

Paths to Depression Among Two Different Cultural Contexts: Comparing Bedouin Arab and Jewish Students

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Abstract

Over the past two decades, there has been an increase in the number of Bedouin Arab students studying at institutions of higher education in Southern Israel. To date, research on Bedouin students is limited, particularly with regard to their coping and adjustment. The main aim of the current study is to shed more light on potential pathways between vulnerability factors and depression among Bedouin Arab and Jewish students. This study was designed to explore cultural differences in the levels of self-criticism, depression, coping, and social support among Bedouin Arab college/university students and their Jewish peers, and to examine the effects of self-criticism on depression in the two cultural contexts. To that end, we conducted a cross-sectional study of 108 Bedouin students and 109 Jewish students. The participants completed the Depressive Experiences Questionnaire, Medical Outcomes Study Social Support Survey, Orientations to Problems Experienced Inventory, the Center for Epidemiological Studies Depression Scale, and demographic questionnaire. In this work, we observed differences in the levels of self-criticism, depression, avoidant coping, and social support in the different groups. Moreover, among the Jewish participants, self-criticism affected depression directly. However, among the Bedouin Arabs, self-criticism affected depression only indirectly, through avoidant coping. The present study highlights the possibility that specific cultural contexts underscore the role of avoidant coping in the pathways between self-criticism and depression, whereas other cultural contexts underscore the direct effect of self-criticism on depression levels. Furthermore, the current research underscores the importance of cross-cultural perspectives in studies of vulnerability factors and depression.

Keywords

Bedouin Arab, depression, self-criticism, Jewish, coping, social support, higher education

University and college students, especially first-year students, often experience stress due to the transitional nature of academic life (Geiger, 2013; Torres, 2003). Many of these students have moved away from home for the first time and are faced with the need to develop entirely new networks of social contacts. In addition, they may have difficulty adjusting to rigorous academic

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expectations and may also need to learn to interact with individuals from different cultural backgrounds (Day & Livingstone, 2004). Over the past two decades, there has been an increase in the number of Bedouin Arab students studying at institutions of higher education in Southern Israel. The numbers have jumped in recent years. For example, the total number of Bedouin graduate students at Ben-Gurion University of the Negev during the period 1977 to 1998 was 143, whereas during the period 1999 to 2009, this number increased to more than 600 (Robert H. Arnow [RHA] Center for Bedouin Studies and Development, 1999, 2010). Bedouin Arab students comprise about 4% of the entire student population in the institutions of higher education in Southern Israel; the official language of study in those academic institutions is Hebrew. Prior to enrolling in college or university, these students lived in a secluded city (Rahat) or villages of the Negev in which only Arabic is spoken and their Hebrew language proficiency is low (Geiger, 2013). Bedouin Arab students are at a high risk of dropping out (25%-40%), tend to get lower grades, often require more than the standard period of 3 years to complete their undergraduate degrees (Dean of Students, Ben-Gurion University of the Negev, personal communication, June 24, 2012), and exhibit high levels of distress (Abu-Kaf & Priel, 2008). To date, research on Bedouin Arab students has been quite limited, particularly regarding coping and adjustment. As the number of Bedouin college students is expected to continue to grow, research is needed on the factors that contribute to the emotional distress of these students as compared with their Jewish peers.

The current study seeks to fill this gap with a better understanding of the relationships between vulnerability to depression, social support, coping strategies, and depression among Bedouin Arab and Jewish students. The Bedouin Arabs in Israel belong to the country's Arab minority, which comprises 20% of the entire population (Central Bureau of Statistics [Israel], 2009). Their culture is highly collectivistic, patriarchal, and authoritarian (Peleg-Popko, Klingman, & Abu-Hanna Nahhas, 2003) and differs significantly from the Jewish Israeli culture in terms of its emphasis on collectivistic ideals (Oyserman, Coon, & Kemmelmeier, 2002). The typical Jewish family is a nuclear system characterized by democratic family relations with relatively permissive parental control (Peleg-Popko et al., 2003). The Jewish culture, being more individualistic and less authoritarian, emphasizes separation, independence, personal development, and achievement (Earley, 1993).

To date, the implications of self-criticism have been tested mainly in Western societies (e.g., United States, Canada, England, and Jewish Israeli society), and little attention has been paid to the implications of this vulnerability in non-Western cultures in the Middle East, Asia, and Africa. In the present study, we compared students from two cultural contexts, Jewish Israeli and Bedouin Arab, and compared the relationships between self-criticism, coping strategies, social support, and depression in these two cultural contexts.

Self-Criticism as a Vulnerability Factor for Depression

Self-criticism is associated with harsh standards, heightened striving for mastery and achievement, and a marked need for acknowledgment, resulting in vulnerability to depression (Blatt, 1991). Longitudinal and cross-sectional studies have indicated that self-criticism is associated with an intense negative affect (Mongrain, 1998), a tendency to assume blame (Dunkley, Zuroff, & Blankstein, 2003), and poor affiliative relationships (Mongrain, 1998), as well as self-blame and hopelessness (Blatt, 2004; Dunkley et al., 2003). Empirical findings have repeatedly shown that self-criticism is a severe vulnerability factor for depression (e.g., Besser & Priel, 2011; Blatt, 2004; Gilbert, Clarke, Kempel, Miles, & Irons, 2004), as it generates risk factors, such as the use of avoidant coping strategies, and reduces the effects of protective factors, namely, social support and active coping strategies (Besser & Priel, 2003; Dunkley et al., 2003; Priel & Shahar, 2000).

