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Quality or quantity of coping resources: Why not both? An integration of common stress theories

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ABSTRACT

Threatening situations may cause distress (e.g., armed conflicts, natural disasters, etc.) and provoke Psychological Distress and Post-Traumatic Stress Symptoms. National resources may mitigate threats or damage in certain situations. This research suggests that in doing so, such resources deployed in concert with personal resources, may reduce levels of these symptoms. Two major stress theories are integrated in theoretical support of the role of national resources: The Conservation of Resource theory (Hobfoll, 1989) and the Cognitive Appraisal Theory (Lazarus and Folkman, 1984). Hobfoll's theory is extended beyond personal resources to encompass national resources. We offer the case of the Iron Dome as an example of a national resource. Iron Dome is an Israeli missile defense system successfully used during Operation Protective Edge in 2014 in response to rocket attacks from Gaza. A cross-sectional study was conducted during the operation in the form of an online survey in which 910 Israeli civilians were assessed using a Psychological Distress and the Impact of Event Scale. They reported on their personal resources and perception of the Iron Dome as a national security resource. Our findings revealed that resource quantity significantly predicted Psychological Distress and Post-Traumatic Stress Symptoms. In addition, it was found that the national security resource significantly contributed to decreased Psychological Distress and Post-Traumatic Stress Symptom predictions beyond all personal resources examined. Research contributions and practical implications are discussed.

1. Introduction

Operation Protective Edge lasted for approximately two months, during which many Israeli civilians were under threat of rocket attacks. This generated uncertainty and fear due to their difficult-to-predict timing, frequency, and location. For Israelis, this represents nothing new. The population of Israel has endured and continues to endure various security threats, including rocket attacks. However, Operation Protective Edge saw the widespread deployment of the active air-defense system, the Iron Dome. As a result, significant casualties and property damage were prevented. This research focused on the psychological impact of the Iron Dome on the Israeli population during Operation Protective Edge, and intended to assess the Iron Dome as a potential national resource, which may be added to the personal resources in the face of adversity.

During security threats civilians tend to report physiological and emotional symptoms of fear and distress. For instance, a manifestation of those symptoms may be changes in sleeping patterns, depression, emotional distress and anxiety (Grossman et al., 2016; Hoffman and Grossman, 2017; Sandler et al., 2015). More specific symptoms may include increased Death Anxiety (Bar-Haim et al., 2010; Hamama-Raz et al., 2016; Ron, 2014); Acute Stress Disorder (Ben Ezra et al., 2015; Kutz and Dekel, 2006); General Anxiety Disorder (Besser et al., 2013); Post-Traumatic Stress Symptoms (PTSS) and Psychological Distress (PD) (e.g. Besser and Neria (2009); Kaufman-Shriqui et al. (2013); Klingman (2001)). The effects of the Iron Dome on some of these symptoms have been examined (e.g. Hoffman et al. (2016); Palgi et al. (2017)), as well as the links between these symptoms and personal and national resilience (Braun-Lewensohn and Mosseri-Rubin, 2014). Nevertheless, the current study sought to integrate two major stress theories: Conservation of Resources (COR) theory (Hobfoll, 1989, 2001, 2002) and Cognitive Appraisal Theory (Lazarus and Folkman, 1984), in referring to the Iron Dome as a potential national resource, and to evaluate its psychological impact on the Israeli population during Operation Protective Edge in addition to their personal resources. Findings from this study might expand our knowledge regarding the role of national resource in psychological implications, as manifested in PD and PTSS symptoms.

1.1. The conservation of resources theory

According to Hobfoll's COR theory (1989; 2001; 2002), in times of acute distress, the individual is compelled to take inventory of available resources in order to effectively cope with and manage stressful situations. Hobfoll defined stress as a reaction to the environment that does not allow gaining or conserving resources, despite efforts towards that goal. Therefore, when resources are threatened, lost, or unable to be replenished, the situation will be experienced as stressful

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(Hobfoll, 1989). Moreover, since during stressful situations personal resources may be threatened, consumed, or lost, the theory states that during remission or calm periods, people will strive to rebuild and preserve resources that might help them cope with future stress (Hobfoll, 1989, 2001, 2002).

