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Global Health Promotion 2009; 16; 5
DOI: 10.1177/1757975909348125

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Adolescents under rocket fire: when are coping resources significant in reducing emotional distress?

Shifra Sagy¹ and Orna Braun-Lewensohn¹

Abstract: Stress reactions and coping resources of adolescents in chronic and acute situations evoked by missile fire were examined. Data were gathered during August 2006 (Second Lebanon War) on a sample of 303 Israeli adolescents living in Northern Israel (acute state) and 114 youths from Sderot and the Negev, an area which has been exposed to frequent rocket attacks in the last seven years (chronic state). State anxiety and psychological distress were measured as stress reactions. Sense of coherence, family sense of coherence, sense of community and level of exposure were investigated as potential explanatory factors in reducing emotional distress. The overall magnitude of variance explanation was found to be different at each state: a relatively high amount explained variance of stress reactions was found in the chronic stress situation, but not in the acute state. These data support the value of developing a model that differentiates stress situations with the aim of understanding patterns of significant resources in moderating stress reactions in each state. (*Global Health Promotion*, 2009; 16 (4): pp. 5–15)

Key words: adolescents, chronic versus acute stress, coping resources, emotional distress

There are growing indications of resilience and salutogenic results among adolescents who have experienced potential traumatic experiences such as political violence, terror and war (1). Many teenagers who were exposed to such experiences do not suffer from later psychological problems and have stayed well (2–4). It appears that mediating and moderating variables, other than the exposure to violence per se, may significantly determine the pathway between exposure to potentially traumatic events and its subsequent outcomes (4).

The salutogenic theoretical approach (5) has sought to explain successful coping with stress and emphasizes the study of coping resources that might reduce distress reactions to stressors. There is a body of accumulated research that indicates that a variety of

coping resources, such as sense of coherence, family cohesion or social support, moderate distress reactions and increase resilience (6, 7).

Employing the salutogenic theoretical approach (5), our study aim was to investigate resilience resources that may reduce distress reactions and enable the adolescents to stay healthy along two different stress experiences of political violence. The importance of understanding and explaining individual reactions in terms of the patterns of cross-situational profile has been highly evaluated by leading researchers in the field of stress and anxiety (e.g. 8, 9). However, only a few models or theories on resilience focus on the issue of differential stress situations and their possible impact on stress reactions and patterns of resources explaining individual

1. Ben Gurion University of the Negev, Israel. Correspondence to: Prof. Shifra Sagy, Department of Education, Ben Gurion University of the Negev, P.O.B 653, Beer – Sheva 84105, Israel. Tel: 972–8–6469148. (shifra@bgu.ac.il)

(This manuscript was submitted on June 30, 2008. Following blind peer review it was accepted for publication on January 22, 2009.)

Global Health Promotion 1757-9759; Vol 16(4): 5–15; 348125 Copyright © The Author(s) 2009, Reprints and permissions: <http://www.sagepub.co.uk/journalsPermissions.nav> DOI: 10.1177/1757975909348125 <http://ghp.sagepub.com>

reactions (10). As far as we know, the comparative question of when these resources do or do not moderate psychological difficulties has not been systematically studied (3, 10, 11).

Our cross-situational study has attempted to address this omission by comparing stress reactions of adolescents under two divergent environmental circumstances: chronic and acute states of stress. The stress situations were 'created' by Israeli political realities in which children and adolescents were exposed to violence and had to face danger in their daily lives.

Employing the salutogenic theoretical approach (5), which has sought to explain successful coping with stress, we examined several coping resources that might reduce distress reactions to stressors and enable the adolescents to stay healthy. Our main purpose, however, was to compare the patterns of these coping resources in explaining stress reactions of the adolescents in the two situations.

We asked: (i) Were the emotional reactions in the two stress situations different in their levels? (ii) When and in which state were the coping resources more significant in reducing emotional responses?

Research background

In the present research we examined these questions among Israeli adolescents during the Second War in Lebanon (July–August, 2006). The acute situation was investigated in the North of Israel, an area which was then suffering from intensive missile fire. Almost 4000 rockets fell in the area during this month, approximately 200 missiles per day. There were about 900 injuries caused by the missiles in northern communities and 52 civilians were killed.

