

Coping Resources and Stress Reactions Among Three Cultural Groups One Year After a Natural Disaster

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Abstract The aim of this study was to examine patterns of personal and community coping resources in explaining stress reactions among three cultural groups: Jews, Muslims and Druze, 1 year after the massive forest fire on Mount Carmel, Israel. We first compared the three cultures in their levels of personal and community resources as well as their stress reactions: anxiety, anger and psychological distress. Data on demographics, personal and community sense of coherence (SOC), as well as stress reactions of state anxiety, state anger and psychological distress, were gathered a year after the fire in northern Israel, among adolescents aged 12–18 belonging to three cultural groups. Results indicate that the personal coping resource of SOC was the strongest predictor of ‘stress reactions’ in all cultures. Community SOC, however, played a significant role especially for the collectivistic culture of the Druze. We will discuss the results in the framework of Antonovsky’s salutogenic model and his conviction that the personal resource of SOC functions as a protective or resiliency mechanism in all cultures whose members are in a chronic state of stress. Implementation of the findings for establishing interventions for social workers to promote sense of coherence and increase resiliency of adolescents will be presented as well.

Keywords Adolescents · Stress reactions · Culture · Coping resources

Introduction

On an otherwise uneventful day at the beginning of December 2010, the people of northern Israel on Mount Carmel were confronted with the outbreak of the deadliest forest fire in Israel’s history. The fire killed 44 people, incinerated 32,000 square kilometers of forest, and destroyed countless houses in the Carmel district. Many neighborhoods and a few communities were displaced as a result of the fire, which continued to burn for approximately a week. Two Druze adolescents were accused of throwing the coal after smoking a hookah in the forest and thus causing the fire (<http://www.jpost.com/NationalNews/Article.aspx?id=197956>). A year after the fire, adolescents from three cultures—Jews, Muslims and Druze—located in the Carmel district, were asked to report their personal and community sense of coherence (SOC) as well as their stress reactions of anxiety, anger, and psychological distress. Our goals were: First we wanted to compare the present study’s data with data we collected immediately after the fire (Braun-Lewensohn and Sagy 2011b). Second, we wanted to compare the answers provided by adolescents belonging to the majority group, an individualistic culture (Jews), to those given by members of two minority groups which are collectivistic cultures (Muslim and Druze), in terms of personal and community SOC as well as on stress reactions. Finally, we wanted to determine whether the cultures exhibited similar coping resources to stressful situations.

The Salutogenic Model and Sense of Coherence

This research is based on the salutogenic model (Antonovsky 1987), which posits that resilient people conceptualize the world as being organized understandable and

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prevents them from developing symptoms of trauma. This ability to use these resources has been termed “sense of coherence” (SOC) which has an important role in the way one perceives challenges throughout life. Globally oriented, SOC is an enduring tendency to see the world as more or less *comprehensible* (the internal and the external world are perceived as rational, understandable, consistent, and expected), *manageable* (the individual believes that s/he has the resources needed to deal with situations), and *meaningful* (the motivation to cope and the commitment to emotionally invest in the coping process). Antonovsky (1987), considered a number of cultural dimensions that contribute to the development of a strong SOC. Among them is a homogeneous society—which although socially isolated, is part of the modern world—with historical roots. Both the Druze and Muslim societies in Israel are homogeneous societies, which can enhance an individual’s feelings of consistency and meaningfulness which has significant consequences to load balance in everyday life, thus strengthening SOC. On the other hand, various studies have found that members of minority groups are at a distinct disadvantage in the realm of strong SOC development (e.g., Braun-Lewensohn and Sagy 2011a, b; Glanz et al. 2005; Israelashvili et al. 2011).

Sense of Community Coherence

In addition to the personal resources of an individual one’s community can also serve as a resource during or following disasters (Overstreet et al. 2011). In general, in the wake of stressful and traumatic events, majority and minority groups were found to utilize different mechanisms to improve or ensure their well-being (Dupéré and Perkins 2007). The characteristics unique to minority groups tend to strengthen their sense of community (Birman et al. 2005). Therefore, contemporary research emphasizes the importance of understanding culture to fully comprehend the coping and adaptation mechanisms employed by groups to negotiate stressful situations (Trickett 2009).