As noted by Westman et al. (2004), there are two main principles to the COR theory: 1) The primacy of resource loss such that resource loss outweighs resource gain and 2) the need for investing resources in order to obtain or retain other resources (or to prevent their loss). Furthermore, four corollaries arise from these two principles: First, although resource gain is inferior to resource loss, in stressful situations the weight of gaining new resources grows in light of the resource loss. Second, those who possess greater resources will be less vulnerable to resource loss and will be able to obtain more resources than the less resourceful, who will also be more vulnerable to resource loss and will find it harder to gain new resources. Third, initial loss begets future loss and initial gain begets future gain, as those cycles will repeat themselves and intensify further over time. Fourth, since resource loss is greater than resource gain, loss cycles will be considerably more impactful than gain cycles (Hobfoll, 2001; Westman et al., 2004).

The COR theory defines four categories of resources: 1) *Objects*: assets and physical items, valued by utility or socio-economic status (e.g. a modest as compared to an expensive home); 2) *Conditions*: relationships, social status, and bodily/mental states, defined by various levels of individual privilege and social desirability (e.g. tenure, marriage, health); 3) *Personal and psychological characteristics*: resources for coping during stressful situations (e.g. self-efficacy, personal traits, skills); and 4) *Energies*: resources valued by their ability to facilitate obtainment of additional resources (e.g. time, knowledge) (Hobfoll, 1989). In the current study, economic and the education resources were assessed as part of "energies" and the social resource as part of the "conditions" .

Moreover, Hobfoll (1988) stated that: *"whether a resource is an asset is situationally dependent"* (p. 75), suggesting that there is a great importance for matching between a resource and situational requirements or cultural values. Such a fit may allow for better resistance to stress, whereas an inconsistency or a mismatch might intensify the experienced stress. In line with this notion and according with the COR model which proposes the ability to adapt over time in accord with updates such as future technological innovations, we suggested a relatively new type of stress-coping resource: The national resource. A recent study conducted by Kimhi (2016) discussed a wider range of national resources attributed as "national resilience", though in our study we referred only to a specific national resource. Our study referred to the Iron Dome, which may be perceived as a protector that also reduces psychological distress. This form of cognitive appraisal was well established by Lazarus and Folkman (1984).

1.2. Cognitive appraisal and stress

According to Lazarus and Folkman (1984), the extent to which a situation is perceived as stressful will have a salient effect on the relationship between personal and environmental factors and on personal coping strategies. However, it will have a negligible effect on the objective situation itself. This assertion is supported by many studies tying cognitive appraisal to stress or well-being (e.g. Hanley et al. (2017); Palmwood and McBride (2017)). Research thus confirms that a situation may be objectively stressful by itself, although the degree to which it is considered stressful or challenging – its potential to result in growth or strain – depends not only on the situation itself, but also on personal beliefs, appraisals, and characteristics. Similarly, the Cognitive Appraisal Theory (Lazarus and Folkman, 1984) suggests that when a stressful situation is perceived as controllable, treatable, or reducible, people will tend to prefer a problem-focused approach and will seek specific solutions to the particular stressor (rather than opting for a non-calibrated solution) in order to reduce the specific threat or stress level. Consistent with Hobfoll's (1988) and Lazarus' and Folkman's (1984) claims, our research suggests that resource type and relevance may play significant roles in enduring or reducing stress.

