threat can be conceptualized as a circular process in which previous experiences and knowledge about the consequences of exposure can exacerbate fear reactions and affect the individual's future patterns of coping. Future longitudinal research is recommended in order to validate this concept.

In addition, it can be argued that fear is a reaction to threat and that GSR and impaired functioning are not just a result of the threat, but can also be attributed to personal characteristics and coping patterns that the individual has adopted in the past in situations of threat.

### Practical Implications

The present findings highlight the need to focus on women as a population at risk for fear reactions in these situations. Women should be provided with skills to alleviate those reactions and with tools to manage and control their fear. In addition, the finding that the distractive coping pattern contributed negatively to all of the measures of stress has implications for setting policies that facilitate coping with emergency situations. It is important to bear in mind that distractive responses can impair students' developmental and academic functioning. Beyond that, distractive responses have serious social implications. This kind of damage is a long-term risk factor that should be prevented in advance. Finally, there is a need for prospective longitudinal studies, which can provide insights into the developmental course of these manifestations.

## REFERENCES

- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.
- Baum, N. (2012). Emergency routine: The experience of professionals in a shared traumatic reality of war. *British Journal of Social Work, 42*, 424–442.
- Berntsen, D., Willert, M., & Rubin, D. C. (2003). Splintered memories or vivid landmarks? Qualities and organization of traumatic memories with and without PTSD. *Applied Cognitive Psychology, 17*, 675–693.
- Besser, A., & Neria, Y. (2009). PTSD symptoms, satisfaction with life, and prejudicial attitudes towards the adversary among Israelis exposed to ongoing terrorist attacks. *Journal of Traumatic Stress, 22*, 268–275.
- Bonanno, G. A., Brewin, C. R., Kaniasty, K., & La Greca, A. M. (2010). Weighing the costs of disaster: Consequences, risks, and resilience in individuals, families, and communities. *Psychological Science in the Public Interest, 11*, 1–49.
- Bonanno, G.A., Papa, A., Lalande, K., Westphal, M., & Coifman, K. (2004). The importance of being flexible: The ability to both enhance and suppress emotional expression predicts long-term adjustment. *Psychological Science, 15*, 482–487.
- Braun-Lewensohn, O., Celestin-Westreich, S., Verleye, G., Verte, D., Celestin, L. P., & Ponjaert-Kristoffersen, I. (2009). Coping strategies as moderating the relationships between terrorist attacks and well-being outcomes: The case of Israeli adolescents. *Journal of Adolescence, 32*, 585–599.
- Broberg, A.G., Dyregrov, A., & Lars, L. (2005). The Göteborg discotheque fire: Posttraumatic stress and school adjustment as reported by the primary victims 18 months later. *Journal of Child Psychology and Psychiatry, 46*, 1279–1286.
- Buss, K. A., Davidson, R. J., Kalin, N. H., & Goldsmith, H. H. (2004). Context-specific freezing and associated physiological reactivity as a dysregulated fear response. *Developmental Psychology, 40*, 583–594.
- Carver, S. C. (1997). You want to measure coping but your protocol's too long: Consider the brief COPE. *International Journal of Behavioral Medicine, 4*, 92–100.
- Davis, T., Grills-Taquechel, A., & Ollendick, T. (2010). The psychological impact from Hurricane Katrina: Effects of displacement and trauma exposure on university students. *Behavior Therapy, 41*, 340–349.
- Dekel, R., Ginsburg, K., & Hantman, S. (2004). Bekav hahazit: Ovdim sozialiim beva-tei holim klali'im btekufa shel terror mitmashekh [In the front line: Hospital social workers confront ongoing terrorism]. *Hevra Urevava, 24*, 163–180.
- Dekel, R., & Nuttman-Shwartz, O. (2009). PTSD and PTG following Qassam attacks: Correlations and contributors among development town and kibbutz residents. *Health and Social Work, 34*, 87–96.
- Derogatis, L. R. (1993). *Brief Symptom Inventory: Administration, scoring, and procedures manual* (4th ed.). Minneapolis, MN: National Computer Systems.
- Diamond, G. M., Lipsitz, J. D., Fajerman, Z., & Rozenblat, O. (2010). Ongoing traumatic stress response (OTSR) in Sderot, Israel. *Professional Psychology: Research and Practice, 41*, 19–25.
- Dickstein, B. D., Schorr, Y., Stein, N., Krantz, L. H., Solomon, Z., & Litz, B. T. (2011). Coping and mental health outcomes among Israelis living with the chronic