The long-term chronic stress state was examined in the South of Israel (the city of Sderot and kibbutz communities in the Negev), an area which during the last eight years has been exposed to frequent rocket attacks, usually one or two strikes at a time. Since the disengagement from Gaza settlements in August 2005 up to August 2006 there have been about 1000 missile strikes.

Emotional reactions in chronic and acute states

Our comparative hypotheses were based on two conceptual frameworks. The first one is the salutogenic model, which considers chronic situations as

more similar to a 'normal' stressful life, where moderators have strong explanatory power in reducing distress reactions. The salutogenic approach is based on the assumption that the human condition is stressful, that stressors are ubiquitous (5), and that daily life can be considered a state of chronic stress (10). The prolonged 'chronic' stress situation can be characterized by the relatively long lasting exposure to the stressor. This might be either a long-term threatening stimulus or longitudinal experiences (12).

The chronic state we examined in this study, however, was a result of catastrophic events of missile strikes and not part of normal modern life.

A chronic stress situation has been found to be a pathogenic factor, resulting in a variety of mental and physical illnesses (13–15). A wide body of research has suggested that continuous stress may lead to the development of more stress responses as time passes (16). Such findings can be explained as a result of change in the way one views the world, particularly the assumption that the world is a safe place (17).

On the other hand, research from different parts of the world has tended to confirm that children exposed to political violence do not inevitably suffer serious psychological consequences (1). In fact, the majority exhibit what may be seen as 'normal' anxiety (18). Punamaki (19) even referred to the possibility of habituation to a threatening environment by children and adolescents who were exposed to violence and who faced danger in their daily lives. Studies conducted among Israeli adolescents during times of prolonged violence or terror (e.g. 4, 10) indicated that, despite the substantial stress reactions and limited sense of safety reported, most Israeli adolescents seemed to adapt to the situation without substantial mental health symptoms. Moreover, a wide body of research has suggested that continuous exposure to stress activates a process of modulation characterized by a gradual decline in the number and intensity of symptoms over time (e.g. 19). These studies have maintained that only a small fraction of those exposed will develop long-term distress, while most individuals will become accustomed to living under the shadow of terror and danger (3). Such findings support the salutogenic approach, which emphasizes the ability of coping resources to attenuate and reduce emotional responses to stress.

The second conceptual framework of our study was the crisis approach (20) and refers mainly to the acute situation. This approach sees the impact of an

acute stressful event as minimizing or even eliminating individual differences in emotional response. Thus, the acute, unexpected event seems to overwhelm coping resources for all those affected.

Two emotional reactions were examined in our study, both of which are commonly used in research as indicators of psycho-physiological distress (21): anxiety state reactions (22) and a measure of psychosomatic symptoms (23). Based on the salutogenic approach, and its emphasis on the ability of human beings to cope with stress and stay well (5), we hypothesized that the emotional reactions in the chronic, habitual stress situation would be less intense than in the acute state.

Coping resources as explanatory factors: chronic versus acute states

The stress buffering research literature (e.g. 24, 25) has considered moderating and mediating factors as influencing stress reactions at higher levels of stress. Our research question relates to the differentiation between chronic and acute stress regarding the explanatory potential of coping resources in reducing the adolescents' reactions.

Employing the salutogenic paradigm we assumed that in the chronic situation, which is more similar to a 'normal' stressful life (5), the coping resources can be more significant in reducing emotional responses than in the acute state. The acute, unexpected event, we assumed, overwhelms coping resources of the individuals affected and minimize individual differences (20). Some empirical support for this differentiation has been found in several studies among Israeli adolescents who were exposed to various stress situations (e.g. 3, 10, 26).

One example of empirical support to our distinction is related to a longitudinal study (27), which was carried out among Israeli adolescents who were confronting an acute stress situation preceding the evacuation of Sinai settlements in the framework of the peace treaty with Egypt. Two to three weeks before the evacuation, when the stress was acute, none of the coping resources examined was found significant in explaining the emotional reactions of state anxiety. After the evacuation, when the acuteness of the stress decreased and became more similar to a 'normal' or chronic stress situation (there were still components of stress in the new situation), the predictors for state anxiety showed a significant impact:

the explained variance increased from 0 percent (acute state) to 38 percent (chronic situation).