1.3. Expansion to the COR theory

According to COR theory principles and corollaries as mentioned above, resource loss or a threat of losing resources may influence or predict an individual's coping ability (Hobfoll, 1989, 2002; Westman et al., 2004). Further, as noted both by Hobfoll (1988) and Lazarus and Folkman (1984), a fit between resource type and stressor characteristics may enhance better coping or better resistance to stress. However, as Lazarus and Folkman (1984) noted, in addition to the tendency to prefer a specific solution-focused approach to the problem, when a situation is perceived as controlled, coping abilities will expand. Therefore, the significance of resource type and relevance will increase. For the integration of these two theories, resource quantity should be accompanied by a fit between resource type and stressor characteristics. This may be required in order to decrease PD and PTSS levels among the population. For example, in Operation Protective Edge, the rocket attacks were the stressor and Iron Dome was the problem-focused solution, enabling threat mitigation and damage control. Therefore, Iron Dome made the problem controllable and solvable. If civilians appraised the missiles threat as controlled and Iron Dome as an effective problem-focused damage preventing solution, then reported PD and PTSS levels may decrease due to the solution's efficiency and suitability to specific stressor characteristics and civilian needs. In other words, not only resource quantity and type but the subject's appraisals regarding the resource, is suggested to be of great importance in decreasing PD and PTSS levels among civilians.

As such, this research suggests a conceptual expansion to the COR theory, with two additional layers: 1) *national resource*, a new type of non-personal resource; and 2) *appraised effectiveness of this resource*, as a factor that increases specific resource's relevance.

1.4. Study aims

This research aimed to evaluate the psychological impact of the Iron Dome on the Israeli population during Operation Protective Edge. Based on the COR, Cognitive Appraisal Theory, and our theoretical contributions, we hypothesized that:

Hypothesis 1: According to the COR theory, the sum of resources will be negatively correlated with PD and PTSS, and will predict reduced PD and PTSS levels;

Hypothesis 2: According to the Cognitive Appraisal Theory, higher assessment of the security resource will be negatively correlated with PD and PTSS, and will predict reduced PD and PTSS levels;

Hypothesis 3: The national security resource will contribute to PD and PTSS predictions beyond all other personal resources examined.

2. Method

2.1. Procedure and sample

The study was conducted during Operation Protective Edge (8/7/14–26/8/14). The survey was approved by the university's Ethics Committee and was administrated online, through a link to a survey program which guarantees respondents' anonymity. The link was sent to a convenience sample of Jewish Israeli adults, using social media, mobile phone applications, emails, and forums. The subject's self-reported age formed the inclusion criterion (18 and over). In addition, civilians from northern Israel and from settlements adjacent to the Gaza border were excluded as their security threats were not exclusively related to those involved in Operation Protective Edge. Thus, their inclusion could have biased the study results. The survey was anonymous and required electronic informed consent.

The cohort consisted of 910 subjects aged 18–81 (M = 30.05, SD = 10.06), of which 620 were females (68.1%). Most subjects lived in the center of Israel (90%), while the rest were located in southern regions. Residents of different regions experienced varying levels of exposure to rocket attacks during Operation Protective Edge, due to their proximity to the rocket launching sites in the Gaza strip. The areas were clustered by the Home Front Command (Home Front Command - HFC, 2017) as the proximity to the Gaza strip determined the level of exposure to the missiles threat. Distance of residence from where the rocket is launched increases the response time the residents have to enter their shelters: Citizens clustered in the center region had 90–180 sec to find shelter, while in southern Israel they had only 15–60 sec until the rockets hit the ground. Moreover, civilians in southern Israel endured higher rates of rocket fire (an average of 28.67–72.12 rockets per day) compared to those in the center of Israel (an average of 1.33–7.54 launches per day) (Israel Security Agency - ISA, 2014).

2.2. Measures

In addition to the demographic variables (gender, age and residence area), subjects completed questionnaires based on the resources examined in the study and dependent variables, as seen by the scales listed below. It should be noted that background demographic variables included subjects' levels of education and income. However, in the study we related to education levels and income as resources, thus they are discussed in the following section.

2.2.1. Resources

The social resource was measured by the Loneliness Scale (Hughes et al., 2004), measuring the level of loneliness among subjects on a 3-item self-report scale, with each item rated on a 3-point scale, ranging from 1 ("almost never") to 3 ("almost always"). Agreement with more items indicates higher levels of loneliness. For statistical analysis measures, all item scales were converted and a single index was calculated for social resource level, ranging from 0 (for highest level of loneliness, i.e., the lowest social resource) to 2 (for lowest level of loneliness, i.e., richest social resource). Respondents scoring 3–5 points were encoded as "2″, scores 6–7 were encoded "1″, and scores 8–9 were encoded "0″. Cronbach's alpha for these 3 items was found to be $\alpha = 0.83$.

