Salutogenesis and culture: Personal and community sense of coherence among adolescents belonging to three different cultural groups

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Abstract

The salutogenic theory considers sense of coherence (SOC) as a cross-cultural concept (Antonovsky, 1987), meaning that in all cultures and at all stages of coping with a stressor, a person with a strong SOC is at an advantage in preventing tension from being transformed into stress. However, in seeking to understand how the SOC works, it is culture which seems to define which resources are appropriate. The aim of our paper is to examine this theoretical assumption of Antonovsky. Data on personal and community SOC as well as on stress reactions were gathered after the last fire in northern Israel (December 2010) among adolescents aged 12–18 belonging to three cultural groups (Jews, Druze, Muslims). We compared the pattern of personal versus community SOC in explaining stress reactions in the three cultures. Results indicate that personal SOC was the strongest predictor of stress reactions in all cultures. Community SOC, however, played a significant role mainly for Druze. Results are discussed relating to Antonovsky's theory and to adolescence as a 'universal' period, as well as considering the uniqueness of each culture separately.

Introduction

The salutogenic theory considers sense of coherence (SOC) as a cross-cultural concept (Antonovsky, 1987), meaning that in all cultures and at all stages of coping with a stressor, a person with a strong SOC is at an advantage in preventing tension from being transformed into stress. However, in seeking to understand how the SOC works, it is culture that seems to define which resources are appropriate. The aim of this study is to examine this theoretical assumption of Antonovsky against the background of a stressful bush fire. We compare personal and community SOC as well as stress reactions in a variety of cultures: Jews, Muslims and Druze. We further attempt to find out whether and how personal SOC and community SOC function as salutary factors according to cultural rules in explaining stress reactions.

The stressful situation was a huge bush fire which broke out on Mount Carmel at the beginning of December 2010. The fire killed 44 people, destroyed 32,000 km² of forest and caused the destruction of many houses in the Carmel district. Many neighbourhoods and some communities were displaced from their homes as a result of the fire which lasted for approximately a week.

Cultural diversity in Israel (Jews, Muslims and Druze)

Israel is a culturally diverse society which includes several minority groups aside from the Jewish majority which accounts for 75% of the entire state population. Of the minority groups, 84% are Muslim and 8% are Druze (Statistical Bureau, 2010). The division between Jewish citizens and the minority groups is reflected in religion, culture, national identity, and socio-economic status.

Jews

Israel is usually defined by its Jewish citizens as a national and cultural Jewish state. The multicultural nature of Israel, however, is expressed in diversity among the Jewish groups in addition to its minority groups. The majority of the population were born in Israel while more than 30% immigrated to Israel from other places around the world. Diversity also exists in religiosity, with one third of the population defining themselves as 'traditional' and another third as religious or very religious (Bistrov & Sofer, 2010). Overall, the Jewish adolescents in Israel are considered as living in a 'western' individualistic society compared to their

more traditional Palestinian Arab neighbours (Sagy et al., 2001).

Muslims

As a separate ethnic, religious, linguistic and cultural minority in Israel, Muslim Arabs also define themselves as a national minority with loyalty to Palestinian nationalism and pan-Arabism (Smooha, 2010). Their way of life, despite a certain modernization, is still far less modern and secular than the dominant secular Jewish culture, and the majority of Muslims define themselves as religious or very religious (Haj-Yahia, 1994). Moreover, according to recent surveys, most Muslims who are Israeli citizens ask for religious education to be enhanced in public schools and request that religion be separated from the state. Almost half of this minority group (47%) feels discriminated against on religious grounds (Statistical Bureau, 2010). The majority (70%) of Muslim adolescents who participated in the present study live in Furadis, a large village of about 11,000 people, with 75% of youths graduating high school with a diploma, while in Muslim society in Israel as a whole only 56% are eligible for high school diplomas (Statistical Bureau, 2010).

Research among Muslim adolescents in Israel has found them to be more collectivist oriented compared to their Jewish Israeli counterparts, in spite of constant exposure to western cultural influences (Dwairy & Achoui, 2006; Sagy et al., 2001). However, recent research has maintained that being continuously exposed to western culture and to the western values of individualism and liberalism, middle-class Israeli Arabs tend to espouse modern western customs and their behaviour is becoming more democratically orientated (Dor & Cohen-Friedel, 2010).