In another study (10), patterns of coping resources explaining stress reactions of adolescents were also compared during two different situations: chronic-without-acute-stress and chronic-with-acute-stress. The participants were Israeli-Jewish adolescents living in West Bank settlements during the prolonged state of the Intifada (the Palestinian uprising against Israeli occupation) and in the acute-stress state, immediately after the assassination of Prime Minister Rabin. Similar to the previous study, in that research the overall magnitude of variance explanation was different at each state: a relatively high explained variance of state anxiety (30%) and psychological distress (21%) was found in the chronic situation but not in the acute stress state (9%).

A recent study (3) among Israeli Jewish adolescents compared stress responses to a single acute terror event and to continuous exposure to terrorist incidents (shootings, air raid attacks) in Northern Israel. The findings of this research also indicated that exposure to continuous stress, in contrast to a solitary terror event, rendered different influences depending on the adolescents' individual characteristics.

Based on the salutogenic model regarding chronic situations and the crisis approach concerning reactions in an acute situation, in addition to the aforementioned research findings, we propose the following differential influence of coping resources in the two kinds of stress situations: in the chronic situation, when the state is more habitual, the personal, familial and community coping factors could have a significant explanatory power regarding emotional distress reactions of the individual. However, when the stress situation is more acute, the emotional reactions are less explained by personal, familial or community factors. In this case, the situational factors have higher potential in explaining stress reactions.

Explanatory factors: coping resources, exposure to rocket fire and demographic characteristics

The coping resources included in our study were personal orientation, the sense of coherence (SOC), and some environmental resources as represented by the sense of family coherence and sense of community.

One situational factor, the level of exposure to incidents of rocket fire, was included as a possible explanatory factor for the emotional reactions. In addition, three demographic characteristics were included: gender, age and place of residence.

In his salutogenic model, Antonovsky (5) sought to explain successful coping with stressors by SOC. SOC is a global orientation, an enduring tendency to see the world as more or less comprehensible, manageable, and meaningful. The SOC, according to the model, has implications for individual responses in various kinds of stressful situations. The salutogenic model suggests that an individual with a strong SOC is less likely than one with a weak SOC to perceive many stressful situations as threatening, and, thus, anxiety provoking, and will be more likely to appraise such situations as manageable.

Two of the environmental resources examined in this study were the family and the community as perceived by the adolescent. Sagy and Antonovsky (28) discussed two dichotomous techniques reflecting theoretical approaches concerning these kinds of collective concepts: the holistic approach, which is external and objective (e.g. 29), and the internal and subjective reductionist approach (e.g. 30). In the present study, we adopted the second approach: we did not inquire into the objective cognitive map of the collective group. Instead, we examined the cognitive representations of the individuals involved, as they were seen from the participant's perspective.

Family views and beliefs have been found to be crucial resources for its members' adaptation to stressful events (13–16, 31, 32). The influence of the sense of family coherence on the adolescents' stress emotions has been examined, based on the assumption that the family is a salient socializing agent influencing patterns of behavior in adolescence (34). The coherence of the family refers to the extent to which the participant sees his/her family worldview as coherent.

The two types of stressful situations investigated in this study were characterized as complex community stress situations, posing a threat to the whole community. Thus, community characteristics may also contribute to understanding emotional reactions in the stressful situation.

First, we included the place of residence (city vs. kibbutz settlements) as one of the demographic

characteristics examined. We hypothesized that a small community like kibbutz could be significant in reducing emotional distress among its youngsters (35). Second, we investigated the community on the basis of the sense of community – a personal quality connoting a strong attachment between people and their communities (36). McMillan and Chavis (37) defined this concept in terms of four elements: membership, influence, integration and fulfillment of needs, and shared emotional connections. Empirical research on the model suggests that these elements are interrelated and make up a relatively cohesive construct (36, 38, 39).

The situational factor examined in this study was the level of exposure and injury caused by the missiles. Adolescents were asked to report whether a missile had fallen on their homes, whether they had been hurt by a missile, whether someone they knew had been hurt, whether a missile had fallen in their neighborhoods, among others. Situational factors, such as various kinds of exposure to injury, were found to be significantly related to adaptive outcomes in stressful situations (e.g. 3, 14). However, we expect this situational factor to have stronger impact on emotional distress in the acute state more than in the chronic one.

