

*Full Length Research Paper*

# **Vulnerabilities to depression and sense of coherence among Bedouin Arab and Jewish students: A test of a mediation model**

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Accepted 28 December, 2011

**This study examined cultural differences in self critical and dependent vulnerabilities to depression and sense of coherence as predictors of depression among Bedouin Arab and Jewish university students in Israel. In addition, this study explored the role of sense of coherence on the self-criticism-depression association and the dependency-depression association. 120 Bedouin Arab and 130 Jewish university students completed the depressive experiences questionnaire (DEQ), the center for epidemiological studies depression scale (CES-D), sense of coherence scale (SOC), and a questionnaire on demographic variables. Bedouin Arab students presented higher level of self-criticism and depression, as well as lower sense of coherence scores. There were no differences in the dependency scores. Sense of coherence partially mediated the association between self-criticism and depression within both groups of students. These results suggest that different cultural contexts associate with different levels of vulnerability to depression and resilience. However, the general mechanisms involved in the formation of depressive states seem to be similar across cultures.**

**Key words:** Self-criticism, dependency, sense of coherence, Bedouin Arab, collectivism, individualism.

## **INTRODUCTION**

Two seemingly opposite approaches have characterized research in the areas of personality, stress, and health: the pathogenic approach, which focuses on how personality factors predispose an individual to a variety of negative health outcomes (Brown and Harris, 1978; Monroe and Simons, 1991) and the salutogenic approach, which focuses on the origin of health and the factors that help an individual to maintain physical and psychological well-being in the face of stress (Antonovsky, 1979, 1987). Recent studies have underscored the effects of cultural differences on the roles played by personal vulnerabilities and resilience factors on individual level of depression (Abu-Kaf and Priel, 2008; Ying et al., 2001). In this paper, we propose that these two approaches may be complementary,

representing distinct aspects of an individual's functioning in a given culture. Moreover, the relationships between pathogenic and salutogenic factors may add to our understanding of the differences in depression levels in collectivistic versus individualistic cultures.

### **The pathogenic-vulnerability model**

Specific personality traits have been traditionally conceptualized as diatheses for depressive disorders (Monroe and Simons, 1991). Individuals who were constrained by these personality vulnerabilities were expected to experience depression in reaction to disruptive life experience (Brown and Harris, 1978). Blatt et al. (1976) proposed that normal developmental processes are characterized by an interweaving of self-definition and relatedness. Overemphasis on self-definition or relatedness motives was assumed to result

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in dysfunctional cognition and contribute to Self-criticism and dependency, which are both indicators of susceptibility to depression. Overemphasis on the relatedness dimension—Dependency—is characterized by an excessive preoccupation with the availability of love, nurturance, and support, and by a heightened need for closeness and interpersonal support. Exaggerated preoccupation with issues of self-definition—Self-criticism—is associated with harsh standards, heightened strivings for achievement and success, and a marked need for acknowledgment. Extensive longitudinal and cross-sectional research in clinical and nonclinical samples has indicated that Self-criticism is associated with low self-esteem (Zuroff et al., 1983), feelings of shame (Gilbert et al., 2004; Gilbert and Miles, 2000), excessive worry (Stoper, 1998), intense negative and less positive impression (Mongrain, 1998), a tendency to assume blame (Dunkley et al., 2003), and poor affiliative relationships with others (Mongrain et al., 1998). In addition, individuals with higher level of Self-criticism respond to stress with feeling of guilt, self-blame, and hopelessness, and they usually use maladaptive coping strategies (Blatt, 2004; Dunkley, 2000; Dunkley et al., 2003). These individuals generate stressful life events involving rejection and confrontation (Priel and Shahr, 2000; Dunkley et al., 2000), and they do not elicit social support (Mongrain, 1998). On the other hand, dependency associates with a positive orientation to others, the capacity for giving trust in a relationship, greater intimacy in close relations (Fichman et al., 1994; Wiseman, 1997), and with the seeking of social support (Priel and Besser, 1999).