In the present research we examined *sense of community coherence* as the community resource. It is a relatively new concept that includes Antonovsky’s components of personal SOC—comprehensibility, manageability and meaningfulness (Alfasi 2011; Braun-Lewensohn and Sagy 2011b). *Comprehensibility* refers to the sense of predictability, safety and security felt by members of the community and the extent to which that community is understandable. A community’s *manageability* expresses its ability to assist its members, via treatment providers and group programs, among others, in times of crisis and distress. Lastly, the higher the level of *meaningfulness* among the members of a community, the more able they are to feel satisfied with, and

challenged and interested by, what the community has to offer them (Braun-Lewensohn and Sagy 2011b; Sagy 2011).

In sum, the present study examined SOC on two levels—personal and communal. Based on data gathered immediately after the fire (Braun-Lewensohn and Sagy 2011b), we hypothesized that the community SOC is a meaningful, collectivist resource for adolescents from all three cultures, but we expected it to be higher and to offer more meaningful explanations of the stress reactions among the Muslims and Druze, whose cultures are more collectivist oriented than that of the Jews in Israel.

Emotional Reactions to Natural Disasters

Research has typically used emotional reactions, such as post-traumatic stress disorder, anxiety, anger, and psychological distress, to evaluate adolescents’ stress reactions to natural disasters. Indeed, the literature to date has shown that individuals, especially minority groups who are exposed to such events are more vulnerable to developing psychological and social problems (Masten and Osofsky 2010; Norris and Alegria 2005; Zhang et al. 2011). Indeed a study on Israeli adolescents immediately after the fire on Mount Carmel has shown that the minority groups (Muslims and Druze) were more vulnerable to symptoms of distress compared to the Jewish majority (Braun-Lewensohn and Sagy 2011b). However, it should be noted that examinations of adolescents a year after they lived through disaster showed that the trauma-related reactions of most of them, regardless of their belonging to ethnic or cultural group had faded away (Kronenberg et al. 2010).

As for *socio-demographic* factors, girls tend to report more stress, anxiety, and emotional symptoms together with somatic complaints, while the problems reported by the boys have more to do with academic conduct and interpersonal relationships (e.g., Kronenberg et al. 2010; Pat-Horenczyk et al. 2007). The effect of age on stress reactions by adolescents during or following the stressful event is not clear. Although age effects are complex, in most cases it appears to be more significant factor with younger children, who tend to exhibit more severe psychopathological reactions than older children or adolescents (Masten and Narayan 2012). However, the increased societal awareness typical of older adolescents may influence how they interpret and negotiate stressful experiences, thereby causing them to report more stress reactions (e.g., Braun-Lewensohn et al. 2010a).

The Cultural Groups of the Study

Israel is a culturally diverse society whose majority group consists of Jews and with number of minority groups

constitute about 25 % of the state's population. Among the minority groups, 84 % are Muslims and only 8 % are Druze. The division between the state's Jewish citizens and its minority groups is reflected in religion, culture, national identity, and socioeconomic status, to name but a few aspects (Statistical Bureau 2010).

Jews

Overall, Jewish society is considered a 'Western,' individualistic society (Sagy et al. 2001). However, diversity in Israel is expressed not only between the variety of ethnicities that constitute the country's overall population, but also within the Jewish majority, a large proportion of whose members immigrated from outside Israel. For example, more than 30 % of the Jews immigrated to Israel from other places around the world, and a third of the population defines itself as 'traditional' while another third is religious or very religious (Bistrov and Sofer 2010).

Muslims

Arab Muslims in Israel are an ethnic, religious, linguistic, cultural, and national minority. Although today they are, in general, more exposed to the "outside world" and are becoming more modernized, they are still a collectivist, traditional society (Sagy et al. 2001). They share language, culture, identity, history, collective memory, narratives, and loyalty with Palestinian nationalism and pan-Arabism. In the eyes of the Jewish majority and the Jewish state, therefore, this minority group is potentially hostile because they are part of the Arab world, which includes the Palestinian people, and as such, they constitute an inassimilable minority (Smootha 2010).

Druze

Since they account for <2 % of Israel's population, the Druze are a minority within the minority. Although they share the Arab language and some aspects of Arab culture with the Arab Muslims, they do not identify with the Arab Palestinian narrative, thereby conferring upon them a unique status in the Israeli state and among its citizens: they are loyal to the state of Israel and to their own community, and accept their standing as a minority group devoid of sovereign power (Nisan 2010). Like other minorities, they have also been changed by the forces of modernity, but they have preserved their special traditions and culture. Overall, this group is considered more similar to Jews than are Israeli Muslim Arabs (Haddad 2002; Shechtman et al. 2003).