Druze

The Druze in Israel account for less than 2% of Israel's population; thus, they are a 'minority within a minority'. Druze are described as a closed community with strong interrelations among the group members (Bennet, 2006). They are located in several districts in Israel with 19% living in two villages (Daliat El Carmel and Usfia) in the Haifa district (Statistical Bureau, 2010) where the fire and our research took place. The Druze ethnic source is unclear but through the years they have differentiated themselves from Islam (Rimer, 2007). They share the Arabic language and some aspects of the Arab culture and are characterized as a collectivist society. Like the Muslim minority, they must deal with the forces of modernity, but they still maintain and preserve their special traditions and culture. Strong values among this cultural group are the

extended family and religion. For example, they do not marry non-Druze and there is strong traditional patriarchal rule by the father over his extended family (Dana, 2003). Living in a multicultural society enhances their identity as a small community (Taylor, 1994).

The mainstream among the Druze community consider Israel as their own country with no aspiration for independence. Most of them do not identify with the Arab Palestinian narrative (Amara & Schnell, 2004). They are loyal to both the state and to their community, and accept that they are a minority group without sovereign power (Dana, 2003; Nisan, 2010). They usually enjoy a special status among the non-Jewish populations in Israel (Bsoul, 2006) as part of their special relationship and alliance with the state of Israel. This is true especially for adolescents (Litvak-Hirsch & Cicurel, 2010) who experience the Israeli educational system which emphasizes values of nationality and army service. However, the younger generation also acknowledges suffering the strictures of discrimination (Halabi, 2006). Among Druze students of higher education, the Israeli identity becomes more complex and some question the national part of their identity while emphasizing their ethnic aspect (Halabi, 2006).

The salutogenic model and sense of coherence

Approximately 30 years ago, Antonovsky (1979) suggested a new model and conceptualization in stress research: 'salutogenesis', which means the 'origin of health'. According to this model, people have general resilience resources (GRRs) which can help them conceptualize the world as organized, understandable and meaningful. The general resilience resources represent the motivation and the internal and external resources one can use to cope with stressors and play an important role in the way one perceives challenges throughout life. The ability to use these resources has been termed sense of coherence (SOC) and it differs among people, thus resulting in more or less successful coping and health. SOC is a global orientation, an enduring tendency to see the world as more or less comprehensible, manageable, and meaningful. Given their tendency to perceive the world as meaningful and manageable, individuals with a strong SOC will perceive themselves as having both internal and external resources to deal with different situations (Antonovsky, 1987) and will be less likely to react with symptoms such as anxiety or anger during stressful events (Braun-Lewensohn et al., 2011a).

Antonovsky (1987) considered some cultural dimensions which contribute to development of a strong sense of coherence; among them is a homogeneous

society with historical roots, socially isolated but part of the modern world. Several religious societies can be considered as having such characteristics. These societies enhance feelings of consistency and meaningfulness and balance over and/or under loads, thus strengthening SOC. Studies have shown that adolescents who live in stable religious societies interpret the world as cohesive, predictable and stable (Bjarnason, 1998).

A few studies have explored SOC among majority and minority groups around the world and their results are inconsistent. While some minority groups have a strong sense of coherence similar to majority groups (Ying & Akutsu, 1997), other minority groups have a weaker SOC compared to their majority counterparts (Braun-Lewensohn & Sagy, 2011; Glantz et al., 2005). An explanation for lower SOC among minority groups is related to weaker GRRs, low socio-economic levels or a different perception of the SOC construct (Braun-Lewensohn & Sagy, 2011; Glantz et al., 2005; Salla-Maarit et al., 2006). Additionally, the relationships between SOC and stress were also inconsistent in different cultural groups. In several minority groups SOC was found to have a protective value (Ying & Akutsu, 1997); however, this was not the case for all cultures (Braun-Lewensohn & Sagy, 2011).