### The salutogenic model

The term salutogenesis, coined as the antonym of pathogenesis, is meant to emphasize health promotion and disease prevention rather than the origin of disease (Antonovsky, 1987). The centre of focus within the salutogenic model is the sense of coherence. Sense of coherence (SOC) refers to an enduring attitude and it measures how people view life, as well as how they identify, use, and reuse their general resistance resources to maintain and develop their health in the face of stressful situations.

A person with a well-developed SOC is assumed to have a belief in the adequacy of his or her coping resources and personal faith in the efficacy of existing coping skills (Hart et al., 2006). There is a strong relationship between factors measuring mental health such as optimism, satisfaction, hardiness, learned resourcefulness, locus of control, mastery, self esteem and self efficacy, acceptance of disability, and social skills. SOC is strongly and negatively associated with anxiety, anger, burnout, demoralisation, hostility, hopelessness, and perceived stressors (Cohen and

Dekel, 2000; Eriksson and Lindstrom, 2006; Pallant and Lae, 2002; Ying et al., 1997). SOC is strongly and negatively related to perceived depression (Matsuura et al., 2003; Eriksson and Lindstrom, 2006). The stronger the SOC, the less are the symptoms of perceived depression. Based on confirmatory factor analysis and structural equation modeling, findings show that SOC is a mediator between stress and mental health (Cohen and Savaya, 2003). Evidence for a mediating effect of the SOC was found among Finnish female employees (Kivimaki et al., 2002). Low SOC was found to be a psychological background factor partially associated with the adverse effect of hostility in ill health.

### Culture as the backdrop for pathogenesis and salutogenesis

While most studies on the dependency-self-criticism model have been conducted on Western populations, this model has also been found to be useful for the study of cultural differences. For instance, Bedouin Arab students, belonging to a more collectivistic culture, were found to have higher levels of self-criticism and depression than their Jewish counterparts, who belong to a more individualistic culture. Moreover, culture had a moderating role on the self-criticism-depression association. No cultural differences were found concerning dependency or the dependency-depression association. These findings imply that self-criticism is a severe vulnerability factor to depression in both cultures, but especially in more collectivistic cultures.

A study on cultural variations in SOC reported that older Japanese-American women had lower level of SOC than older Anglo-American women, possibly because of their minority status (Milanesi et al., 1994). Ying et al. (2001) found that Asian-American students reported SOC scores that were significantly lower than those of white African-American, Hispanic, and multiracial students, despite their high level of academic achievement.

Students belonging to ethnic and racial minorities confront enormous difficulties, as they often experience marginalization and may find themselves, possibly for the first time, in a cultural context different from their own (Jackson, 1998; Nishimura, 1998; Renn, 2000; Swim et al., 2003; Torres, 2003; Woo, 1997).

A possible explanation for the findings from these cultural studies of SOC and the relationship between self-criticism and depression relates to the different attitudes toward achievement that characterize the different cultures studied (Nelson and Shavit, 2002) and may affect the level of resilience factors like SOC. Specifically, more collectivistic cultural contexts may not allow the development of resilience in situations in which higher achievement is required. In more individualistic societies, achievement is conceptualized at the individual level in a way that emphasizes interpersonal competition and

hierarchies. Collectivist cultures, however, stress in-group obligations or sociability at the expense of personal achievement. These cultures may make more achievement-oriented individuals' such that changes look less comprehensible, their motivations may seem less meaningful, and they may have fewer support resources available to them in stressful situations.

Zaidner (1986, 1992) found that Arab students are more stressed than their Jewish counterparts and perceive various aspects of academic life as more threatening and stressful. Moreover, previous research conducted by Pines et al. (2003) in Israel, reported that Arab students more often than Jewish students, significantly, would turn to "no one" for support.

Collectivistic cultural contexts may consequently be seen as underscoring the effects of self-critical personality which is vulnerable to depression while concomitantly reducing individuals' SOC.