Three demographic characteristics were also included in the research as mediators (24) in attenuating the adolescents' emotional distress in the two situations. As mentioned before, we expected small and cohesive communities (like kibbutz) to reduce levels of emotional distress among its youth.

The socio-demographic parameter of gender is considered in research literature as a structural context that can affect the ways in which stress outcomes are manifested (40). Teenage girls generally report higher levels of anxiety than boys (e.g. 4, 10). Thus, we hypothesized that gender would be another factor that could explain variability of stress reactions.

Regarding the age factor, the existing evidence suggests that less coping resources and higher anxiety levels are prevalent among younger children than among their older counterparts (e.g. 41). Thus, age could be considered an additional explanatory factor for levels of stress responses. We expected the three demographic parameters to have more influence in the chronic than in the acute state.

In sum, the aim of the present study was to increase knowledge about differential stress situations and their possible relations with emotional reactions of the individual adolescent. We examined this comparative question in natural community settings of chronic and acute stress situations. Our main objective was to ask this question regarding coping resources as significant potential factors in reducing emotional distress stress situations. We deemed it particularly important to explore these questions among teenagers, who must find a way to cope with these crisis situations during the critical period of adolescence, while they are subject to rapid physiological, psychological and cognitive changes (42, 43).

We formulated the major hypotheses of the research as follows:

A. Levels of emotional reactions: The intensity of the emotional responses is predicted to be of higher levels in the acute situation than in the chronic, habitual one.

B. Coping resources: During the chronic situation, coping resources are predicted to reduce emotional stress reactions. Thus, adolescents with strong SOC and/or family and community resources are predicted to have fewer emotional stress responses. In the acute situation, however, these factors should have less explanatory power. The demographic characteristics – gender, age and place of residence – would have more explanatory power in the chronic, habitual situation than in the acute state. The situational factor – level of exposure to missile attacks – is predicted to explain the emotional responses in the acute more than in the chronic situation.

Method

Participants

Data were collected in August 2006, during the war in Lebanon, on a sample of 303 youths living in Northern Israel and on 114 adolescents from Southern Israel. In the South, about 38 percent ($n = 43$) lived in a small town (Sderot) and 62 percent

lived in kibbutz communities in the region. Eighty three percent ($n = 231$) of the Northern sample lived in cities, towns etc., while 17 percent ($n = 47$) lived in kibbutz communities. The respondents' ages ranged from 12 through 19, with an average age of 15.56 ($SD = 1.78$) in the Northern sample and 15.46 ($SD = 1.55$) in the Southern sample.

Procedure

Data were gathered via self-completion questionnaires. The second author and research assistants administered the questionnaires and provided general instructions and explanations regarding the anonymity of the data collected. After receiving permission from parents, the questionnaires were administered in the respondents' home (sometimes in shelters) and in summer camps organized by the scouts and by the Jewish Agency during the war.

Measures

A. Stress emotional reactions

A1. State Anxiety. State Anxiety was assessed using the Hebrew version of Spielberger, Gorsuch and Lushene's (44) State-Trait Anxiety Inventory (STAI). The Hebrew STAI is a translation of the English STAI. It has proved to be reliable, valid and equivalent to the English inventory (45). State Anxiety scores were evaluated using the mean score of the relevant 11 items from the 20-item inventory of the STAI (on a Likert-type scale ranging from 1 to 4). Cronbach's alpha was .88 for the chronic state group (South) and .87 for the group in the acute situation (North).

A2. Scale of Psychological Distress (SPD). SPD is a 6-item psychosomatic symptom scale, referring to frequency of occurrence of familiar psychological symptoms. The scale was developed in Hebrew (23) and has been used in a number of studies with satisfactory psychometric properties (46). Five of the items are culled from Langer's psychological-equilibrium index (47): pounding heart, fainting, insomnia, headache and sore hands. The scale was elaborated by Sagy for use in a population of children

(48). Some of the symptoms were modified (for example, stomachache instead of sore hands), and one item (nervous breakdown) was deleted. In this format, the questionnaire included five items and was scored on a scale of 1–4. Low scores denoted a high level of psychological distress and high scores indication a low level of distress. In the present study, the Cronbach's alpha was .76 in the chronic state group and .74 in the acute state group.