To date, only a few studies have been conducted in non-Western cultural contexts, namely, Bedouin Arab and Japanese contexts (e.g., Abu-Kaf & Priel, 2008; Kuwabara, Sakado, Sakado, Sato, & Someya, 2004), and the findings of these studies have underscored the role of

self-criticism as a severe vulnerability factor for depression in these cultures. For example, Abu-Kaf and Priel (2008) tested the reliability and validity of the first Arabic version of the Depressive Experiences Questionnaire (DEQ). Ninety-six Bedouin Arab students and 96 Jewish students participated in the research. The study of the Arabic version of the DEQ indicated that it is a reliable and valid instrument for assessing Bedouin Arabs' levels of vulnerabilities: self-criticism and dependency. In addition, in this research, the Bedouin Arab students reported higher levels of self-criticism and depression (but not dependency) than the Jewish students did. Self-criticism was found to be a severe vulnerability to depression in both cultures, but its effect was much more pronounced in the Bedouin Arab culture; a stronger relationship was observed between these variables in the Bedouin Arab context. In the present study, we will attempt to add to this nascent body of knowledge with regard to the paths between self-criticism and depression in the Bedouin Arab context as compared with the Jewish Israeli context.

Depressive Symptoms

Depression is a common mental health problem. Globally, more than 350 million people of all ages suffer from depression (World Health Organization, 2012). The symptoms of depression include sadness, diminished pleasure in daily life, weight change, disturbed sleep patterns, fatigue, feelings of worthlessness and self-blame, diminished ability to concentrate, indecisiveness, and changes in motor patterns (retardation or agitation; American Psychiatric Association, 2000). The incidence of depressive symptoms has been increasing among college students. In a nationwide study, 43% of American college students reported feeling depressed to the point that it was difficult for them to study (American College Health Association, 2009).

Social Support

Social support is defined as information that leads people to believe that they are cared for, loved, esteemed, and valued, and that they are members of a network of communication and mutual obligation (Cobb, 1976). It is a product of social activities that enhance people's sense of mastery through the sharing of tasks, material and cognitive assistance, and the provision of emotional comfort (Caplan, 1974). Social support has long been known to counter the experience of stress, enhance well-being, reduce the severity of illness, and speed recovery from medical disorders (Dalgard, Thapa, Hauff, McCubbin, & Syed, 2006). In this context, self-criticism as a vulnerability factor is characterized by an emphasis on achievement at the expense of interpersonal relationships, which may lead to interpersonal stress and a lack of social support (Helgeson, 1994). For example, several studies have found self-criticism to be a predictor of social avoidance and lower perceived levels of social support (Besser & Neria, 2010; Mongrain, 1998; Priel & Shahar, 2000).

Despite the large body of research on social support, research on this topic in the Bedouin Arab cultural context is still limited. Studies have demonstrated that Asians and Asian Americans, like Arabs, use less social support for coping with stress than European Americans or Israeli Jews (Pines & Zaidman, 2003; Shin, 2002; Taylor, Sherman, Jarcho, Takagi, & Dunagan, 2004). This finding reflects the strong cultural interdiction among Arabs against the disclosure of personal affairs (Al-Haj, 1995; Savaya, 1998). Requesting assistance from others may involve exposing one's vulnerability and/or incompetence and risking rejection (Taylor et al., 2004). The lack of encouragement for the use of social support in times of stress may affect the perception of the availability of social support as a coping resource.

Coping Strategies

Coping includes regulatory processes that can reduce the negative feelings that result from stressful events. Active coping strategies are behavioral or psychological responses designed to change

the nature of the stressor itself or how one thinks about it, whereas avoidant coping strategies lead people into activities (such as alcohol use) or mental states (such as withdrawal) that keep them from directly addressing stressful events (Holahan & Moos, 1987). Active coping strategies are more effective in reducing negative psychological well-being (Braun-Lewensohn et al., 2009) and avoidant coping strategies tend to be associated with psychological distress (Braun-Lewensohn, Sagy, & Roth, 2010; Lambert, Lambert, & Ito, 2004).

Research on self-criticism suggests that withdrawal is one of the main strategies used by self-critical individuals facing stress (Blatt & Shichman, 1983). Furthermore, self-criticism seems to be associated with high-level use of avoidant coping strategies and low-level use of active coping strategies (Besser & Priel, 2003; Dunkley et al., 2003).