In accordance to the findings in the literature review, we hypothesized that:

1. Overall, a year after the fire the different stress reactions are expected to decline in all groups (Kronenberg et al. 2010). Furthermore, no changes are expected in personal and community sense of coherence as they are considered a stable construct (Antonovsky 1987; Eriksson and Lindström 2005).
2. Members of the Jewish majority will have fewer symptoms of distress and stronger personal SOC (Braun-Lewensohn and Sagy 2011b) while members of the more collectivist minority cultures will exhibit the strongest community SOC (Braun-Lewensohn and Sagy 2011b).
3. Gender will affect reaction levels of stress with boys being more resilient (Pat-Horenczyk et al. 2007). As for age, we do not specify a direction because of inconsistent results in previous studies (Braun-Lewensohn et al. 2010a, b; Masten and Narayan 2012).
4. Personal SOC will be linked to fewer symptoms of stress and will have a protective effect (Eriksson and Lindström 2006) and community SOC is expected to be linked to fewer symptoms of stress only among the collectivistic cultures (Braun-Lewensohn and Sagy 2011b). Thus, we hypothesize that the link between personal and or communal coping resources and 'stress reactions' will vary among the three cultures.

Method

Participants

This study was comprised of a sample of 1,143 Israeli adolescents aged 12–19 years, $M = 15.89$, $SD = 1.19$ (Jews— $M = 16.32$, $SD = .98$; Muslims— $M = 15.50$, $SD = 1.20$; Druze— $M = 15.79$, $SD = 1.26$). Age was the only inclusion criterion used. The vast majority (94 %) of participants were born in Israel. Girls accounted for 60.2 % of the sample (Jews—55.9 %; Muslims—67.3 %; Druze—57.8 %). Jews accounted for 36.1 % ($n = 413$); Muslims 32.7 % ($n = 374$), and Druze 31.1 % ($n = 356$) of the sample population. The members of this sample were students at the time and attended five different schools (junior high and senior high schools) in the area of the forest fire in the Carmel district. All participating schools were public "open access" schools (no selective admission procedures).

Socio-economic status of the sample was based on parents' employment status and level of education attained. The majority of the fathers in all groups were employed (Jews 90.3 %, Muslims 83.4 % and Druze 79.4 %). Among the women, however, the majority of Jewish mothers worked outside the home (79.5 %), while only 40.3 and 43.5 % of Muslim and Druze mothers, respectively, were

employed outside the home. When looking at parental educational level, similar gaps emerged. The majority of Jewish fathers (61.3 %) but a significantly lower percentage of Druze fathers (43.4 %) and fewer still Muslim fathers (27.5 %) had pursued either professional training or higher education after high school. These gaps were even greater among the mothers: 70 % of Jewish mothers versus 39.7 % of Druze and only 31.8 % of Muslim mothers had obtained either higher education or professional training after high school.

Procedure

After receipt of the required approval from the Office of the Chief Scientist in the Ministry of Education and from the school principals, questionnaires were distributed to the students, approximately 1 year after the forest fire, during regular class periods by M.A. and Ph.D. students. The questionnaire was translated into Arabic for Muslim and Druze students and was back translated to assure accuracy. No identifying personal data was requested in this research.

Measures

Demographic Background Data that was collected included gender and age; parents' level of education and job status were also collected as indicators for socio-economic status.

Sense of Coherence (SOC) (Antonovsky 1987) was measured using a series of semantic, differential items on a seven-point Likert-type scale with anchoring phrases at each end. High scores indicated a strong SOC. The development of the SOC scale and its psychometric properties is described in Antonovsky's writings (1987, 1993). A systematic review of the psychometric properties of the SOC scale shows that SOC was found to be reliable in various cultures and languages with high internal consistency; its criterion validity with health and mental health is very good and its predictive validity in predicting stress reaction after disasters is also very good (Eriksson and Lindström 2005). In this study, the SOC was measured using the abridged form of the scale (consisting of 13 items), which was found to be highly correlated to the original long version (Antonovsky 1993). The scale includes such items as "Doing the things you do every day is," for which the answers ranged from (1) "a source of pain and boredom" to (7) "a source of deep pleasure and satisfaction." In the present study, the Cronbach alpha ranged from .63 to .79.