## THE PRESENT STUDY

In the present study, we approach the pathogenic and the salutogenic models as complementary within the context of two cultures, Bedouin Arab and Western-Jewish. These cultures differ in their respective collectivistic versus individualistic emphasis. Bedouin Arabs belong to the Arab minority in Israel. Arab society comprises 18% of the state's citizenry. Their culture is highly collectivistic, patriarchal, and authoritative (Barakat, 1985; Haj-Yahia, 1997). The relationship of the Bedouin Arab individual to his or her family is characterized by interdependence, with the result that people are less individualized than the typical Westerner (Dwairy, 2004). During the last decade, more Bedouin Arab families encourage their young members to get high education as a way of preventing poverty and unemployment. This trend is not accompanied with developments and cultural changes that may help these students with their high academic stress. These students suffer from higher levels of self-criticism and depression symptoms (Abu-Kaf and Priel, 2008). It is important to point out that Bedouin Arab university students may plausibly be more achievement-oriented than other Bedouin Arab youth who choose not to enter institutions of high learning.

During the half century of Israel's existence as an independent nation, the Israeli Jewish identity has shifted from a collectivist identity to a more diversified and individualistic identity with a commitment to social solidarity and an emphasis on Jewish identity (Ohana, 1998). In comparison to Bedouin Arab society, Jewish society tends to be more modern and Western. The Israeli Jewish family is a nuclear system characterized by democratic family relationship with relatively permissive parental control (Davids, 1983; Mikulincer et al., 1993). Jewish students are part of the majority culture that is more individualistic, less authoritative and emphasizes separation, independence, personal development, and

achievement more than the Bedouin Arab society (Earley, 1993; Hofstede, 1991). Moreover, Arabs differ from the Jewish majority in language, religion, and other traits (Al-Haj, 1995).

The present study's main assumption is that levels of dependency and self-criticism, as well as levels of SOC are affected by personal characteristics and experiences, as well as by cultural values and culturally determined experiences. In more collectivistic culture, vulnerability to Dependency has less deleterious effects in a collectivistic culture than in an individualistic culture. Therefore, we would expect to find a weaker association between dependency and depression in this context than in a more individualistic, Western context. Highly individualistic culture foster individuals' motivations to confirm positive, self-defining attributes of oneself, such as competence and efficacy (Kitayama et al., 1997). This would imply greater tolerance for higher levels of self-critical vulnerability among individuals within individualistic cultures than among individuals from more collectivistic backgrounds.

Empirical findings repeatedly show that self-criticism must be considered a more severe vulnerability factor (for depression) than dependency (Blatt et al., 1995; Gilbert, 1992; Gilbert et al., 2004; Santor et al., 2000; Vettese and Mongrain, 2000). A possible explanation for these findings is that whereas self-criticism generates risk factors (stressful events and avoidant coping strategies) and reduces the effects of protective factors (social support and active coping strategies (Besser and Priel, 2003; Dunkley et al., 2000; Dunkley et al., 2003; Gilbert et al., 2004). Dependency generates both risk and protective factors. Dependency has been found to predict interpersonal problems, but has also been associated with high levels of social support (Fichman et al., 1994; Wiseman, 1997). On the basis of these studies, we assumed that SOC plays a mediating role in the relationship between self-criticism and depression. Moreover, since previous research (Abu-Kaf and Priel, 2008) has shown very high level of self-criticism and depression among Bedouin Arab participants, we assumed that the mediating effects of SOC may be especially important in that population.

The following hypotheses were tested in this study:

- i. First, consistent with past research, it was expected that Bedouin Arab students would have higher level of self-criticism and similar level of dependency when compared with their Jewish counterparts. In addition, they were expected to have lower SOC scores than Jewish students.
- ii. Second, it was hypothesized that both self-criticism and dependency would be negatively associated with SOC. Stronger associations were expected for self-criticism.
- iii. Finally, it was predicted that the association between self-criticism/dependency and depression would be mediated by SOC.

**Table 1.** Motivation to participate by culture.

Motivation to participate	Culture		Total
	Bedouin Arab	Jewish	
Receiving course credit	57	69	126
Volunteering	63	61	124
Total	120	130	

## METHOD

### Participants

250 participants, 120 Bedouin Arab students (35% men and 65% women) with a mean age of 20.87 years ( $SD = 1.92$ ) and 130 Jewish students (30% men and 70% women) with a mean age of 22.94 years ( $SD = 1.63$ ), all from Ben-Gurion University in southern Israel took part in the study. Preliminary analyses indicated a significant age difference between the two samples, ( $F(1, 250) = 19.33, p < 0.01$ ). The Jewish students were older than the Bedouin Arab students. Accordingly, age was covaried in statistical analyses wherever relevant.