Sociocultural groups appear to generate shared beliefs concerning the most appropriate means for coping with stress (Antonovsky, 1979), but actual research findings to date are inconclusive. Overall, some studies have provided support for an association between certain non-Western cultures (e.g., Asians and Asian Americans) and the use of avoidant coping strategies (Bjorck, Cuthbertson, Thurman, & Lee, 2001; Taylor et al., 2004), as well as an association between the European American cultural context and the use of active coping strategies (e.g., Chun, Moos, & Cronkite, 2006; Taylor et al., 2004). Still other studies have found no significant cultural differences in the use of active coping strategies (Bjorck et al., 2001). Additional complexity was brought to light by a study that compared the use of coping strategies among Jewish and Arab adolescents in Israel during missile attacks and reported similarities among Jews and Arabs in the use of active coping strategies, but not in the use of avoidant coping strategies (Braun-Lewensohn et al., 2010). With regard to the links between coping and well-being, while active coping strategies seem to be associated with better adjustment and psychological well-being in a variety of cultural contexts (e.g., Braun-Lewensohn et al., 2009), avoidant coping strategies have been found to be the best predictors of negative mental health in Arab and Japanese cultural contexts (Braun-Lewensohn et al., 2010; Lambert et al., 2004).

Gender Differences in Self-Criticism, Social Support, Coping, and Depression

Although previous studies have found no gender differences in self-criticism (Blatt, 2004), women are twice as likely as men to develop depressive symptoms (e.g., Nolen-Hoeksema & Hilt, 2009). There are also gender differences in coping strategies, with women more likely to exploit social support, affective release, emotional regulation, and emotionally focused and tend-and-befriend strategies (Nolen-Hoeksema & Hilt, 2009; Taylor et al., 2000), whereas men's coping efforts tend more toward fight-or-flight responses (i.e., gaining control over the situation or disengaging; Taylor et al., 2000).

Aims of the Present Study

The present study aimed to explore potential pathways between vulnerability factors and depression among Bedouin Arab and Jewish students. This study was designed to explore cultural and gender differences in the levels of self-criticism, depression, coping, and social support among Bedouin Arab college/university students and their Jewish peers, and to examine associations between self-criticism, coping strategies, social support, and depression against the background of the transitional and stressful nature of the first year of academic life in these two cultural contexts.

Several hypotheses were tested in this study:

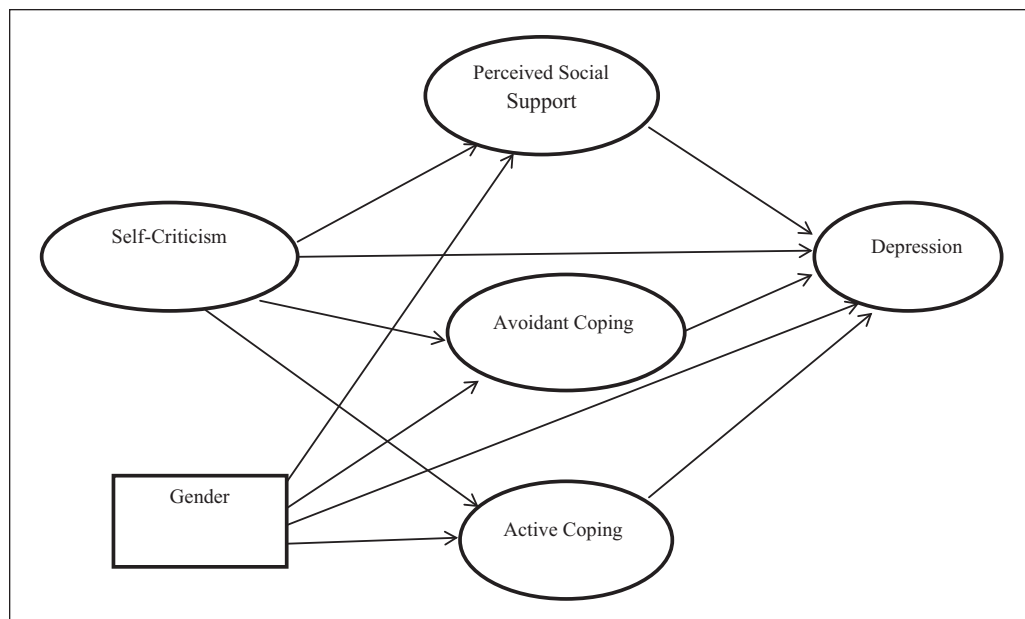


Figure 1. The hypothesized relationships between gender, self-criticism, avoidant coping, active coping, social support, and depression.

1. It was expected that Bedouin students would exhibit higher levels of self-criticism, avoidant coping, and depression, as well as lower levels of active coping and that they would report lower levels of social support, as compared with their Jewish counterparts (Abu-Kaf & Priel, 2008; Braun-Lewensohn et al., 2010; Taylor et al., 2004). In addition, it was expected that females would exhibit higher levels of active coping and depression and would report higher levels of social support, as well as lower levels of avoidant coping, as compared with males (Nolen-Hoeksema & Hilt, 2009; Taylor et al., 2000).
2. We hypothesized that self-criticism would be positively associated with avoidant coping and depression, with a stronger association expected among the Bedouin Arab group. Moreover, self-criticism would be negatively associated with perceived social support and active coping, with a stronger association expected among the Jewish group.
3. We hypothesized that we would observe differences in the pathways between self-criticism and depression within the Bedouin Arab and Jewish cultural contexts (Figure 1).

Method

Participants

Two hundred seventeen students took part in the study: 108 Bedouin Arabs (34% men and 66% women; age: $M = 19.13$ years, $SD = 1.29$) and 109 Jews (46% men and 54% women; age: $M = 23.03$ years, $SD = 1.40$). There were significant age differences between the two samples, $t(216) = -21.23$, $p < .01$. All of the participants were students at academic institutions of higher learning in Southern Israel. A complete description of the demographic characteristics of the study population is presented in Table 1.