Sense of Community Coherence (Braun-Lewensohn and Sagy 2011b). This is a 15-item seven-point Likert-type scale with anchoring phrases at each end. It translates the major themes of Antonovsky's personal SOC—comprehensibility, manageability and meaningfulness—into community resources. The reliability of this measure proved to

be good across cultures (Braun-Lewensohn and Sagy 2011b). Examples of the items are "To what extent do you feel that you have influence in your community", "This community offers interesting alternatives for youth in extra-curricular activities", and "I intend to live in this community in the future". Cronbach alpha for the present study ranged from .75 to .81.

State Anxiety (Spielberger et al. 1970). This is an eleven-item four-point Likert-type scale (1—almost never, 4—almost always). The Hebrew translation proved to be reliably valid and equivalent to the English State Anxiety Inventory (Teichman 1978). Examples of the items are "I feel peaceful", "I am afraid of disasters", and "I am worried". The mean score was used and Cronbach alpha reliability as in other studies (e.g., Braun-Lewensohn et al. 2010b) were good and ranged from .80 to .85.

State Anger (Spielberger et al. 1970). This is a six-item four-point Likert-type scale (1—almost never, 4—almost always). The Hebrew translation proved to be reliably valid and equivalent to the English State Anxiety Inventory (Teichman 1978). Examples of items include "I am angry," "I want to scream at someone," and "I feel frustrated." The mean score was used and Cronbach alpha reliability as in other studies (e.g., Sagy and Braun-Lewensohn 2009) was good and ranged from .74 to .81.

Psychological Distress is a six-item psychosomatic symptom scale on a four point Likert scale (1—never 4—very frequently), referring to frequency of occurrence of familiar psychological symptoms. The scale was developed in Hebrew (Ben-Sira 1979) and has been used in a number of studies, with satisfactory psychometric properties (Ben-Sira 1988). Five of the items were culled from Langer's psychological equilibrium index (Langer 1962): pounding heart, fainting, insomnia, headache, and sore hands (feeling pain in your hands). Some of the symptoms were modified (e.g., stomach ache instead of sore hands), and one item (nervous breakdown) was deleted. In this format the questionnaire included five items. The scale was adapted by Sagy for use with children (Sagy and Dotan 2001). Examples for items are: Have you had headaches, problems falling asleep, etc. In the present study, the Cronbach alpha ranged from .70 to .77.

Results

The first hypothesis was examined by means of t test comparing means and standard deviations of each variable for each cultural group immediately after the fire and a year after the fire (Table 1).

In all groups there was a significant drop in state anxiety. While community SOC was weakened for both Jews and Druze it was strengthened among the Muslims. It is also should be noted that among Jews, state anger was weakened as well.

Table 1 Differences for each cultural group between the first and second study on coping resources and stress reactions

Variables	Jews (1) N ≈ 779		Jews (2) N ≈ 413		t	Muslims (1) N ≈ 330		Muslims (2) N ≈ 364		t	Druze (1) N ≈ 500		Druze (2) N ≈ 346		t
	M		SD			M		SD			M		SD		
	M	SD	M	SD		M	SD	M	SD		M	SD	M	SD	
Sense of coherence (1–7)	4.54	.82	4.60	.84	−1.15	4.10	.90	4.13	.85	−.46	4.42	.88	4.36	.96	.87
Sense of community coherence (1–7)	4.44	.95	4.17	.53	6.05***	4.01	.92	4.15	.58	−2.41*	4.58	.93	4.30	.58	5.30***
State anxiety (1–4)	2.31	.62	2.20	.61	2.64**	2.45	.56	2.36	.55	2.14*	2.25	.56	2.15	.55	2.73**
State anger (1–4)	1.72	.71	1.56	1.57	3.71***	1.98	.72	2.02	.74	−.83	1.97	.72	1.91	.74	1.15
Psychological distress (1–4)	1.98	.66	1.92	.63	1.63	2.27	.67	2.30	.69	−.64	2.14	.64	2.12	.75	.31