Cultural context can shape the type of stressors experienced by the individual and it may affect the appraisal of the event and the choice of coping strategies (Aldwin, 2008). However, Antonovsky claimed that a person with a strong SOC will have the motivational and cognitive bases for transforming his/her potential resources into appropriate coping strategies which may vary according to cultures (Antonovsky & Sourani, 1988). The salutogenic model would predict that, in all cultures, SOC could be considered as a potential protector against stress (Antonovsky, 1987).

Relating to adolescence, studies have indicated that during this stage of life SOC is already moulded and might contribute to an explanation of stress experiences, and might also play a protective role even at a young age, similar to that of the mature adult SOC (e.g. Braun-Lewensohn et al., 2011b, 2011b; Ristkary et al., 2008; Simonsson et al., 2008; Sagy & Braun-Lewensohn, 2009). It seems to us of prime importance to study SOC and coping among adolescents who are in this special developmental stage of their lives, where many structures such as coping are being formed (Frydenberg, 1997).

Sense of community coherence

Studies in the domain of community psychology emphasize the importance of culture to fully understand coping and adaptation in stressful situations (Trickett, 2009). For example, a study which was conducted in multicultural societies found that in white majority communities, informal relationships between neighbours were a protective factor, but this was not the case among minority communities (Dupéré & Perkins, 2007). Furthermore, perceived discrimination by members of the minority group was related to self-identity as a reaction to a discrimination threat (Birman et al., 2005), leading to a strengthening of their community.

In our study we examined sense of community coherence which includes the perception of the community with regard to the three components of Antonovsky's concept – comprehensibility, manageability and meaningfulness (Sagy, 2011). We assumed that in all cultures a person who perceives his/her community as consistent, manageable and meaningful will have another resource to rely on when needed. Community comprehensibility relates to resources in the community that advance the sense that life in the community is predictable, safe and secure for adolescents and that the community is a place which is known and comprehended. Community manageability resources are those which can assist adolescents in times of crisis and distress; for example, treatment providers, group programmes run for young people by the Social Services Department, and programmes to prevent dropouts. Lastly, community meaningfulness resources enable adolescents to express and to realize themselves, to feel satisfaction, challenge and interest. This could be the pride of the adolescents in their community as well as a meaningful existence in the place where they live (Sagy, 2011).

In sum, in the present study we seek to examine not only personal SOC as a resource for coping with a stressful situation, but also the community SOC, as a meaningful collectivist resource for adolescents in the three cultures. We expect it to be higher and more meaningful in explaining stress reactions among the cultural groups which are more collectivist orientated (Muslims and Druze) compared to the more individualistic orientated cultural group (Jews).

Stress reactions in different cultures

When considering the literature on the psychological and behavioural effects of disasters on adolescents, a wide spectrum of outcomes is found, ranging from mild stress reactions to a variety of emotional and psychological problems (e.g. Furr et al., 2010; Masten & Osofsky, 2010). It should be noted that although some of the population suffers from such psychological difficulties, the majority of children and adolescents show resilience, cope well and do not suffer major emotional problems as result of stressful events (Zeidner, 2005; Sagy & Braun-Lewensohn, 2009). However, adolescents from minority groups

seem to be more vulnerable to distress following disasters (Norris & Alegria, 2005; Weems et al., 2010; Wickrama et al., 2005). Those who continued to experience disruption and instability after the disaster exhibited higher symptoms in the long run (La Greca et al., 1996). Minorities were also less likely to seek community treatment following disasters, thus increasing their vulnerability (Chavira et al., 2003; Mojtabai & Olfson, 2006). These results emphasize the importance of looking at individuals in their ecological context (Bronfenbrenner, 1977, 1979), which takes into account one's function not only on a personal level but also on other levels such as cultural affiliation. The cultural context could influence not only reactions to crisis but coping and adjusting to the crisis as well.

Research has found a variety of coping resources to be potential mediators between exposure to natural or manmade disasters and stress reactions (Lahad & Ben-Nesher, 2008; Wang & Gan, 2010) among them personal as well as communal resources.