Participants received course credit for either participating (50.5%) or volunteering (49.5%). We did not find any statistically significant relationship between motivation to participate and culture,  $\chi^2(1, 249) = 0.06, ns$  (Table 1). Moreover, we did not find any statistically significant relationship between motivation to participate and gender,  $\chi^2(1, 249) = 0.12, ns$ .

### Measures

#### *The depressive experience questionnaire (DEQ)*

The DEQ (Blatt et al., 1976) is composed of 66 items assessing self-criticism and dependency, which are rated on a Likert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree). The self-criticism factor assesses preoccupation with self-evaluation, perfectionism, achievement, and need for self-esteem (for example "If I fail to live up to expectations, I feel unworthy"). The dependency factor evaluates the tendency to seek close, nurturing, and protective interpersonal relations (for example "without the support of others who are close to me, I would be helpless"). The validity of the DEQ has been demonstrated in a variety of contexts (Flett et al., 1995; Zuroff et al., 2004).

The Arabic and Hebrew versions of the DEQ were found to possess reasonable reliability and validity (Abu-Kaf and Priel, 2008; Priel and Besser, 1999; Priel and Shahar, 2000; Wiseman, 1997). In the present study, the DEQ has demonstrated good internal reliability in both Bedouin Arab and Jewish samples.

#### *The sense of coherence (SOC) questionnaire*

This questionnaire consists of 29 items that measure a respondent's perception of life as comprehensible, manageable, and meaningful (Antonovsky, 1987). Respondents use a 7-point Likert scale, from 1 (strongly disagree) to 7 (strongly agree) or from 1 (strongly agree) to 7 (strongly disagree) at inverse items, to express different levels of endorsement. In over 20 studies, the instrument's Cronbach alpha of internal consistency has ranged from 0.82 to 0.95 (Antonovsky, 1993). The SOC scale has also been tested and found to be reliable and valid across cultures (Bowman, 1996). The Arabic and Hebrew versions of the CES-D

were found to possess reasonable reliability and validity (Antonovsky, 1979, 1987, 1993; Cohen and Savaya, 2003). In the current study, the instrument's alpha internal reliability coefficients were 0.86 for the Bedouin Arab sample and 0.88 for the Jewish sample.

#### *The center for epidemiological studies depression scale (CES-D)*

The CES-D scale is a 20-item inventory of symptoms of depression (Radloff, 1977). Respondents reported on the frequency of symptoms experienced during the past week, using a 4-point Likert scale that ranges from zero (rarely or none of the time; less than once a day) to 3 (mostly or all of the time; 5-7 days). Scores range from 0 to 60, with higher scores indicating higher levels of depression mood and symptoms. The internal reliability of the CES-D has been demonstrated, as well as its concurrent and constructive validity in different cultural context (Mackinnon et al., 1998; Radloff, 1977). The Arabic and Hebrew versions of the CES-D were found to possess reasonable reliability and validity (Ghubash et al., 2000; Priel and Besser, 1999; Priel and Shahar, 2000). The internal reliability of the CES-D scores in the present study was 0.92 in the Bedouin Arab sample and 0.90 in the Jewish sample.

#### *Demographics*

Respondents were asked to report their culture, gender, and age.

#### *Procedure*

After signing a consent form, all respondents completed the questionnaires in their native language (Arabic or Hebrew). The questionnaires were administered in small groups of four to seven participants in a standardized format. The order of presentation of the questionnaires was counterbalanced. The students were informed that they would be filling out questionnaires about their personal views, feelings, and attitudes. After completing the survey, participants were fully debriefed on the purpose of the study.

## RESULTS

After preliminary analyses of sample characteristics, three sets of analyses were conducted. First, we explored the differences between the Bedouin Arab and the Jewish students' scores for self-criticism, dependency, SOC, and depression. Next, we explored the correlations between the two populations' levels of self-criticism, dependency, SOC, and depression. Finally, the roles of SOC in the self-criticism-depression association and the dependency-depression association were examined.