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

Table 2 Means and SD among the groups for the study’s variables

Variables	Jews (a) N ≈ 413		Muslims (b) N ≈ 364		Druze (c) N ≈ 346		F		
	M		SD		M			SD	
	M	SD	M	SD	M	SD		M	SD
Sense of coherence (1–7)	4.60	.84	4.13	.85	4.36	.96	27.59*** ^{ab, ac, bc}		
Sense of community coherence (1–7)	4.17	.53	4.15	.58	4.30	.58	6.47*** ^{ac, bc}		
State anxiety (1–4)	2.20	.61	2.36	.55	2.15	.55	12.57*** ^{ab, bc}		
state anger (1–4)	1.56	1.57	2.02	.74	1.91	.74	42.79*** ^{ab, ac}		
Psychological distress (1–4)	1.92	.63	2.30	.69	2.12	.75	30.38*** ^{ab, ac, bc}		

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

^a Jews

^b Muslims

^c Druze

In accordance with the second hypotheses, the three cultural groups were compared based on the study’s variables and a one-way Anova was run (Table 2).

Coping Resources

Overall, Jewish adolescents reported significantly higher personal SOC compared to their minority counterparts. Within the minority groups, Druze respondents reported higher SOC. Community SOC, in turn, was highest among the Druze compared to the two other groups.

Stress Reactions

Overall, Jews reported the fewest symptoms of distress while Muslims were the most vulnerable youths.

To examine the third and fourth hypothesis a hierarchal regression analysis was conducted. In a preliminary stage, factor analysis was run on the three stress reactions (anxiety, anger and psychological distress) and one factor emerged explaining 65.28 % of the variance. The three factors loaded as follows: state anxiety—.84, state anger—.84 and

Table 3 Hierarchal regression for stress reactions

	B	β	SE	t
Gender	.28	.14	.05	5.36***
Age	−.04	−.04	.02	−1.66
Personal SOC	−.60	−.55	.04	−16.78***
Community SOC	−.04	−.02	.05	−.81
Personal SOC X cultural group	.05	.29	.01	3.80***
Community SOC X cultural group	−.04	.27	.01	3.58***
Total R2	.28			

*** $p < .001$

psychological distress—.73. The new ‘stress reaction’ variable was entered as the dependent variable while gender, age, personal SOC, community SOC and interactions of personal SOC X culture and community SOC X culture were entered as independent variables. Results are presented in Table 3.

Results show that while gender had an effect on stress reactions, with boys being more resilient, age had no effect. Furthermore, both interactions were significant, thus separate regressions for each culture were run with ‘stress

Table 4 Hierarchical regression for stress reactions in three cultural groups

	Jews					Muslims					Druze				
	R ²	B	β	SE	t	R ²	B	β	SE	t	R ²	B	β	SE	t
Personal SOC	.20	-.49	-.45	.05	-9.99***	.22	-.51	-.46	.05	-9.94***	.24	-.51	-.58	.05	-9.93***
Community SOC	.00	.01	.00	.08	.07	.01	-.15	-.09	.08	-1.90	.01	-.17	-.10	.09	-1.99*

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

reactions' as the dependent variable and personal and community SOC as independent variables (Table 4).

For all cultures personal SOC seems to be most significant resilient factor, with those having stronger SOC reporting fewer 'stress reactions' symptoms. Community SOC in turn had a less explanatory power and it explained significantly 'stress reactions' among Druze and was marginally significant among Muslims ($p = .059$).

Discussion

This study compared three cultural groups (Jews, Muslims, and Druze) living in the same geographical region of Israel, 1 year after a large forest fire that, in addition to destroying a huge area of land in the vicinity of the study participants, also killed many people. These cultural groups were compared in terms of personal and community salutary factors (personal and community SOC), and stress reactions as expressed by their state anxiety, state anger, and psychological distress. The main focus of the present research was examining the extent and strength of the link between salutary/resilience resources and study participants' stress reactions 1 year after the fire (chronic state of stress).

The first hypothesis compared data from immediately after the fire (Braun-Lewensohn and Sagy 2011b) with data from the present study. As expected from the literature (Kronenberg et al. 2010) a year after the fire there was a significant drop in anxieties in all cultures. On the other hand the fact that anger has dropped only among Jews could be explained with the fact that Muslims on one hand have conflictual relations with the state of Israel (Smooha 2010) which are not related to the fire, thus it is possible such feelings are a result of their daily life. Druze adolescents on the other hand, may identify with those who were accused of causing the fire (<http://www.jpost.com/NationalNews/Article.aspx?id=197956>); and could have been angry due to these accusations. This anger was expressed in their reports and did not diminish even a year after the fire.