Table 1. Demographic Characteristics: Differences Between Bedouin Arab and Jewish Students.

	Bedouin Arabs (%; n = 108)	Jews (%; n = 109)	χ^2
Gender			3.63
Male	33.6	46	
Female	66.4	54	
Marital status			12.01**
Single	89.7	99.1	
Engaged	4.7	0.9	
Married	5.6	0	
Family size			215.80***
2-6	11.3	95.5	
7-12	16	4.5	
13-17	76	0	
18-24	5.7	0	
Mother's education			166.32***
Didn't study	51	0	
Completed elementary school	18.3	1.9	
High school	28.8	39.6	
Nonacademic diploma	1.9	20.8	
Academic diploma	0	37.7	
Father's education			72.54***
Didn't study	22.3	1	
Completed elementary school	12.6	1	
High school	51.5	37.3	
Nonacademic diploma	5.8	22.5	
Academic diploma	7.8	38.2	

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

Procedure

Once approval was granted by the Ethics Committee of Ben-Gurion University of the Negev, the study was begun. After signing a consent form, Bedouin Arab and Jewish respondents completed a self-report questionnaire in Arabic or Hebrew (respectively). These questionnaires were completed during the first month of the academic year. The questionnaires were administered in small groups of five to eight participants in a standardized format.

Measures

Demographics. Respondents were asked to report their gender, age, marital status, institutional affiliation, mother's level of education, father's level of education, and family size. Demographic data are presented in Table 1.

Self-criticism. Self-criticism was assessed using the DEQ (Blatt, D'Afflitti, & Quinlan, 1976). The DEQ is comprised of 66 items assessing self-criticism, dependency, and efficacy. The McGill revision of the DEQ (Santor, Zuroff, & Fielding, 1997) was used in the current study. In the current study, we used only the 18 self-criticism items that assess preoccupation with self-evaluation, perfectionism, achievement, and need for self-esteem (e.g., *If I fail to live up to expectations, I feel unworthy*; *I often find that I don't live up to my own standards or ideals*; *I often feel guilty*; *I often feel that I disappoint others*). The items are rated on a Likert-type scale, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

The validity of the DEQ has been demonstrated in a variety of contexts (Zuroff, Mongrain, & Santor, 2004). We used Hebrew (Priel & Shahar, 2000) and Arabic versions (Abu-Kaf & Priel, 2008) of the DEQ. The reliability of the Self-Criticism scale for both the Bedouin students ($\alpha = .89$) and Jewish students ($\alpha = .83$) was acceptable.

Depressive symptoms. Depressive symptoms were assessed using the Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977). The CES-D is a 20-item self-report measure used to assess various dimensions of depression and mood problems in the general population (i.e., anhedonia, negative affect, and somatic symptoms). Respondents reported how frequently they had experienced symptoms over the past 2 weeks, with each item rated on a 4-point Likert-type scale ranging from 0 (*rarely/none*) to 3 (*most of the time*). We used a Hebrew version (Blumstein et al., 2004) and an Arabic version (Ghubash, Daradkeh, Al Naseri, Al Bloushi, & Al Daheri, 2000) of the CES-D. The Cronbach's alpha values were .88 and .89 among the Bedouin Arab and Jewish students, respectively.

Social support. Social support was assessed using the Medical Outcomes Study Social Support Survey (MOS; Sherbourne & Stewart, 1991). The MOS is a 19-item self-report questionnaire used to assess various functional dimensions of social support, including emotional/informational, tangible, and affectionate support and positive interaction. Emphasis is placed on the perceived availability of support, if needed. Respondents were asked to indicate how often each type of support is available to them, if needed, on a 5-point Likert-type scale ranging from 1 (*never*) to 5 (*all of the time*). Sherbourne and Stewart (1991) tested this instrument among almost 3,000 adults in three different geographic locations and established its reliability and validity. In the current study, we used Hebrew and Arabic versions of the MOS. As we were interested in the overall availability of social support and did not have any a priori hypotheses regarding the different types of support, we used only the total index score. The Cronbach's alpha values were .91 and .72 among the Bedouin and Jewish students, respectively.

Avoidant and active coping. Avoidant and active coping were assessed using the Brief Coping Orientations to Problems Experienced Inventory (Brief COPE; Carver, 1997). This 28-item self-report measure assesses different dimensions of active and avoidant coping strategies. Participants rated each coping statement in terms of how frequently they used that strategy to manage stressful events, using a scale of 1 (*never*) to 5 (*always*). The subscales were aggregated to form two composite scales: Active Coping (14 items reflecting problem-solving, planning, positive reframing, emotional support, instrumental support, and humor) and Avoidant Coping (14 items reflecting behavioral disengagement, self-distraction, denial, self-blame, and substance use). In the current study, we used Hebrew and Arabic versions of the COPE inventory. The internal consistency coefficients of the Active-Coping and the Avoidant-Coping scales in the Hebrew (Ben-Zur, Gilbar, & Lev, 2001) and the Arabic versions of the instrument (Qouta, Punamäki, & El Sarraj, 1997) were considered acceptable. In the current study, the Cronbach's alpha coefficients for the Active-Coping scale were .80 and .65 among the Bedouin and Jewish students, respectively. For the Avoidant-Coping scale, the Cronbach's alpha coefficients were .72 and .68 among the Bedouin and Jewish students, respectively.