The economic resource was assessed by a comparison to the average monthly income level, measured by a single question comparing the monthly payment to the average salary in Israel, as 8,900 NIS is considered an average salary in Israel (Central Bureau of Statistics, 2012). The economic resource was codified as 0 = lower than average income, 1 = as average, and 2 = above average.

The education resource was measured by the sum of education years of each subject, evaluated by a single question and codified as follows: 0 = up to 12 years of schooling (i.e., without a degree), 1 = 13–15 years of schooling (i.e., students or holders of a first degree or degree certificate), and 2 = 16 years of schooling or more (i.e., graduate degree or higher).

The security national resource was measured by a single question regarding the level of security felt by participants as the Iron Dome deployed defensive measures during an actual rocket attack. This consisted of the following single item: "To what extent does the use of the Iron Dome reassure you during a warning siren?". Measured on a 5-point scale, the item was encoded as 0 = "not at all" or "very little", 1 = "moderately", and 2 = "to a great extent" or "to a very large extent", indicating highest sense of security owing to the use of the Iron Dome system.

The sum of resources index for each subject was calculated by the sum of scores for all resource questionnaires (social, economic, education, and national security resources). These scores were combined into a 9-point scale, representing the amount of resources available ranging from 0 ("no resources available") to 8 ("all resources measured available to a large extent"), as all resources were scored 0–2 for each subject.

2.2.2. Dependent measures

Psychological Distress (PD) was measured by the Psychological Distress scale (K6; Kessler et al., 2002), assessing PD levels among subjects on a 6-item self-report scale, each item measuring a symptom of PD rated on a 5-point scale, ranging from 1 ("not at all") to 5 ("all the time"). Agreement with more items indicates higher levels of PD. For statistical analysis measures, a single index was calculated for PD levels, ranging from 6 (the lowest PD level) to 30 (the highest PD level). Cronbach's alpha for these 6 items was found to be $\alpha = 0.83$. This measure has been validated for the Israeli population (e.g., Kagan et al., 2018; Lavenda and Kestler-Peleg, 2017), and Cronbach's alpha was found to be between $0.80 < \alpha < 0.89$.

Post-Traumatic Stress Symptoms (PTSS) were measured by the Impact of Event Scale - Revised (IES-R; Weiss and Marmar, 1997). This is a self-report scale examining the impact of a traumatic event on subject PTSS levels, according to the DSM-IV criteria for PTSD. This test, as well, was validated and broadly used in previous studies among the Israeli population (e.g., Ben Ezra et al., 2010; King et al., 2009), and Cronbach's alpha was found to be between $0.82 < \alpha < 0.96$. The symptoms are divided into three clusters: 1) intrusion (8 items), 2) hyper-arousal (8 items), and 3) avoidance (6 items), comprising a total of 22 items. Respondents were asked to rate level of difficulty experienced during the previous week due to a stressful, traumatic event on a 5-point scale, ranging from 0 ("not at all") to 4 ("extremely"). Agreement with more items was indicative of higher levels of PTSS. For statistical analysis measures, a single index was calculated for PTSS levels, ranging from 0 (to the lowest level of PTSS) to 88 (for the highest level of PTSS). Cronbach's alpha for these 22 items was found to be $\alpha = 0.93$.

2.3. Data analysis

In order to test the first hypothesis regarding predictions and the link between the *sum of resources* and PD and PTSS levels, we examined the correlations between the sum of resources and PD and PTSS, as well as hierarchical regressions to predict PD and PTSS by exposure levels and quantity of resources.

In order to test the second and the third hypotheses regarding the link between *security national resource assessments* and PD and PTSS levels, correlations were performed. In addition, hierarchical regressions were used to predict PD and PTSS by exposure levels and resource type, in an attempt to examine the contribution of the security national resource beyond all other personal resources.

In both hierarchical regressions, the first step included age, gender, and exposure levels; the second step included the quantity of resources (at the first part) or personal resource types (at the second part); and, at the second part, the third step included the new national resource. No indication of multi-collinearity was found as VIF levels ranged from 1.000 to 1.747 and tolerance levels ranged from 0.573 to 1.000, which is in line with literature requirements (O' Brien, 2007).