As for the coping resources, the fact that personal SOC remained stable is in line with Antonovsky theory (1987), that a personal SOC does not deteriorate due to episodically acute expression of stress but rather remains stable. On the other hand community coherence dropped in the

Jewish and Druze communities. It could be that in time of crisis communities gather and make use of all their resources for the common good (Kaniasty and Norris 1995), therefore adolescents during this time felt strong community coherence. Once the crisis is over and everyone gets back to routine, this perception may erode.

The main aim of this study however, was to explore differences among the three cultures in their ways of coping. Significant differences were observed in personal SOC. Our results, which showed that the majority group reported the strongest SOC, reaffirmed the findings from a line of studies that have consistently shown SOC to be strongest among majority groups (e.g., Braun-Lewensohn and Sagy 2011; Braun-Lewensohn and Sagy 2011b; Glanz et al. 2005; Israelashvili et al. 2011). In our study, the differences found among the minority groups, such as the result that Druze (the smallest minority) reported stronger personal SOC compared to Muslims, were unexpected. Although surprising, this result mirrors the findings of a study done immediately after the fire (Braun-Lewensohn and Sagy 2011b), and the results of both studies could be explained by the cultural background of the Druze and by their unique relationship with the Israeli state (Bsoul 2006; Dana 2003; Nisan 2010). Despite trends of modernization evident among the Druze, their identity and ethnicity are nevertheless perceived, even by their youngest members, as distinct from those of their Muslim or Jewish neighbors. Moreover, the inherently multicultural environment of Israel further enhances Druze identity as a small and separate community (Nisan 2010). Strengthening this small group's identity could explain the strong comprehensibility in the Druze adolescents' SOC. Finally, the acceptance by the leaders and members of this group that they constitute a minority without sovereign power (Dana 2003; Nisan 2010) may also enhance their manageability.

The second salutary factor, community SOC, was strongest among Druze. Once again this result is similar to the findings of the study conducted immediately after the fire (Braun-Lewensohn and Sagy 2011b). It seems that the nature of the very small and closed Druze community, which is based on social and traditional membership in the ethnic group, can explain the results. The results of the exploratory study done immediately after the fire (Braun-Lewensohn and Sagy 2011b) were confirmed in this study,

thus helping to solidify the knowledge about community coherence in these three cultures.

Stress reactions also differed between the groups, with Jews reporting the fewest symptoms of distress, followed by the Druze, and then the most highly stressed youth, the Muslims. These results confirm other research showing that minority groups tend to be ‘at risk’ groups that are correspondingly more vulnerable to develop symptoms of distress when facing disasters or traumatic events (Braun-Lewensohn and Sagy 2011b; Norris and Alegria 2005). The stable cultural background of the Druze and their acceptance of the authority of the Israeli state (Bennett 2006; Litvak-Hirsch and Cicurel 2010) may help protect them from acquiring symptoms of distress.

This study had an additional central aim which related to how the different demographics and the coping resource variables of the study participants can explain the stress reactions in each of the three groups. Girls were more vulnerable, reporting more severe stress reactions compared to boys. The findings replicate those from different studies with regards to gender reactions in similar contexts (e.g., Braun-Lewensohn et al. 2010a, b). As for age, the results of this study continue a recent trend toward the increased complexity of age effects (Masten and Narayan 2012). Therefore, as in other studies (e.g., Braun-Lewensohn et al. 2010a, b), the present work found that older adolescents are not better off than younger adolescents after exposure to stressful and potentially traumatic events. A possible explanation for this observation is that the potential developmental advantage (Masten and Narayan 2012), could be two edged sword. An older and more mature adolescent as part of his/her developmental stage is more aware of betrayal and loss of futures. The fact that this fire was believed to be an ignition by Druze adolescents, could lead to such feelings of betrayal as the cultural group of Druze is perceived by Israelis as embedded in the Israeli society. Such action could lead to feelings and thoughts that they are closer to the Muslims Arabs Israelis who are in a deeper conflict with the Jewish Israeli society.