**Table 2.** Cultural differences in vulnerabilities to depression, sense of coherence, and depression.

Variable	Bedouin Arab (n=120)		Jewish (n=130)		F (1, 250)	Eta <sup>2</sup>
	M	SD	M	SD		
Self-criticism	113.87	15.94	105.78	18.03	***8.98	0.07
Dependency	133.96	15.73	130.62	14.97	1.66	0.00
SOC	126.8	17.54	134.11	16.13	4.77*	0.03
Depression	21.22	12.67	14.13	8.32	17.91***	0.06

Note. \*  $p < 0.05$ . \*\*\*  $p < 0.001$ .

**Table 3.** Correlations between the study variables.

Variable	1	2	8	4
1. Self-criticism	1	0.18	-0.70***	0.58***
2. Dependency	0.02	1	-0.27**	0.29***
3. Sense of coherence	-0.62***	-0.24*	1	-0.55***
4. Depression	0.50***	0.14	-0.61***	1

Note. \* $P < 0.05$ . \*\* $P < 0.01$ . \*\*\* $P < 0.0001$  (two-tailed test). Correlations below the diagonal are for the Bedouin Arab group (N = 120) and the correlations above the diagonal are for the Jewish group (N = 130).

### Effects of group differences on the main study variables

A multivariate analysis of covariance (MANCOVA) was conducted with culture as the independent variable and vulnerabilities to depression, SOC, and depression as dependent variables, and age as a covariate. As shown in Table 2, we found significant cultural differences in self-criticism, SOC, and depression. Bedouin Arab students scored significantly higher in self-criticism and depression, but significantly lower in SOC. The Bedouin Arab students' dependency scores were similar to those of their Jewish counterparts.

### Correlations between vulnerabilities to depression, SOC, and depression

As shown in Table 3, the patterns of correlations involving self-criticism and dependency with SOC were similar in the Bedouin Arab and Jewish samples. Self-criticism was negatively associated with SOC ( $r = -0.62$ ,  $P < 0.001$ ;  $r = -0.70$ ,  $P < 0.001$ ) in the Bedouin Arab and Jewish samples, respectively. In addition, dependency was negatively associated with SOC among the Bedouin Arab and Jewish students ( $r = -0.24$ ,  $P < 0.05$  and  $r = -0.27$ ,  $P < 0.01$ , respectively),

The self-criticism factor was positively associated with depression among the Bedouin Arab and Jewish students ( $r = 0.50$ ,  $P < 0.001$  and  $r = 0.58$ ,  $P < 0.001$ , respectively). Cultural differences were found to affect the association of the dependency factor and depression. Dependency was positively associated with depression among Jewish students ( $r = 0.29$ ,  $P < 0.01$ ), but not

among Bedouin Arabs ( $r = 0.14$ , *ns.*). In both culture, SOC was negatively correlated with depression.