3. Results

3.1. Sum of resources: correlations and hierarchical regressions predicting PD and PTSS

In accordance with the first hypothesis, as can be observed in Table 1, significant negative correlations were found between the sum of resources and PD and PTSS. This suggests that greater resource quantities are correlated with lower levels of PD and PTSS. Moreover, hierarchical regressions revealed that the sum of resources predicted 3.6% of PD and 2.1% of PTSS beyond the contribution of all other variables examined (gender, age, and exposure level), as shown in Table 2. Respondents who reported availability of more resources were

Table 1
Means or percentage, standard deviations, and correlations of study variables (n = 910).

	M/%	*SD*	1	2	3	4	5	6	7	8	9
1.. Age	30.06	10.06									
2.. Gender (Female)	68.1%		−0.014								
3.. Exposure (High)	10%		0.048	−0.070*							
4.. Social resource	1.60	0.60	0.047	0.004	0.025						
5.. Education resource	1.14	0.76	0.414***	0.083*	0.046	−0.011					
6.. Economic resource	0.42	0.74	0.551***	−0.046	0.077*	0.054	0.348***				
7.. Security resource	1.57	0.68	0.069*	0.001	0.111*	0.074*	−0.043	0.070*			
8. Sum of resources	4.74	1.56	0.508***	0.020	0.116***	0.434***	0.624***	0.691***	0.475***		
9. PD	12.86	4.65	−0.152***	0.233***	−0.088**	−0.245**	−0.085*	−0.139***	−0.097**	−0.242***	
10. PTSS	26.53	16.61	−0.147***	0.314***	−0.141***	−0.127***	−0.066*	−0.166***	−0.107**	−0.205***	0.615***

* $p < 0.05$
** $p < 0.01$
*** $p < 0.001$

found to report less PD and PTSS than those with access to fewer resources. Therefore, greater resources predicted lower levels of PD and PTSS.

3.2. Resource type: correlations and hierarchical regressions predicting PD and PTSS

In accordance with the second and the third hypotheses, as can be observed in Table 1, significant negative correlations were found between resource type and PD, and resource type and PTSS. That is, higher levels of security national resource were correlated with lower levels of PD and PTSS. Moreover, resource type contributed to PD and PTSS predictions as the security national resource predicted 0.3% of PD and 0.5% of PTSS beyond the contribution of all other resources examined (social, economic, and education resources), as shown in Table 3. Respondents who reported higher levels of security national resource were found to report lower levels of PD and PTSS than those who reported lower levels of security national resource.

4. Discussion

The present research aimed to examine PD and PTSS levels in light of the amount and type of resources available to subjects, and thus attempted to compare and examine the relationship between two central stress theories: Conservation of Resources (Hobfoll, 1989; 2001; 2002) and Cognitive Appraisal Theory (Lazarus and Folkman, 1984).

The current findings show that, in line with the first hypothesis, the sum of resources was correlated with decreased levels of PD and PTSS. Moreover, resource quantity significantly predicted decreased levels of PD and PTSS. Consistent with the second hypothesis, the security national resource was also found to negatively correlate with decreased levels of PD and PTSS and significantly predicted decreased levels of PD and PTSS. The same was confirmed for the third hypothesis, as the contribution of the national security resource in PD and PTSS predictions was shown to be significantly beyond all other personal resources examined, although the additional prediction was quite low (0.3–0.5% of the symptoms examined over the other resources), along with quite weak correlations.

These results, highlighting the importance of resource quantity, are supported by previous studies, showing that loss of resources during stress significantly increases risk of PD and PTSS. This applies if the cause is a security threat (Hamama-Raz et al., 2017; Hobfoll et al., 2008), service-related satisfaction among reservists (Goldfarb and Ben-Zur, 2017), or threats from natural forces (Suar et al., 2016). All suggest that resource loss or threats contribute to exacerbation of PD and PTSS (Shing et al., 2016).