This study aims to compare three cultural groups of adolescents who live in the same geographical location in Israel and who faced a joint stressful situation of bush fire. We compared the majority group (Jews) with two minority groups (Muslims and Druze) in several dimensions. The following are our research questions and hypotheses:

1. Are there differences between the cultural groups in the two coping resources of personal and community SOC, as well as in the different stress reactions − state anxiety, state anger and psychological distress? We hypothesize that while Jews would report higher personal SOC (Braun-Lewensohn & Sagy, 2011; Glantz et al., 2005), Muslim and Druze adolescents will report a stronger sense of community coherence compared to their Jewish counterparts. These hypotheses are based on research among Arab adolescents, finding them to be more collectivist orientated than their Jewish counterparts (Sagy et al., 2001). Being members of minority groups Druze and Muslims are also expected to exhibit more symptoms of anxiety, anger and psychological distress compared to their Jewish counterparts (Norris & Alegria, 2005; Wickrama et al., 2005).

2. What are the relationships between personal SOC, community SOC and the different stress reactions in the entire sample? Overall, we expect a positive relationship between the two coping resources. Furthermore, we expect negative relationships between resources and stress reactions (Braun-Lewensohn & Sagy, 2011; Sagy & Braun-Lewensohn, 2009).

3. Do personal and community SOC explain stress reactions of anxiety, anger and psychological distress

(SPD) in the same way in the three cultures? We expect the two resources to explain stress reactions differently in the three cultures. Among Jewish individualistic orientated adolescents, personal SOC will make the strongest contribution to an explanation of stress while among Muslim and Druze adolescents who are more collectivist orientated, community SOC will be the strongest predictor (Braun-Lewensohn & Sagy, 2011; Dupéré & Perkins, 2007).

Method

Participants

This study comprised a sample of 1609 Israeli adolescents aged 12–18 years M = 15.87 SD = 1.10 (Jews: M = 16.04, SD = 0.99; Muslims: M = 15.56, SD = 1.21; Druze: M = 15.80, SD = 1.14). No other inclusion or exclusion criteria except age were used. The vast majority (95%) were born in Israel. Girls accounted for 56% of the sample (Jews 53.5%; Muslims 58.3%; Druze 59.7%). Students of this sample attended seven different schools (junior high and senior high schools) in the area of the bush fire in the Carmel district. All participating schools are 'open access' (no selective admission procedures). Jews accounted for 48% (n = 779); Muslims 21% (n = 330) and Druze 31% (n = 500) of the sample population.

Socio-economic status of the sample was measured by parental job status and parental education. It was evident that the majority of the fathers in all groups work (80%), while major differences were found in maternal job status. While in the Jewish group 80% of the mothers work, among Druze 40% work, and among Muslims only 30% of the mothers work. When looking at parental education similar gaps emerge. The majority of Jewish fathers (55%) have professional or academic education post-high school graduation, followed by the Druze fathers (48%) and Muslim fathers (29%). Among the mothers, the gaps are even greater − 60% of Jewish mothers have professional or academic education; Druze 38% and Muslims only 26%.

Procedure

After receipt of the required approval from the Office of the Chief Scientist in the Ministry of Education and from the school principals, the questionnaires were distributed to the students during regular class periods by PhD students approximately one month after the bush fire. The questionnaires were administered to the students in their native tongues. They had been translated into Arabic and were evaluated

according to accepted procedure. No identifying personal data was requested in this research.

Measures

Demographic background data was collected relating to gender and age, and parental level of education and parental job status as indicators for socio-economic status. Each student separately reported his/her father's and mother's education on a scale from 1(did not attend school at all) to 5 (academic degree). Additionally, adolescents reported whether their parents were working or not.

Sense of coherence (SOC) (Antonovsky, 1987) was measured using a series of semantic differential items on a 7-point Likert-type scale, with anchoring phrases at each end. High scores indicated 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's writings (1987, 1993). In this study, the SOC was measured by the short form scale consisting of 13 items, which was found highly correlated to the original long version (Antonovsky, 1993). The scale includes such items as: 'Doing the things you do every day is...' with answers ranging from 1 'a source of pain and boredom' to 7 'a source of deep pleasure and satisfaction'. In the present study, Cronbach's alpha was 0.73.