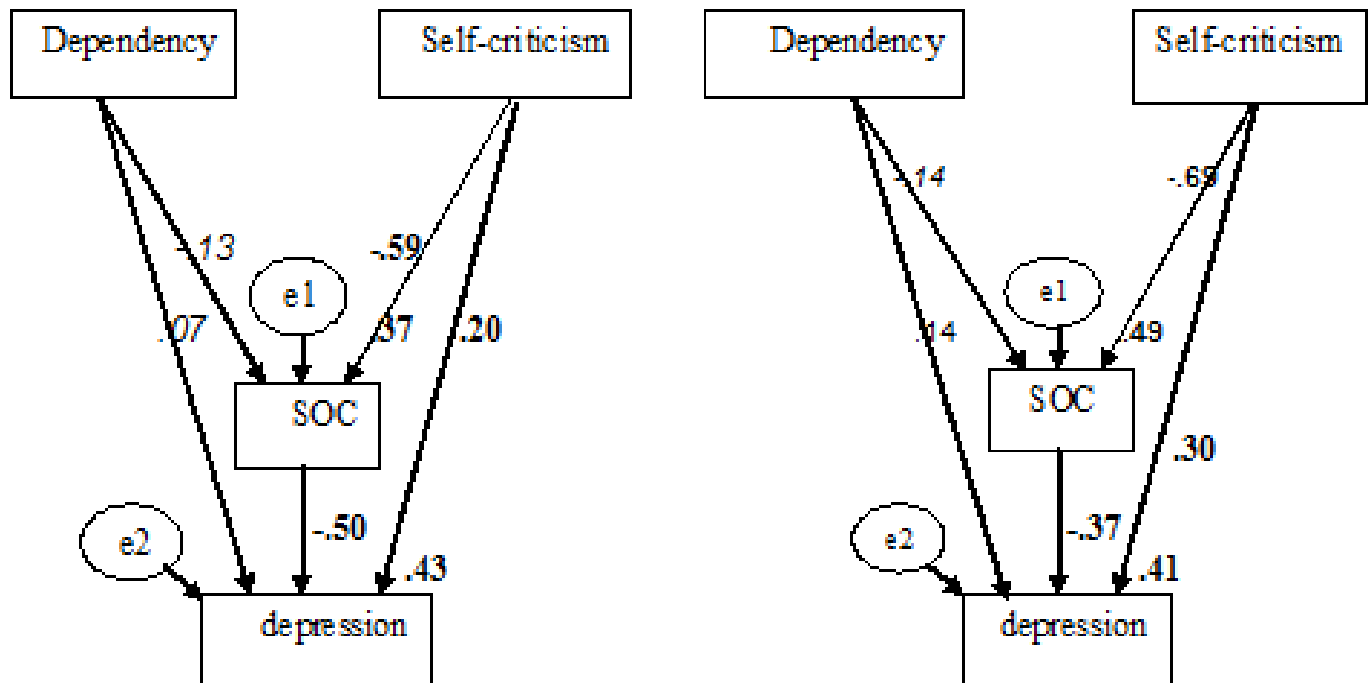
### SOC as a mediator of the effects of self-criticism and dependency on depression

#### Effects of self-criticism and dependency on depression

Following Baron and Kenny (1986) recommendations, we tested for mediation by estimating the combined direct effect of dependency and self-criticism on depression. Zero-order showed a significant positive association between self-criticism and depression among Bedouin Arab and Jewish groups but smaller association between dependency and depression only among Jewish group. First, a regression analysis was conducted with depression as the criterion variable and self-criticism and dependency as the predictors. The specified model accounted for 30% ( $F [2,117] = 11.85$ ,  $P < 0.0001$ ) and 34% [ $F (2,127) = 18.69$ ,  $P < 0.0001$ ] of the variance in depression for Bedouin Arab and Jewish samples respectively. Thus, self-criticism demonstrated a significant direct effect on depression.

#### SOC as a mediator of self-criticism and depression

According to Baron and Kenny (1986) criteria for mediation, the following principle were put together: (1) There must be a significant association between the predictor (self-criticism) and the criterion variable



**Figure 1.** The full direct indirect effect models: the role of SOC in the association between self-criticism and depression and dependency and depression. The figure on the left presents the model for Bedouin Arab participants and the figure on the right presents the model for Jewish participants. Parameters are  $\beta$ s, and bold estimates are statistically significant at  $P < 0.05$ . Bold numbers above the SOC and the depression variables are the  $R^2$ .

(depression), (2) In an equation which includes both the mediator (SOC) and the criterion variable, there must be a significant association between the predictor and the mediator and the mediator must be a significant predictor of the criterion variable. If the significant direct relationship between the predictor and the criterion variable in the equation declines, the obtained pattern effect approaches zero. After including the direct mediator and predictor variables, it is consistent with the mediation hypothesis, and the mediator, although not necessarily exclusive, can be said to fully account for the relationship between the predictor and the outcome (Baron and Kenny, 1986).

### Analysis of mediation

Hierarchical multiple regression (HMR) was used to test a full direct-indirect mediational effect model of the predictor (self-criticism). We entered the mediator SOC (Figure 1). The specified model accounted for 41% [ $F(3,116) = 16.27, P < 0.0001$ ] and 43% [ $F(3,126) = 14.88, P < 0.0001$ ] of the variance in depression for the Bedouin Arab and Jewish groups, respectively. As can be seen in Figure 1, high levels of self-criticism were associated with decreased levels of SOC ( $\beta = -0.59, t = 4.32, P < 0.0001$ ), among the Bedouin Arab group which in turn were associated with increased levels of depression ( $\beta = -0.50,$