These findings can be explained in the context of Hobfoll's COR theory (1988, 1989, 2001, 2002), according to which stress levels may be increased if the resources are under threat, therefore it can be suggested that resource quantity may be associated with reduced stress. This reduction can be attributed to two reasons. The first relates to resource exchange ability: When a resource is threatened or lost, another resource can replace its function. Hobfoll (1988) emphasized that this is particularly relevant with respect to energy resources (time, money and knowledge) since they are more flexible and relatively easy to convert to other resources (e.g., buying additional resources or using knowledge to achieve a higher status). Whether the replacement is direct (e.g. finding a new workplace to replace the former) or symbolic (e.g. finding new meaning in life), one resource may replace another. This claim was validated by previous studies regarding flexibility in coping with traumatic events (Bonanno et al., 2011; Shing et al., 2016). This implies that a person who is capable of exchanging resources, and

Table 2
Hierarchical regressions predicting PD and PTSS by gender, age, exposure and sum of resources (n = 910).

step	Variables	PD			PTSS		
		β	*T*	*P value*	*β*	*T*	*P value*
1	Age	−0.146***	−4.566	0.001>	−0.138***	−4.444	0.001>
	Gender	0.227***	7.098	0.001>	0.304***	9.791	0.001
	Exposure (time to enter shelter)	−0.065*	−2.031	0.043	**-0.113*	−3.632	0.001>
R^2	0.078	0.129					
2	Age	−0.032	−0.877	0.381	−0.050	−1.396	0.163
	Gender	0.234***	7.481	0.001>	0.310***	10.100	0.001>
	Exposure (time to enter shelter)	−0.044	−1.385	0.166	−0.096**	−3.121	0.002
	Sum of resources	***-0.226	−6.190	0.001>	***-0.175	−4.897	0.001>
R^2		0.114			0.150		
ΔR^2		0.036			0.021		

* $p < 0.05$
** $p < 0.01$
*** $p < 0.001$

Table 3
Hierarchical regressions predicting PD and PTSS by gender, age, exposure and resource type ($n = 910$).

Step	Variables		PD			PTSS		
			β	*T*	*P value*	*β*	*T*	*P value*
1	Age		−0.146***	−4.566	<0.001	−0.138***	−4.444	<0.001
	Gender		0.227***	7.098	<0.001	0.304***	9.791	<0.001
	Exposure (time to enter shelter)		−0.065*	−2.031	0.043	−0.113***	−3.632	<0.001
	R^2			0.078			0.129	
2	Age		−0.089*	−2.299	0.022	−0.073	−1.913	0.056
	Gender		0.231***	7.431	<0.001	0.304***	9.829	<0.001
	Exposure (time to enter shelter)		−0.056	−1.795	0.073	−0.105**	−3.410	0.001
	Hobfoll's resources	Social	−0.239***	−7.715	<0.001	−0.118***	−3.840	<0.001
		Economic	−0.045	−1.186	0.236	−0.088*	−2.348	0.019
		Education	−0.052	−1.504	0.133	−0.026	−0.771	0.441
	R^2			0.136			0.147	
	ΔR^2			0.058			0.018	
3	Age		−0.084*	−2.172	0.030	−0.068	−1.765	0.078
	Gender		0.233***	7.488	<0.001	0.306***	9.908	<0.001
	Exposure (time to enter shelter)		−0.048	−1.552	0.121	−0.097**	−3.123	0.002
	Hobfoll's resources	Social	−0.234***	−7.575	<0.001	−0.113***	−3.679	<0.001
		Economic	−0.041	−1.091	0.276	−0.083*	−2.240	0.025
		Education	−0.059	−1.694	0.091	−0.034	−0.996	0.320
	The new national security resource		−0.068*	−2.178	0.030	−0.079*	−2.559	0.011
	R^2			0.139			0.152	
	ΔR^2			0.003			0.005	

* $p < 0.05$
** $p < 0.01$
*** $p < 0.001$

therefore has flexible coping styles, might enhance his/her coping and adjustment abilities through a variety of traumatic events. Therefore, a wide range of resources is needed in order to enhance flexibility in resource management, which may be associated with decreased PD and PTSS levels.