B. Coping resources

B1. Sense of Coherence (SOC). SOC was measured using a series of semantic differential items on a 7-point Likert-type scale with anchoring phrases at each end. High scores indicate a strong SOC. An account of the development of the SOC scale and its psychometric properties, showing it to be reliable and reasonably valid, appears in Antonovsky (5, 49). In this study, the SOC was measured by the short form scale consisting of 13 items and was found highly correlated to the original long version (5, 49). The scale includes items such as: 'Doing the things you do everyday is' – answers ranging from (1) 'a source of pain and boredom' to (7) 'a source of deep pleasure and satisfaction.' In the present study, the Cronbach's alpha was .74 for the chronic state (South) group and .75 for the acute one.

B2. Sense of Family Coherence (SOFC). SOFC was measured using a scale consisting of 12 items on a 7-point scale. This scale is an elaborated version on the family level of the SOC personal orientation scale (50). The SOFC score is the mean score of all scale items, with high scores denoting a strong sense of family coherence. The scale includes items such as: 'When your family faces a difficult problem you usually feel that the choice of a solution is ...' – answers ranging from 1 'always confusing and hard to find for the family' to 7 'always completely clear for the family'; 'To what extent does it seem to you that the family rules are clear to you?' answers ranging from 1 'the family rules are not clear at all' to 7 'the family rules are completely clear.' Previous studies found Cronbach's alpha coefficients of .88 and .76 (26, 48). In the present study, the Cronbach's alpha of the scale was .84 for the chronic state group and .75 for the acute one.

B3. Sense of Community Sense of Community was measured by a scale developed by Davidson and Cotter and was found to be reliable and valid (36). It consists of 17 questions, scored on a 4-point Likert scale. The scale was translated into Hebrew by Sagy, Stern and Krakover (51). It includes items such as: 'I feel like I belong here' (membership); 'It is hard to make friends and meet people in this place' (influence); 'It would take a lot for me to move away from this community' (shared emotional connection). In the present study the Cronbach's alpha was .86 for the Southern group and .85 for the North.

C. Situational Factor

C1. Level of Exposure. Level of Exposure was assessed by a 5 items inventory especially constructed for the purpose of this study. Respondents were asked to report whether a missile had fallen on their homes, whether they had been hurt by a missile, whether someone they knew had been hurt, whether the home of someone they knew had been damaged and whether missiles had fallen in their neighborhood. The participants also reported how long they had had to stay in a shelter.

D. Demographic Characteristics

Gender, age and place of residence were reported by the respondents. Each place was coded separately. Subsequently, city, community town, local council, and village were joined together into one type of residence while kibbutz was another type of community. Analysis through this study was made according to these main types of residency.

Results

Table 1 displays scale means, standard deviations and T-test results of the variables in the study, for each state separately.

State Anxiety, but not SPD scores, was at the high end of the scale. Results of T-tests showed significant differences between the two samples. In accordance with our hypothesis, State Anxiety scores were higher among the youth in the North (acute state) than among the adolescents in the Southern

Table 1. Means (M), standard deviations (SD) and T-test results in the study for each stress state

Sample Variable	Acute State n = 292		Chronic State n = 112		T-test
	M	SD	M	SD	
State Anxiety	2.46	.66	2.27	.63	2.57**
Psychological Distress	1.91	.67	2.08	.70	-2.27*
Sense of Coherence	3.48	.85	3.56	.83	-.74
Family Coherence	3.06	.88	3.02	.97	.37
Sense of Community	2.98	.54	2.84	.58	2.25*
Level of Exposure	1.61	1.18	2.18	1.10	-4.35***

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

sample (chronic state). On the other hand, in contrast to our hypothesis, the SPD scores were higher among the adolescents in the Southern sample than among the Northern adolescents.

Significant differences were found between the two samples in the levels of exposure to missile attacks. These levels were higher among the chronic state sample, which had been suffering from six years of missile attacks, than among the acute sample in the north.

In order to examine the coping resources in each situation, each of the two emotional stress responses was regressed on the array of predictor variables. The predictor variables we examined were: (1) demographic characteristics: gender, age and place of residence (2) level of exposure (3) SOC, sense of family coherence, sense of community. Tables 2 and 3 present the results of hierarchic multiple regression analyses for each variable separately.