Sense of Community Coherence scale is a 15-item 7-point Likert-type scale with anchoring phrases at each end which was designed for this study. It translates the major themes of Antonovsky's personal SOC – comprehensibility, manageability and meaningfulness into community resources. Examples for items are: 'To what extent do you feel that you have influence in your community'; 'this community offers interesting alternatives for youths in extra-curricular activities'; 'I intend to live in this community in the future'. Cronbach's alpha for the present study was 0.80.

The State Anxiety scale (Spielberger et al., 1970) consists of 11 items on a 4-point Likert scale (1 = almost never, 4 = almost always). Examples of questions are: 'I feel peaceful', 'I am afraid of disasters', 'I am worried'. The mean score was used and Cronbach's alpha reliability was 0.81.

The State Anger scale (Spielberger et al., 1970). consists of six items on a 4-point Likert scale (1 = almost never, 4 = almost always). Examples of questions are: 'I am angry', 'I want to scream at someone', 'I feel frustrated'. The mean score was used and Cronbach's alpha reliability was 0.79.

Psychological Distress is a six-item psychosomatic symptom scale on a 4-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 are culled from Langer's Psychological Equilibrium Index (Langer, 1962): pounding heart, fainting, insomnia, headache and sore hands. The scale was elaborated by Sagy for use in a population of children (Sagy & Dotan, 2001). Some of the symptoms were modified (for example, stomach ache 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 to 4 (1 = never, 4 = frequently). In the present study, Cronbach's alpha was 0.71.

Results

In order to examine the first question and to compare the three cultural groups on the study's variables, one-way ANOVA was run and results are presented in Table I.

Coping resources

Post hoc analyses showed that overall Jewish adolescents reported significantly higher personal SOC compared to their minority counterparts. Furthermore, within the minority groups Druze reported higher SOC. Community SOC was highest among the Druze followed by Jews and lastly by Muslims.

Table I. Means and SD among the groups on the study's variables.

Variables	Jews[a] N ≈ 779		Muslims[b] N ≈ 330		Druze[c] N ≈ 500		
	M	SD	M	SD	M	SD	F
Sense of Coherence (1–7)	4.54	0.82	4.10	0.90	4.42	0.88	21.99*ab,ac,bc
Sense of Community Coherence (1–7)	4.44	0.95	4.01	0.92	4.58	0.93	28.30*ab,ac,bc
State Anxiety (1–4)	2.31	0.62	2.45	0.56	2.25	0.56	7.54*ab,bc
State Anger (1–4)	1.72	0.71	1.98	0.72	1.97	0.72	18.97*ab,ac
Psychological Distress (1–4)	1.98	0.66	2.27	0.67	2.14	0.64	16.34*ab,ac,bc

*p < 0.001.

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Stress reactions

Jews reported fewer symptoms of anger and psychological distress compared to Druze and Muslims. While no differences between the minority groups were observed on anger, Druze reported fewer symptoms of psychological distress compared to Muslims. As for anxiety, no differences were observed between Druze and Jews, while the highest level was reported by Muslims.

The second question was answered by a correlation matrix of all study variables (Table II).

Overall significant relationships in the expected direction were found between the two coping resources, personal and community SOC, as well as between the two coping resources and the different stress reactions.

To answer the third question we ran multiple hierarchal regressions for each of the outcome scales with the two coping resources as well as with interactions of personal SOC X cultural group and community SOC X cultural group (Table III).

Results show that personal SOC was the most important factor in explaining each of the outcome scales. Community SOC was significant in explaining both anger and psychological distress; its magnitude, however, was low. The only significant interaction effect was personal SOC X cultural group on psychological distress. Thus, we decided to run a separate regression for each cultural group. In the regression, we included both personal and community SOC because of multicollinearity among these variables (Table IV).

Results show that in spite of being significant in all groups, personal SOC was strongest in its contribution for the Jewish group compared to both Muslims and Druze. Community SOC, in turn, was significant in its explanation of SPD for Druze only.