Equivalence of Measures Across Cultural Groups

All of the measures in this study were developed in the United States. It has repeatedly been pointed out that it is critical to ascertain, especially when using self-report measures, whether the scales convey the same meaning across cultures that differ from the one in which they were originally generated (van de Vijver & Leung, 2000). Therefore, given the fact that any potential differences in the meanings of some of the scales are likely to influence the validity and sensitivity

of any findings, we first examined the equivalence of the measures across the two cultural groups. Four levels of nested hierarchy of factorial invariance have been formulated in the psychometric literature: (a) configural invariance, (b) weak invariance, (c) strong invariance, and (d) strict invariance (Meredith, 1993). Configural invariance requires that the same factor model specification hold true across groups. In addition to the configural invariance equality constraints, weak invariance requires cross-group equality in the loadings, strong invariance requires cross-group equality in the loadings and intercepts, and strict invariance requires cross-group equality in the loadings, intercepts, and residual variances. From the 1990s to the present, the governing belief reflected in research practice has been that weak invariance, or strong invariance at best, would constitute sufficient evidence for measurement invariance (MI; Little, 1997; Vandenberg & Lance, 2000). Although weak and strong invariance are typically assessed separately, Nye, Roberts, Saucier, and Zhou (2008) suggested several reasons for assessing both simultaneously.

In the current study, we used AMOS 5.0 structural equation modeling (SEM) software (Arbuckle, 2003) based on data from the 108 Bedouin Arab students and 109 Jewish students. Prior to the main analysis, data were screened by analyzing frequencies and descriptive statistics such as means, standard deviations, and ranges. No outliers or out-of-scale points were found. A missing-values analysis was conducted, and because for some variables more than 5% of the data were missing at random, missing data were estimated using expectation-maximization methods. Data were normally distributed, and the variance was satisfactorily similar across the dependent variables within the two samples. As our data were normally distributed, we chose to use maximum-likelihood estimation. First, we tested the configural model for each of the different factors (social support, avoidant coping, active coping, and depression) in the Bedouin Arab and Jewish samples using multigroup confirmatory factor analyses (CFAs; Byrne, 2012). The results of these analyses for all four of the factors are presented in Table 3. Results suggest that the factor structures fit well in the two samples; the χ^2 (reported as CMIN -minimum discrepancy function) was not significant in any of the four models, the root mean square error of approximation (RMSEA) statistics were all 0.05 or below, all of the nonnormed fit index (NNFI) and confirmatory fit index (CFI) statistics were above 0.92. Therefore, all of the scales demonstrated configural invariance across groups for each factor. The factor loading for each factor in the Bedouin Arab and Jewish samples is presented in Table 2. After testing the configural model, we simultaneously tested the weak and strong equivalence by constraining the parcel loadings and intercepts. This multigroup comparison showed no differential parcel functioning at the weak and strong levels. The fit statistics presented in Table 3 show that the four factors demonstrated these forms of equivalence. In each case, the resulting RMSEA was 0.06 or below (the configural model) and was inside of the 90% confidence interval (CI); the Δ CFI statistics were $\leq -.01$ (Hu & Bentler, 1999). Overall, these results show that the Arabic and Hebrew versions of these questionnaires have factor structures that are configural and have weak/strong equivalence across the two cultures.

Statistical Analyses

A preliminary χ^2 analysis explored differences in sample characteristics between the two cultural groups. Thereafter, four sets of analyses were conducted. First, a MANCOVA was used to explore the effects of cultural group, gender, and the interaction between culture and gender on Self-Criticism, Social Support, Active Coping, Avoidant Coping, and Depression. In this analysis, age was treated as a covariate. Second, Pearson's correlations were used to examine the associations between the study variables in the Bedouin Arab and the Jewish samples, separately. Third, SEM was used to test the effects of the demographic variables on the outcome variable (depression). Only demographic variables that had significant effects on depression were included in the final model. Finally, SEM, including a bootstrapping procedure, was used to test the direct and indirect effects of Self-Criticism on Depression.

Table 2. Factor Loading for the Bedouin Arab and Jewish Samples.

Domain/variable	Factor loading	
	Bedouin Arab students	Jewish students
Social support		
Informational	0.72	0.67
Tangible	0.45	0.60
Affectionate	0.77	0.77
Positive interactions	0.88	0.73
Active coping		
Problem-solving	0.64	0.70
Planning	0.66	0.74
Positive reframing	0.60	0.45
Emotional support	0.73	0.64
Instrumental support	0.72	0.66
Humor	0.47	0.42
Avoidant coping		
Self-distraction	0.51	0.44
Behavioral disengagement	0.44	0.41
Self-blame	0.59	0.66
Venting	0.61	0.65
Denial	0.66	0.43
Depression		
Anhedonia	0.66	0.70
Negative affect	0.91	0.86
Somatic symptoms	0.63	0.70

Table 3. Fit Statistics for the Tests of Measurement Equivalence (Configural and Weak/Strong Models) in Bedouin Arab and Jewish Contexts.