Regarding our main comparative question with regard to the predictor variables of the stress reactions, different magnitudes of variance explanation were found in each sample. In the chronic stress state (South), the predictor variables explained 38 percent of the variance of SPD, but only 23 percent in the acute stress state (North). With regard to the State Anxiety measure, 35% of the variance was accounted for in the chronic state, but only 16 per cent of variance was explained in the acute stress situation.

In the chronic state sample the main predictor for the two stress reactions was SOC that contributed 15 percent to the variance of each variable. The family measure (SOFC) also contributed 3 percent and 4 percent (respectively) to the variance in both equations. For the SPD symptoms, only the level of exposure contributed another 6 percent to the explanation. The demographic characteristic of gender,

Table 2. Hierarchical multiple regression results for Scale of Psychological Distress (SPD) for each stress state

Sample Variable	Chronic state South n = 112			Acute state North n = 303		
	β	R^2 change	F Change	β	R^2 change	F Change
Step I						
(1) Gender	.19***	.10	11.13**	.21**	.04	10.01**
(2) Age	-.14	.01	1.56	-0.1	.00	.53
(3) Place	-.04	.02	2.15	.00	.01	3.00
Step II						
Level of Exposure	.18**	.06	6.88**	.27***	.09	22.62***
Step III						
(1) Sense of Coherence	-.29***	.15	20.73***	-.28**	.08	22.63***
(2) Family Coherence	-.18*	.03	4.22*	-.07	.00	.34
(3) Sense of Community	-0.7	.01	.65	-.08	.01	4.69*
R^2		.38			.23	

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

Table 3. Hierarchical multiple regression results for State Anxiety for each stress state

Sample	Variable	Chronic state South <i>n</i> = 112			Acute state North <i>n</i> = 303		
		β	R^2	<i>F</i> Change	β	R^2	<i>F</i> Change
Step I							
	(1) Gender	.33***	.13	13.17**	.27***	.07	15.48***
	(2) Age	–	.00	.01	–.01	.00	.17
	(3) Place of Residence	.16	.01	.94	–.04	.01	3.15
Step II							
	(1) Level of exposure	.11	.02	2.48	.19**	.04	9.03**
Step III							
	(1) Sense of Coherence	–.15***	.15	18.58***	–.22*	.04	10.11**
	(2) Family Coherence	–.20**	.04	5.37**	–.07	.00	.67
	(3) Sense of Community	.03	.00	.08	–.07	.00	.98
	R^2		.35			.16	

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

which entered in the first step, contributed 13 percent and 10 percent to the variance explanation.

In the acute sample, the level of exposure variable was one of the significant factors in explaining the variance, 4 percent (state anxiety) and 9 percent (SPD). The SOC contributed only 4 percent (state anxiety) and 8 percent (SPD) to the variance explanation. Gender contributed 7 percent (anxiety) and 4 percent (SPD) to the variance.

The sense of community variable did not explain the variance in both samples. This may have been caused by the intercorrelations among the three predictors of SOC, family coherence and sense of community (50). Table 4 presents the intercorrelations among variables in the study separately.

Discussion

The present study investigated stress reactions and coping resources of adolescents in two different situations of stress evoked by missile fire. One situation was characterized by chronic stress (Southern Israel) and the other was typified by an acute,

sudden and intensive war (in Northern Israel). In particular, our study was designed to achieve one major objective of assessment: the contribution of various coping resources – on demographic, personal, family and community levels – in decreasing levels of anxiety and distress of the adolescents in the two stressful situations.

First, we found that the stress reactions of state anxiety of the youth in both groups were relatively high, and can be considered as characteristic responses to the experience of stress (22). In accordance with our hypothesis, in the North, where the youth had been exposed to an acute stress situation, there were significantly higher scores of state anxiety. Significant differences were also found between the two samples in SPD, but not in the hypothesized direction. The physiological symptoms of distress were significantly stronger among the adolescents from the south.

These findings could shed some light on the different reactions that characterize various types of situations. As the physiological symptoms seem to be more severe in a continuous state of stress, the verbal expressions of the state anxiety were more intensive in the acute state. These results could be related to recognitions of anxiety. The more severe physiological symptoms in the chronic state, could indicate more pervasive and potentially detrimental effects of the situation (11). The findings are also in accordance with previous research suggesting that violent incidents may have a lesser effect on mental health than events that represent the reality of day-to-day living in conflictual societies (52).