The second reason relates to loss cycles, since reduction in resource quantity entails additional implications (Hobfoll, 1989). Initial loss begets future loss or greater difficulty in obtaining new resources in the future, which may also be linked with increased PD and PTSS levels.

As noted, our findings regarding significance of resource type in predicting decreased PD and PTSS levels may be supported by Hobfoll's (1988) claim regarding the importance of fit between resource type and situational demands. Additional support was provided by Lazarus and Folkman's Cognitive Appraisal Theory (1984) with its focus on cognitive appraisals and preferred coping styles, when considering the Iron Dome as a problem-focused solution to the stressor at hand, as elaborated below.

As recalled, the Cognitive Appraisal Theory (Lazarus and Folkman, 1984) suggests that stressful situations or encounters may be evaluated as irrelevant, benign-positive, or stressful by the experiencer (primary appraisal); who also appraises whether the individual has adequate resources to deal with the stressor, if appraised as a threat (secondary appraisal). Accordingly, they divide the stressors' appraisals into three categories, based on the degree of perceived sense of control: 1) harm/loss (lowest sense of control), 2) threat, and 3) challenge (i.e. growth, mastery or gain from opportunities). The last consists of positive and negative emotions, as well as permits the highest sense of control. In fact, perceived sense of control is critical, for it determines selection of coping styles. When strong negative emotions arise, emotion-focused coping will appear. Otherwise, if negative emotions are activated to a lesser extent, individual functioning will be more efficient and problem-focused coping styles will, therefore, be preferred. Moreover, according to Folkman (1984), situations may be objectively as well as subjectively perceived as controlled or uncontrolled. When there is a fit between controllability appraisal and reality (e.g., objectively controllable and subjectively appraised), people will tend to feel better, appraise the situation as a challenge and appraise to have adequate resources to endure or withstand the situation, and therefore prefer problem-focused coping styles.

In our context, the Iron Dome may serve as a specific solution to the threat of rocket attacks, making a stressful situation objectively controlled. That is, it largely prevents damage and reduces stressor impact. Thereby, if the Iron Dome is appraised as a shield and the situation is perceived as being controlled (i.e., a fit between controllability appraisal and reality, if the Iron Dome indeed functions and is perceived as reducing threat), the situation may be perceived as a challenge. Negative emotions will likely be provoked to a lesser extent and will be less likely to intervene with problem-focused efforts. Positive emotions of increased sense of safety will likely increase, and eventually it would be feasible to correlate the increased sense of safety with reduced levels of PD and PTSS. Therefore, our results regarding the predicting contribution of resource type (and more specifically, the security national resource) may be attributed to the fact that it generally neutralized the specific threat of rocket attacks.

In addition, our results revealed gender differences as women reported of higher PD and PTSS levels than men. Support for this finding can be observed in many studies that have shown similar results, in which women often report of higher levels of PD and PTSS than men (e.g., Perrin et al., 2014; Tolin and Foa, 2006), where these discrepancies are also explained as gender bias speculation in the questionnaire, socialization, or gender differences in perception of the threatening event (Simmons, 2007).

To sum, this research reinforces, as noted, two major stress theories, and offers both theoretical and clinical contributions. The former represents a confirmation and expansion of Hobfoll's COR theory (1988, 1989, 2001, 2002). That is, (a) quantity of resources was found to predict decreased PD and PTSS levels, which reinforces Hobfoll's COR theory; (b) a new category of resources (i.e., national rather than personal) was suggested; and (c) linkages were made between Hobfoll's COR theory and Lazarus and Folkman's (1984) Cognitive Appraisal Theory, on two levels. First, as reinforced in both theories that not only resource quantity but also resource type exerts a significant role in predicting decreased PD and PTSS, in accordance with the characteristics of the specific stressor. Second, as noted by Lazarus and Folkman, a specific resource targeted to reduce harm/loss probabilities of a precise stress experience, also renders the stressor controlled and

solvable. Therefore, such a resource lends itself more to categorization as superior and as possessing greater weight than other unspecific personal resources.