The most important finding of this study is that personal SOC was the protective and resilient factor most able to explain stress. Although it differed based on culture in the strength of its explanation, it seems that Antonovsky’s conviction that SOC is a cross-cultural concept that functions as a protective factor in all cultures was supported by the present research. Thus, despite the doubt expressed by some researchers as to whether SOC can even develop (let alone fulfill some protective role) in low socio-economic level environments (e.g., Eriksson and Lindström 2005), the present study has shown that even though a minority group may have relatively low socio-economic status and even relatively weak (compared to the majority group) personal SOC, that does not necessarily indicate that SOC is not an

important asset to members of the minority when coping with stressful and potentially traumatic events.

The second coping resource of this study, community SOC, appeared to be an asset only for the Druze—the more collectivist culture. Thus, not only did Druze adolescents have the strongest community SOC, but it was also especially significant in explaining stress reactions for this group. The homogeneous and collective nature of the Druze community (Dana 2003) may maintain the integrity of their culture by, on the one hand, keeping it distinct from the other communities and, on the other hand, taking the necessary responsibilities to integrate into the ‘majority’ society, thus protecting their members better than do the other groups, regardless of whether they are majority or minority.

Practical Implications for Social Workers

The present study shows that 1 year after experiencing the extreme stress of a forest fire, the personal coping resource of SOC provided significant protection for boys and girls as well as for all three cultures. It seems that when facing stressful and traumatic event such as a fire, a major resilient factor in different individualistic and collectivistic cultures as well as across genders is personal sense of coherence. Thus, the results indicate the importance of strengthening this coping resource in adolescents to enable them to better adapt when confronted with stress. Since sense of coherence is still developing and crystalizing during adolescence, it is important to enhance adolescents’ manageability, comprehensibility and meaningfulness; the dimensions which make up the construct of sense of coherence. Whether at the home, school, or community level, it is important that adolescents be included as integral parts of societal and familiar processes which could contribute to their sense of coherence. *Comprehensibility* could be strengthened with promotion of feelings of security and buildup of safe and respectful environments that can promote social relationships (Krause 2011). *Manageability* is the individual belief that s/he has the resources needed to deal with situations which could be increased when the individual feels that their needs are being acknowledged. Therefore, experiencing self-efficacy, balance between overload and under load, acceptance and appreciation of their individual progress and achievements as well as recognition of their actions can enhance this component. Finally, *meaningfulness*, which is the motivational and emotional component of SOC, can be increased and promoted when adolescents feel that they have real potential to influence decisions (Krause 2011).

Increasing and promoting personal SOC via community capacities could also enhance community SOC, thereby increasing the potential that adolescents who belong to the

more collectivist cultures (which rely also on community SOC) will also benefit from another coping resource which could serve as a resilience factor following stressful and traumatic situations.

For clinical therapeutic intervention it should be mentioned that the conceptual framework of 'salutogenesis' relies on asking different questions than of the pathogenic frameworks. For example, as oppose to asking—what is the problem or what cause the problem in salutogenic intervention one will ask—what has influenced your wellbeing or your health. The clinician should work towards enhancing the salutogenic factors of sense of coherence, i.e. working on communication can increase comprehensibility; solution focused worked can increase manageability etc.

Study Limitations

Information about their experiences during the Mount Carmel forest fire was provided only by the adolescents themselves, and therefore, the collected data is subjective and retrospective. In addition, because we lack base rate information about the rates of stress reactions in the adolescents prior to the study period, we cannot with certainty ascribe the mental health outcomes solely to the impact of the examined stressful situation.

Conclusion

In conclusion, this study examined Antonovsky's conviction (1987) that sense of coherence (SOC) is a cross-cultural concept. Elaborated in the present study, this concept was examined on both the personal and community levels to determine whether a person regardless of his/her culture, who has a strong SOC is better able to cope and adjust to stressful situations than a person with a weak SOC. Although levels of personal SOC varied significantly across the groups, SOC had a strong protective effect in all groups. This outcome adds to the knowledge obtained in previous research in which similar results were found when examining acute states of stress immediately after the forest fire (Braun-Lewensohn and Sagy 2011b). Community SOC, in turn, had a protective effect only for members of collectivist culture. We can cautiously conclude, therefore, that it may be possible for different cultures to have their own, culturally-relevant translations for SOC so that it becomes a meaningful protective factor when confronting stressful situations.

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