- threat of terrorism. *Psychological Trauma: Theory, Research, Practice, and Policy*, 4, 382–399.
- Dohrenwend, B. P., Turner, J. B., Turse, N. A., Adams, B. G., Koenan, K. C., & Marshall, R. (2006). The psychological risk of Vietnam for US veterans: A revisit with new data and methods. *Science*, 313, 979–982.
- Farnsworth, J. K., & Sewell, K.W. (2011). Fear of emotion as a moderator between PTSD and firefighter social interactions. *Journal of Traumatic Stress*, 11, 444–450.
- Feldner, M., Lewis, S., Leen-Feldner, E., Schnurr, P. P., & Zvolensky, M. (2006). Anxiety sensitivity as a moderator of the relation between trauma exposure frequency and posttraumatic stress symptomatology. *Journal of Cognitive Psychotherapy: An International Quarterly*, 20, 201–213.
- Freedman, S., Gluck, N., Tuval-Mashiach, R., Brandes, D., Peri, T., & Shalev, A. Y. (2002). Gender differences in responses to traumatic events: A prospective study. *Journal of Traumatic Stress*, 15, 407–413.
- Hall, B. J., Hobfoll, S. E., Canetti, D., Johnson, R. J., Palmieri, P. A., & Galea, S. (2010). Exploring the association between posttraumatic growth and PTSD: A national study of Jews and Arabs following the 2006 Israeli-Hezbollah war. *Journal of Nervous and Mental Disease*, 198, 180–186.
- Henrich, C. C., & Shahar, G. (2008). Social support buffers the effects of terrorism on adolescent depression: Findings from Sderot, Israel. *Journal of the American Academy of Child and Adolescent Psychiatry*, 47, 1073–1076.
- 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.
- Kline, P. M., & Mone, E. (2003). Coping with war: Three strategies employed by adolescent citizens of Sierra Leone. *Child and Adolescent Social Work Journal*, 20, 321–333.
- Korn, L., & Zukerman, G. (2011). Affective and behavioral changes following exposure to traumatic events: The moderating effect of religiosity on avoidance behavior among students studying under a high level of terror event exposure. *Journal of Religion and Health*, 50, 911–921.
- Kruczek, T., & Salsman, J. (2006). Prevention and treatment of posttraumatic stress disorder in the school setting. *Psychology in the Schools*, 43, 461–470.
- Laufer, A., & Solomon, Z. (2009). Gender differences in PTSD in Israeli youth exposed to terror attacks. *Journal of Interpersonal Violence*, 24, 959–976.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York, NY: Springer.
- Nuttman-Shwartz, O., & Dekel, R. (2009). Ways of coping and sense of belonging to the college in the face of a persistent security threat. *Journal of Traumatic Stress*, 22, 670–667.
- Osei-Bonsu, P. E., Spiro, A., Schultz, M. R., Ryabchenko, K. A., Smith, E., Herz, L., & Eisen, S. V. (2012). Is DSM-IV criterion A2 associated with PTSD diagnosis and symptom severity? *Journal of Traumatic Stress*, 25, 368–375.
- Pfefferbaum, B., Doughty, D. E., Gurwitsch, R. H., North, C. S., Fullerton, C. S., & Kyula, J. (2003). Posttraumatic stress and functional impairment in Kenyan children following the 1998 American embassy bombing. *American Journal of Orthopsychiatry*, 73, 133–140.



- Quarantelli, L., & Dynes, K. R. (1985). Community responses to disaster. In S. Sowder (Ed.), *Disaster and mental health: Selective contemporary perspective* (pp. 158–168). Rockville, MD: National Institute of Mental Health.
- Reuther, E. T., Davis, T. E., Matthews, R. A., Munson, M. S., & Grills-Taquechel, A. E. (2010). Fear of anxiety as a partial mediator of the relation between trauma severity and PTSD symptoms. *Journal of Traumatic Stress, 23*, 519–522.
- Rosenberg, A., Heimberg, R. G., Solomon, Z., & Levin, L. (2008). Investigation of exposure-symptom relationships in a context of recurrent violence. *Journal of Anxiety Disorders, 22*, 416–428.
- Rubin, D. C., Berntsen, D., & Johansen, M. K. (2008). A memory-based model of posttraumatic stress disorder: Evaluating basic assumptions underlying the PTSD diagnosis. *Psychological Review, 115*, 985–1011.
- Sagy, S., & Braun-Lewensohn, O. (2009). Adolescents under rocket fire: When are coping resources significant in reducing emotional distress? *Global Health Promotion, 16*, 5–15.
- Saltzman, W. R., Pynoos, R. S., Layne, C. M., Steinberg, A. M., & Aisenberg, E. (2001). Trauma- and grief-focused intervention for adolescents exposed to community violence: Results of a school-based screening and group treatment protocol. *Group Dynamics: Theory, Research, and Practice, 5*, 291–303.
- Shalev, A. Y., Tuval, R., Frenkiel-Fishman, S., Hadar, H., & Eth, S. (2006). Psychological responses to continuous terror: A study of two communities in Israel. *American Journal of Psychiatry, 163*, 667–673.
- Skinner, E. A., & Zimmer-Gembeck, M. J. (2007). The development of coping. *Annual Review of Psychology, 58*, 119–144.
- Ungar, M. (2008). Resilience across cultures. *British Journal of Social Work, 38*, 218–235.

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