	χ^2	df	RMSEA	90% CI for RMSEA	NNFI (TLI)	CFI	$\Delta\chi^2(\Delta df)$	ΔCFI
Social support								
Configural model	6.96	4	0.04	[0.032, 0.084]	0.92	0.96		
Weak/strong model	21.56	11	0.06	[0.053, 0.10]	0.92	0.95	14.6 (7)	.05
Avoidant coping								
Configural model	10.39	12	0.02	[0.00, 0.08]	0.99	0.99		
Weak/strong model	38.43	21	0.053	[0.022, 0.096]	0.98	0.98	27.53 (9)	.01
Active coping								
Configural model	6.4	5	0.036	[0.00, 0.11]	0.94	0.98		
Weak/strong model	25.2	12	0.049	[0.039, 0.12]	0.93	0.98	18.8 (7)	.00
Depression								
Configural model	1.91	1	0.044	[0.02, 0.13]	0.97	0.98		
Weak/strong model	12.45	6	0.051	[0.01, 0.15]	0.96	0.97	11.26 (5)	.01

Note. RMSEA = root mean square error of approximation; CI = confidence interval; NNFI = nonnormed fit index; CFI = comparative fit index; TLI = Tucker–Lewis index.

Results

Cultural and Gender Differences

Our first hypothesis was that Bedouin Arab students would exhibit higher levels of Self-Criticism, Avoidant Coping, and Depression than their Jewish counterparts. We also expected that females

Table 4. Cultural, Gender Differences, and Univariate *F* Results for Self-Criticism, Social Support, Active Coping, Avoidant Coping, and Depression.

Study variables	Bedouin Arab students		Jewish students		Culture effect <i>F</i> (1, 213)	Gender effect <i>F</i> (1, 213)	Culture × Gender effect <i>F</i> (1, 213)
	Female (<i>n</i> = 72)	Male (<i>n</i> = 36)	Female (<i>n</i> = 59)	Male (<i>n</i> = 50)			
Self-criticism	118.77 (19.42)	119 (18.17)	104.47 (16.46)	109.88 (18.54)	4.12*	0.53	0.96
Social support	69.82 (14.15)	65.14 (15.34)	79.37 (11.12)	72.65 (12.12)	4.35*	4.55*	0.22
Active coping	47.75 (6.93)	43.19 (7.12)	46.31 (5.57)	45.75 (4.65)	0.41	5.51*	5.51*
Avoidant coping	28.52 (4.65)	25.14 (5.82)	23.85 (4.65)	23.84 (5.19)	4.10*	4.24*	7.15**
Depression	25.52 (11.96)	21.22 (10.20)	14.24 (9.24)	13.92 (9.35)	6.14**	1.62	1.76

* $p < .05$. ** $p < .01$.

would report higher levels of Social Support, Active Coping, and Depression than males. A two-way MANCOVA with age as a covariate and with five dependent variables (DV_s; Self-Criticism, Social Support, Active Coping, Avoidant Coping, and Depression) revealed a significant multivariate main effect for Culture, Wilks's $\lambda = .36$, $F(5, 209) = 2.78$, $p < .05$, $\eta^2 = .07$; for Gender, Wilks's $\lambda = .49$, $F(5, 209) = 4.12$, $p < .001$, $\eta^2 = .10$; and for Culture × Gender interaction, Wilks's $\lambda = .31$, $F(5, 209) = 2.38$, $p < .05$, $\eta^2 = .06$. Given the significance of the overall test, the univariate main effects were examined and reported in Table 4. Age was not a significant covariate: $F(5, 209) = 1.09$, $p > .05$, $\eta^2 = .02$.

We found that culture had a main effect on Self-Criticism, Social Support, Avoidant Coping, and Depression. Bedouin students reported significantly higher levels of Self-Criticism, Avoidant Coping, and Depression and significantly lower levels of Social Support, as compared with their Jewish counterparts (Table 4). However, the main effect of culture on Active Coping was not significant.

Gender had a main effect on Social Support, Active Coping, and Avoidant Coping. Females reported higher levels of Social Support and used active and avoidant coping strategies more than males did. However, we did not find any main effect of gender on Self-Criticism or Depression. The Culture × Gender interaction affected only Active Coping and Avoidant Coping. Bedouin Arab females reported higher levels of Avoidant and Active Coping than Bedouin Arab males, whereas such differences were not observed between females and males in the Jewish sample.

Relationships Between the Different Study Variables

Our second hypothesis was that Self-Criticism would be positively associated with Avoidant Coping and Depression (with a stronger association expected among the Bedouin Arab group), but negatively associated with Social Support and Active Coping (with a stronger association expected among the Jewish group). To test this hypothesis, we computed zero-order correlations between the study variables (Table 5). We analyzed the Bedouin Arab and the Jewish samples separately.

This hypothesis was partially supported, in that Self-Criticism was positively associated with Avoidant Coping and Depression among both samples. However, stronger associations were found among the Jewish group. In addition, Self-Criticism was negatively associated with Social Support among both samples (a stronger association was observed among the Jewish group). Furthermore, we found that Avoidant Coping was positively related to Depression and that Social Support was negatively correlated with Depression among both the Bedouin Arab and Jewish samples. It is important to note that Active Coping was not associated with Self-Criticism or

Table 5. Zero-Order Correlations Observed Between the Study Variables.