Discussion

Our study aimed to compare three cultural groups (Jews, Muslim, Druze) living in the same geographical area in one country, against the backdrop of a stressful bush fire. We compared these cultural groups on personal and community salutary factors (personal and community SOC) as well as on stress reactions of state anxiety, state anger and psychological distress. Furthermore, we examined the way these salutary resources were protective following the fire.

Our first question revealed differences in the salutary resources of personal and community SOC among the three groups. Personal SOC was strongest among the majority group (Jews) followed by the Druze and lastly by the Muslims. Previous studies have shown sense of coherence to be stronger among majority groups (e.g. Braun-Lewensohn & Sagy, 2011; Glantz et al., 2005). Thus, it is not surprising to find these results also in the present study. However, the gap between the Druze and Muslim groups is more puzzling since the Druze are not just a minority group but also a 'minority within a minority'. This result could be explained by the groups' cultural background as well as their relationships with the Israeli state. In spite of the winds of modernity, Druze identity and ethnicity are perceived even by youths as different and separate from their Muslim or Jewish neighbours. Moreover, living in such a multicultural environment enhances the Druze identity as a small and separate community (Nisan, 2010), which could explain strong comprehensibility as part of sense of coherence.

Secondly, Druze in Israel hold a special place and identity and are treated by the Jewish majority with more respect and equality since they are perceived as loyal, serve in the army, do not perceive themselves as part of the Palestinian narrative and do not aspire to be a sovereign power (Dana, 2003; Nisan, 2010). This is especially true for adolescents (Litvak-Hirch & Cicurel, 2010) who are socialized through the Israeli education system which, in addition to emphasizing their special ethnic roots, also emphasizes values of Israeli nationality and the importance of serving in the army (Halabi, 1996). The Muslims, on the other hand, have been in constant conflict with the State of Israel and during the last decade, this has strengthened their Islamic Palestinian identity. These tendencies enhance hostility between the majority group of Jews and the minority group of Muslims (Smooha, 2010). The different relationships of these two groups with the State of Israel and the Jewish majority could lead to the differences we have found in personal SOC. For Muslim adolescents, the conflictual situation of living in a state which they oppose, could lead to more identity confusion and to result in less comprehensibility and manageability.

The second salutary factor of community sense of coherence (SOC) was the strongest among Druze, even stronger than among the Jews, and the weakest among the Muslims. It seems that the very small and closed community of Druze, which is based on social and traditional membership in the ethnic group, can explain the results.

Table II. Correlation matrix of study variables.

	1	2	3	4	5
Personal SOC	1	0.30*	−0.27*	−0.32*	−0.40*
Community SOC		1	−0.11*	−0.18*	−0.16*
State Anxiety			1	0.58*	0.29*
State Anger				1	0.31*
Psychological Distress					1

*$p < 0.001$; N ≈ 1609.

Table III. Hierarchal regression for state anxiety, state anger and SPD.

	State Anxiety					State Anger					Psychological Distress (SPD)				
	R^2	B	β	SE	t	R^2	B	β	SE	t	R^2	B	β	SE	t
Personal SOC	0.07	−0.18	−0.27	0.02	−11.00**	0.10	−0.26	−0.32	0.02	−13.37**	0.16	−0.30	−0.40	0.02	−17.10**
Community SOC	0.00	−0.02	−0.03	0.02	−1.37	0.01	−0.07	−0.09	0.02	−3.71**	0.01	−0.04	−0.05	0.02	−2.19*
Personal SOC X cultural group	0.00	−0.01	−0.02	0.02	−0.28	0.00	0.00	0.00	0.02	−0.01	0.01	0.04	0.12	0.02	2.19*
Community SOC X cultural group	0.00	0.00	0.00	0.02	−0.06	0.00	0.00	−0.01	0.02	−0.17	0.00	−0.03	−0.08	0.02	−1.34

*$p < 0.05$;
**$p < 0.001$; $N \approx 1609$.