As noted, in the case of rocket attacks, the security national resource may carry more weight than other resources because of its ability to reduce the specific stressor's harm and threat capabilities. Civilians who recognized the Iron Dome's effectiveness in protecting them and preventing damage tended to appraise the missile threat as controllable and therefore less threatening. They reported decreased levels of PD and PTSS and being more relatively calm during siren alarms. This may be explained through Buzan's (2008) claims that argue that even though governments provide residents with resources to protect themselves from security threats and harm, subjective feelings of safety are not necessarily related to objectively being safe. In line with this notion, it seems as if providing people with a problem-focused solution is not exclusive, as other factors appear to matter as well, such as their personal resources, along with their appraisals regarding the situation, noted earlier as primary and secondary appraisals, by Lazarus and Folkman (1984). Further research is recommended in order to expand the view regarding links between cognitive appraisal, sense of control and psychological distress in the face of adversity.

This leads us to the study's clinical contributions, which revolve around enhancing people's appraisals regarding the suggested national security resource. Indeed, for such a resource to preserve even a relatively small degree of civilians' calm and report of lower PD and PTSS levels during a missile threat, it is suggested to make an effort to increase people's ability to appraise the situation as controlled and able to be maintained. That may be obtained by equipping people with knowledge and awareness, along with the security resource itself. While the Iron Dome has been established as an effective security resource, the missile threat may thus be perceived as more controlled and its potential damage as averted. By doing so, civilian PD and PTSS levels could be potentially diminished.

Taking a broader view, the relevance of a national resource is especially timely. We live in an age of global threats such as terrorism, economic instability, and other geopolitical uncertainties. For natural or man-made threats, targeted effective national-level solutions (measured by safeguarding civilian life and mitigating damage) may help civilians feel safer and more capable of functioning normally and continuing their daily routines. However, the likelihood of this outcome will potentially increase if its implementation is perceived as successful – as with Iron Dome. Ultimately, every country should identify a specific national resource based on civilian needs, while considering local threat conditions and characteristics. Moreover, as mentioned, it appears that it will probably be important to inform the residents so that they will be aware of the services and resources suggested to them and their applications. It is equally important to assist the public in using these resources and in understanding their protective capabilities. This might facilitate residents' sense of control of the situation, and might be associated with decreased reported levels of PD and PTSS (if relevant to the specific stressor at hand). Thus, these results suggest a dynamic application for future threats and stressors of various types, which may warrant further investigation in the future.

However, these research findings and contributions should be viewed in light of a few limitations. First, the study is cross-sectional in design, with information collected by an online self-report survey, using a snowball sampling technique as respondents were invited to send the online survey to their friends and family members as well. As such, the study sample was subject to selection and response bias. Information was gathered only for particular subjects, volunteers who were willing to take the survey online. The sample did not include, for example, respondents without internet connection or respondents that were unwilling to take the survey because they had especially high levels of PD and PTSS. Individuals who refused to participate had a high probability of similar population characteristics, due to the use of the snow ball technique. Participants reported only on their current emotional state and lack a report of before and after Operation Protective Edge. Moreover, the gathered information was subjective to respondents' perception and bias, due to the self-report structure, although we assumed that they had no particular reason to bias their responses or to fill out the survey more than once. Second, it should be noted that even though significant, study results have to be taken under very careful consideration, since correlations, main effects and prediction intensities were quite weak and could have at least partly stemmed from a relatively large sample. Third, as can be seen in the method section in describing subjects' characteristics, women, young adults and subjects with higher educations were over-sampled since subjects were mostly students. Future research should be expanded globally to a range of populations, countries, and cultures. It should also not overlook regions less routinely exposed to security threats to ensure that the effect will be found in other contexts as well.

In conclusion, the current study reinforces and integrates two major stress theories, through studying the case of Operation Protective Edge and its psychological implications as manifested in PD and PTSS symptoms, within the framework of those theories. Our findings suggest that subjects who reported higher levels of reassurance when protected by the Iron Dome were more likely to have reported reduced PD and PTSS levels, which might be interpreted as better mental health.

Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.psychres.2018.12.051.

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