Variables	1	2	3	4	5
1. Self-criticism	1	-.22*	-.01	.41***	.35***
2. Social support	-.40***	1	.45***	.03	-.41***
3. Active coping	-.16	.19*	1	.26**	-.15
4. Avoidant coping	.56***	-.18	.10	1	.43***
5. Depression	.52***	-.32**	-.06	.48***	1

Note. Correlations below the diagonal are for the Jewish group ($n = 109$) and correlations above the diagonal are for the Bedouin Arab group ($n = 108$). The above results related to scale scores.

* $p < .05$. ** $p < .01$. *** $p < .001$, two-tailed test.

Depression in either sample. For that reason, we did not include Active Coping in the final model.

Pathways Between Self-Criticism and Depression Within the Bedouin Arab and Jewish Cultural Contexts

Prior to testing our hypothesized model, we regressed the outcome variable (depression) on the demographic variables (age, gender, marital status, mother's education, and father's education). None of the demographic variables played any significant role in predicting depression in either cultural group, thus age, marital status, mother's education, and father's education were removed from the final model. However, as we found main and interaction effects for gender on the variables involving in the final model, we decided to include it in the final model (see Figure 2).

We used multigroup analysis to compare the effects of the different variables on depression levels in the two groups. To reduce the number of subscales indicating the latent variables of Social Support (four subscales), Avoidant Coping (five subscales), and Depression (three subscales), we used the parceling method to create three indicators of those variables (Little, Cunningham, Shahar, & Widaman, 2002). Specifically, we used the domain-representative approach for dealing with multidimensional item sets (Kishton & Widaman, 1994). This approach attempts to account for multidimensionality by creating parcels that encompass not only the common variance but also the reliable unique facet/subscale of the multiple dimensions. We treated the parcels into item sets by joining items from different subscales. Concerning self-criticism as a unidimensional construct (Blatt, 2004; Zuroff et al., 2004), we used the random assignment method (Kishton & Widaman, 1994; Little et al., 2002). Using this method, we created three parcels by assigning each item (from the 18 items) randomly and without replacement to one of the parcel groups. Using a two-step approach (Anderson & Gerbing, 1988), we first established the measurement model of the study variables and then tested the suggested models.

Test of the Measurement Model

This measurement model included four latent variables: Self-Criticism, Social Support, Avoidant Coping, and Depression. The loading of one parcel of each latent variable (i.e., Self-Criticism, Social Support, Avoidant Coping, and Depression) was fixed at 1.0 to ensure identifiability and to provide the metric for the latent variables. Multiple-group SEM analysis was performed with AMOS software (version 5.0; Arbuckle, 2003), using the maximum-likelihood estimation to test how well the data fit the measurement model. The measurement model fits the data well (CFI = 0.98; NNFI = 0.97; RMSEA = 0.03; and $CMIN(\chi^2)/df = 1.22, p > .05$). The loadings of