Stress reactions to the fire were also found to be different among the three groups. State anger and SPD were lowest among Jews, followed by Druze, while the highest levels were found among Muslims. Anxiety was also the highest among Muslims. These results confirm other research in which minority groups tend to be more vulnerable to symptoms of distress when facing stressful situations such as disasters (Norris & Alegria, 2005). Here, once again, it is possible that the stable cultural background of the Druze protects them from symptoms of anxiety and distress. For young Muslims, in turn, being a minority with confused identity (Smooha, 2010) could enhance feelings of stress not only in times of natural disaster such as fire, but also routinely.

The last question related to an explanation of stress reactions by the two salutary factors. As previous studies have suggested, sense of coherence was expected to be a strong protective factor (e.g. Braun-Lewensohn et al., 2011a; Sagy & Braun-Lewensohn, 2009) among the three groups. However, its strength of explanation fluctuates. Personal SOC was found to have the weakest power to explain stress reactions among Muslim adolescents. It should be noted that questions regarding the protective role of SOC for those with a weak SOC have been aroused in previous studies (e.g. Braun-Lewensohn & Sagy, 2011; Eriksson & Lindström, 2006). It appears that SOC can be a better protective factor among strong populations. Since Muslims had the weakest SOC, this could have also led to the weakest explanation power. A different explanation could be related to the Muslim culture as a more collectivist, traditional and religious one. These characteristics of the culture might lead to the development of other coping resources rather than SOC, which is a more

western orientated asset (Braun-Lewensohn & Sagy, 2011).

The collectivist resource of community SOC explained state anger and SPD when examined in all groups together. However, when SPD was examined for each culture separately, contrary to personal SOC, which was salutary for all cultures, community SOC was a salutary factor for the Druze only. Thus, Druze adolescents not only had the strongest community SOC, but this was also especially significant in explaining stress for this group. Being a small community with strong feelings of coherence protects its members from symptoms of distress more than in the two other groups. Moreover, it could be that, in a different way from the Muslims, the Druze have a unique identity which is based on a strong value system on the one hand and acceptance of the Israeli State on the other hand (Dana, 2003; Nisan, 2010). This identity enables them to have their own unique resources such as their community.

Finally, we would like to address our question considering sense of coherence (SOC) as a cross-cultural concept. As stated, Antonovsky (1987) considered SOC to be an explanatory factor in all cultures and at all stages of coping with a stressor. A person with a strong SOC, he claimed, is at an advantage in preventing tension from being transformed into stress. In the present study we examined three groups from different cultures in an acute state of stress immediately after a huge bush fire. First, we found significant differences in the levels of SOC across the groups, with the majority Jewish group having the highest SOC level. In spite of these differences, however, we can cautiously conclude that it is possible for various cultures to have their own translations for

Table IV. Hierarchal regression for SPD 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	0.16	−0.33	−0.41	0.03	−12.19***	0.12	−0.26	−0.35	0.04	−6.67***	0.13	−0.26	−0.36	0.03	−8.45***
Community SOC	0.00	−0.02	−0.03	0.02	−0.86	0.00	0.01	0.01	0.04	0.23	0.02	−0.09	−0.13	0.03	−2.91**

**$p < 0.01$; ***$p < 0.001$.

personal sense of coherence so that it becomes a meaningful protective factor. Regarding other dimensions of sense of coherence, such as the community sense of coherence, we found this factor to reinforce especially members of one culture in coping with the stressful situation.

Study limitation

One should take into account that reports were provided by adolescents only and therefore the collected data is subjective and retrospective. In addition, since we do not have base rate information regarding the rates of stress reactions 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 sum, our conclusion regarding salutogenesis and culture is equivocal and much more complicated than Antonovsky's conviction. Our results indeed support the notion that SOC is a significant protective factor in all cultures when facing a stressful situation. However, levels of SOC are quite different for various cultural groups and explain stress reactions differently.

Thus, Antonovsky's notion that sense of coherence is a cross-cultural concept and contributes to resilience in all cultures and for all situations still has to be clarified in future research. Further longitudinal investigations could also shed light into causality attributes of the two important salutary factors in an intercultural perspective. The results of such studies can assist policy makers, educators and health practitioners in developing special intervention programs which address the uniqueness of each cultural group.

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