Table 4. Pearson correlations of variables in the study (*n* = 415)

Variable	1	2	3	4
1. Sense of Coherence	–	.51**	.16	–.09
2. Family Coherence		–	.28**	–.08
3. Sense of Community			–	–.38**
4. Level of Exposure				

** $p \leq .01$; * $p \leq .05$

Another possible explanation could be related to the findings as a result of a kind of social 'permission' for verbal expressions of fear in the chaotic state of the war. As the situation becomes more habitual and chronic, this 'permission' might be reduced.

The gender differences, which we found in both samples, support our hypothesis that female adolescents, compared to their male counterparts, report higher levels of affective reactions following exposure to stress (4). High emotionality may be the result of hormone variations, but also indication of psychological sensitivity during stressful periods. Moreover, research findings indicate that females feel more secure than males to express their anxiety in their social environment (4).

Our research question, however, referred mainly to the comparative question of different patterns of coping resources in reducing stress reactions in the two states. Among the personal and environmental resources examined in our research, SOC was found to be the main predictor of emotional reactions in both situations. Although these findings may be explained in methodological terms (intercorrelations among the moderating predictors), they still suggest that the same personality orientation has potential significance for reducing stress reactions in the two states.

However, and despite this similarity, the more significant findings of this study reside in the different magnitude of variance explanations at each state. The coping resource of SOC had a clearly stronger effect in attenuating stress reactions in the chronic state than in the acute state.

Overall, these findings support our hypotheses regarding the distinction between the two situations. As expected, in the chronic stress, the coping resources, as well as the gender, showed significant explanatory power in predicting the emotional reactions. These results support the salutogenic model, which is based on the assumption of life as continuing and habitual stress. In the acute situation, however, the explanatory power of the coping resources showed a significant decrease. This confirms crisis theories (20), which claim that the intensity of the reactions in the acute situation is mainly influenced by the overwhelming nature of the situation itself.

In our study we referred to only one situational factor – the exposure level of the youth to the rocket attacks. Indeed, this variable was found to be a

meaningful predictor of the stress reactions mostly in the acute situation, and much less among the adolescents who suffered from a chronic state of stress in the South (and from relatively higher levels of exposure). In any case, the magnitude of explanation by this factor was relatively low and other situational factors need to be examined in order to achieve better understanding of these parameters in the acute situation. This might be of special importance among adolescents, who experience a unique developmental period, during which the peer group plays a meaningful role in coping with stress. Thus, reactions to the acute stress seem to be more collective, relating to the situation itself and less affected by personal, and family or community resources (10).

In sum, our findings support the value of developing a model that differentiates between stress situations with the aim of understanding (i) the type of the emotional reactions characteristic to each state, and (ii) the different patterns of factors explaining the stress reactions.

Despite these theoretically suggestive results, the generalizability of this study is limited because of the relatively small and unbalanced number of respondents in the two groups of the samples. Another limitation lies in the selective situations examined. Moreover, casual relationships cannot be inferred from the findings of this report, which is cross-sectional in nature. The reliance on self-report data only is another important limitation.

However, collection of data in a true-to-life distress situation seems to be of special interest. Indeed, conducting the research in a 'natural laboratory' does not enable a simple continuation of the research in different states. Thus, although the results of our study may reflect only the special, unique situations examined here, they still raise theoretical issues that should be investigated in a wider spectrum of stress situations. The findings also raise the need for a framework that would focus on the major domain of the stress situation. Our research results put greater emphasis on the chronic stressor, which was found to have more pervasive effects, than on the dramatic, acute war situation.

Keeping these constraints in mind, our findings still point to a meaningful distinction with some applications to fieldwork. In an acute situation, it seems to be more significant to intervene at the situational level in order to minimize the exposure to stress and damage. The intervention

should move away from focusing on individual or families at risk to developing a strategy that encompasses the total population within the given acute stress state. On the other hand, in chronic situations, personal or family resources seem to influence stress responses by increasing the ability to cope with the situation. In these situations, it would be meaningful to provide intervention on these levels by strengthening their resilience resources.

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