$t = 3.72, P < 0.0001$ ). As can also be seen in Figure 1, high levels of self-criticism were associated with decreased levels of SOC ( $\beta = -0.69, t = 5.36, P < 0.0001$ ) among the Jewish group which in turn were associated with increased levels of depression ( $\beta = -0.37, t = 3.58, P < 0.0001$ ). Mediation has occurred when the indirect effect of a predictor through a mediator significantly reduces the predictor's direct effect (Baron and Kenny, 1986). As found in the above analysis, the direct path from self-criticism to depression was significant in Figure 1, however, this path declines but remained significant among the Bedouin Arab group ( $\beta = 0.20, t = 2.21, P < 0.05$ ) and Jewish group ( $\beta = 0.03, t = 2.79, P < 0.05$ ). The drop in the coefficients of the direct path from self-criticism to depression, once the mediator—SOC—was controlled were significant according to Sobel's test (Baron and Kenny, 1986) ( $Z = 2.98, P < 0.05; Z = 2.74, P < 0.05$ ) among Bedouin Arab and Jewish groups. Thus, SOC had a partial mediation effect on the association between self-criticism and depression. The indirect effect of self-criticism on depression, through SOC, do not entirely account for the depression levels of Bedouin Arab and Jewish students. This pattern of findings suggest that self-criticism may affect depression directly, as well as indirectly through decreased levels of SOC. There were no mediation effects for dependency, since dependency was not associated with depression in the Bedouin Arab group ( $\beta = 0.14, ns.$ ) and did not have a

significant direct effect on SOC in either group ( $\beta = 0.07$ , ns;  $\beta = 0.14$ ,  $p < 0.07$ , respectively).

## DISCUSSION

Within two different cultural contexts, we approached the pathogenic and the salutogenic models as complementary. We were particularly interested in the mediating effect of SOC on the association between self-criticism and depression among Bedouin Arab and Jewish university students.

### Cultural differences in self-criticism, dependency and SOC

Our findings confirm the first hypothesis: self-criticism scores were higher among the Bedouin Arab students and we found no difference in the dependency scores. In addition, the Bedouin Arabs' SOC scores were lower than those of the Jewish students. These findings support previous reports concerning cultural differences in both vulnerabilities to depression and SOC (Abu-Kaf and Priel, 2008; Milanese et al., 1994; Ying et al., 2001).

Bedouin Arab students had higher levels of self-criticism. Kitayama et al. (1997) found that individuals from collectivistic cultures are sensitive to negative self-relevant information regarding their own shortcomings or any failure to meet the standards of excellence accepted in their given social unit. Bedouin Arab university students, as members of a cultural minority, may have more "reflected shame" than Jewish students and may be very conscious of the possibility that one's failure might bring shame to one's family/community (Gilbert, 1998; Gilbert et al., 2004).

Dependency scores in the two groups were similar. This result is inconsistent with the assumption that a collective identity requires a relatively high level of dependency. Dwairy (2004) reported that Bedouin adolescents experience lower levels of individuation and higher levels of separation, anxiety and expectation of rejection. This finding may be related to the possibility that Bedouin Arab youth that choose to pursue university studies are less dependent individuals, who are more comfortable leaving their familiar environments.

The finding that Bedouin Arab students have lower levels of SOC strengthens the claim that belonging to a cultural minority affects SOC (Milanese et al., 1994; Ying et al., 2001). These differences may be due to the feeling that belonging to the Arab minority affects the extent to which an individual perceives that the requisite resources for successfully coping with life's challenges are available. Our findings are consistent with previous research, which found that a sense of not having control over the future is prevalent among minority groups in Israel (Seginer and Halabi, 1991).

### Associations between self-criticism, dependency and SOC

Our results support a strong negative association between self-criticism and SOC and a moderate negative association between dependency and SOC among Bedouin Arab and Jewish students. This pattern of findings extends previous studies whose findings showed that dependency should be considered a less severe vulnerability factor than self-criticism (Abu-Kaf and Priel, 2008; Blatt et al., 1995; Mongrain, 1998; Priel and Besser, 2000; Priel and Shahar, 2003; Santor et al., 2000; Vettese and Mongrain, 2000). Moreover, dependency was associated with depression among Jewish students, but not among Bedouin Arabs. Accordingly, it can be assumed that this vulnerability has less deleterious effects in a collectivistic culture than in an individualistic culture. The collectivistic context is characterized by a special concern with relationships and their maintenance. Individuals are interdependent within their in-group, mainly within their family (Kagitcibasi, 1997). Accordingly, it can be assumed that this cultural context may be more tolerant of dependency than the individualistic context.

### The mediation of SOC

We found that SOC had a partial mediating effect on the association between self-criticism and depression among Bedouin Arab and Jewish students. In other words, self-criticism may affect depression directly, as well as indirectly, through decreased levels of SOC.

Our findings further extend previous research on the mechanisms by which self-criticism, but not dependency, induces depression. This previous research has pointed at social support (Dunkley et al., 2003; Mongrain, 1998; Priel and Besser, 2000; Priel and Shahar, 2000), coping strategies (Dunkley et al., 2000), and stressful events (Shahar and Priel, 2003) as mediators of the association between self-criticism and depression. The present study suggests that self-critical individuals may also be more likely to become depressed because they experience less SOC than their dependent counterparts.

The similarity in the mediation effect within the Bedouin Arab and Jewish populations suggests that the mechanism by which self-criticism affects depression may be generalized across cultures. Our findings suggest that while different cultural contexts do associate with different levels of vulnerability to depression, resilience, the general mechanisms involved in the formation of depressive states are similar across cultures. However, since our design is cross-sectional, we cannot totally exclude the possibility that low SOC predated a self-critical stance. In any case, our findings strengthen a conceptualization of self-criticism as a state of constant doubts about one's coping skills and the adequacy of

resources that would be available if and when help is needed.

### Clinical implications

The current research has several potential intervention implications. Research relating to personal predispositions to distress may be of limited immediate clinical value, inasmuch as it is difficult to modify personal vulnerabilities directly. Research by Blatt and Zuroff (1992) and associates has shown that self-criticism is relatively difficult to treat and is best suited for long-term interventions and as a result, direct efforts to reduce self-criticism might not be appropriate (for a recent extensive review (Blatt, 2004). The fact that these personal vulnerabilities affect distress through constant doubts about one's coping skills and the adequacy of resources hold more clinical promise. Individuals from individualistic and collectivistic cultures can be trained to develop strong SOC that affect their coping and emotional distress. This kind of training has been successful in improving individuals' ability to cope with other stressful events (Meichenbaum, 1996) and may ultimately hold more clinical promise than a focus on personal predisposition.

Our study provides a comparison between Bedouin Arab and Jewish students in terms of vulnerabilities to depression, SOC, and depression. Such knowledge is expected to help student units to be aware of different factors and aspects that may affect the emotional distress and the adjustment problems that characterize each group of students. Our results underscore the need for psychological counseling and guidance programs to be tailored to the specific needs of each group.

### Limitations and suggestions for future research

The study of vulnerabilities to depression and SOC contributes to our understanding of the relationships between pathogenic and salutogenic factors, which may increase our understanding of the difference in depression levels found in collectivistic and individualistic cultures. However, there are a number of limitations that must be noted.

First, the data for this study were collected cross-sectionally. This design forecloses definitive conclusions about the casualty of depression. Future research must be designed in a longitudinal form to reveal causal relationship. Second, our findings were based on self-report measures. Therefore, results could have been based on social desirability. In future studies with similar designs, it would be prudent to include a measure of social desirability to test the degree to which this variable may make the results bias. Third, the generalization of the present results should be examined in other Bedouin

Arab populations. Since it can be argued that university students are more affected by Western values than the rest of the Bedouin population, research including a non-student Bedouin Arab sample would allow for an evaluation of the observed results.

### ACKNOWLEDGEMENTS

This study was conducted while the first author was at Ben-Gurion University of the Negev, Israel. This paper was completed while the first author was a postdoctoral fellow at Harvard University in Cambridge, MA, USA.

This research was supported by the RHA Center for Bedouin Studies and Development, Ben-Gurion University of the Negev. Grateful thanks are extended to all the students that agreed to participate in this study. We thank the anonymous reviewers for their constructive suggestions.

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