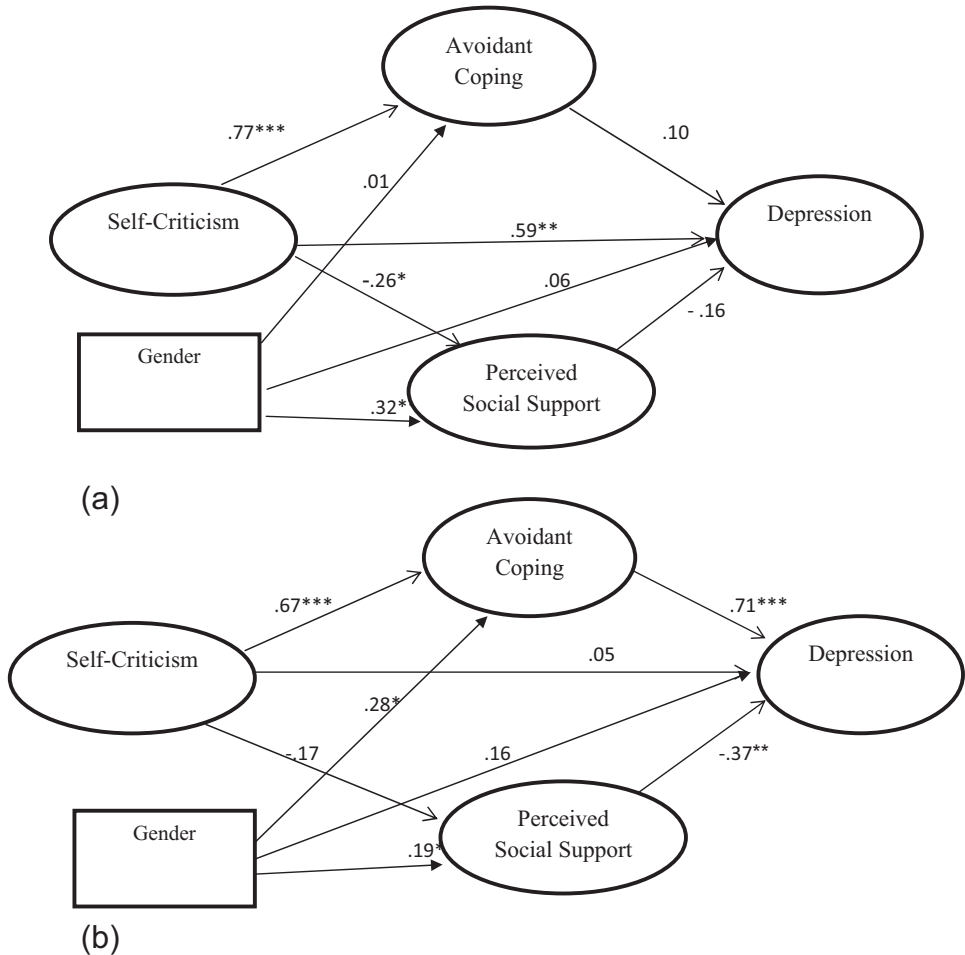


Figure 2. Direct and indirect effects of self-criticism on depression through avoidant coping and social support among (a) the Jewish sample and (b) the Bedouin Arab sample.

Note. All of the coefficients in the figures are standardized.

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

each of the parcels on their respective latent variables were strong (ranging from 0.57 to 0.97 within the Jewish sample and ranging from 0.59 to 0.94 within the Bedouin sample) and statistically significant ($p < .001$).

The fit indices of the hypothesized model are as follows: CFI = 0.96, NNFI = 0.95 and RMSEA = 0.05, CMIN/df = 1.5, and $p < .05$. Thus, the hypothesized model fits the data well.

The overall model (Figure 2) explained 42% and 51% of the depression among the Bedouin Arab and Jewish samples, respectively. To test the direct and indirect effects of Self-Criticism on Depression through Avoidant Coping and Social Support, we used the bootstrapping method with bias-corrected confidence estimates (MacKinnon, Lockwood, & Williams, 2004; Preacher & Hayes, 2004). In the present analysis, the 95% CI of the effects was obtained with 5,000 bootstrap resamples (Preacher & Hayes, 2008). Significant effects were accepted if the range of the CI values did not include 0.

Self-Criticism was found to have a significant direct effect on depression among the Jewish sample ($\beta = .59$, CI = [0.24, 1.08]), but not among the Bedouin Arab sample ($\beta = .05$,

CI = [-0.92, 0.35]). In the Jewish sample, Self-Criticism had strong direct effects on Avoidant Coping ($\beta = .77$, CI = [0.56, 0.98]) and Social Support ($\beta = -.26$, CI = [-0.51, -0.08]), whereas, among the Bedouin Arabs, Self-Criticism had strong direct effects on Avoidant Coping ($\beta = .67$, CI = [0.63, 0.95]), but not on Social Support ($\beta = -.17$, CI = [-0.33, 0.14]). Moreover, we observed significant direct effects of Avoidant Coping ($\beta = .40$, CI = [0.09, 1.37]) and Social Support ($\beta = -.41$, CI = [-0.59, -0.19]) on Depression only among the Bedouin Arab sample. As we examined these findings, we found that the precondition for indirect effect was not fulfilled in both groups in the case of Social Support. This condition was fulfilled only among Bedouin Arabs and was related to Avoidant Coping. Results of this analysis supported the significance of the indirect effect of Self-Criticism on Depression through Avoidant Coping ($\beta = .36$, CI = [0.11, 0.81]) among the Bedouin Arabs, but not among the Jewish participants ($\beta = .11$, CI = [-0.34, 0.50]).

An examination of the total (direct and indirect) effects of Self-Criticism revealed a meaningful picture. Among the Jewish participants, Self-Criticism affected Depression directly. However, among the Bedouin Arabs, Self-Criticism affected Depression only indirectly, through Avoidant Coping.

Discussion

The main aim of the current study is to shed more light on potential pathways between vulnerability factors and depression among Bedouin Arab and Jewish students. This study was designed to explore cultural differences in the levels of self-criticism, depression, coping, and social support among Bedouin Arab college/university students and their Jewish peers, and to examine the associations between self-criticism, different coping strategies, social support, and depression in these two cultural contexts. Our results show that the Arabic and Hebrew versions of the questionnaires used in this work have factor structures that are fully comparable and, therefore, support the assumption of construct equivalence across the two cultural contexts.

As expected, Bedouin students exhibited higher levels of self-criticism, avoidant coping, and depression and reported lower levels of social support than their Jewish counterparts. The higher levels of self-criticism among the Bedouin Arab students may be related to the possibility that Bedouin youth who choose to pursue academic studies are a priori more self-critical individuals, more achievement-oriented, and more comfortable leaving their familiar environments. Future studies should explore this interpretation.

The finding of lower levels of perceived social support among the Bedouin population strengthens previous research in which Arabs reported that they would turn to “no one” for support significantly more often than Jews did. The explanation for this finding may be related to the strong cultural prohibition against the disclosure of personal affairs in this cultural context (Pines & Zaidman, 2003; Savaya, 1998). This cultural prohibition discourages the use of social support for coping with stressful events. Furthermore, this discouragement may affect the perception of the availability of social support as a coping resource.

The Bedouin students reported more avoidant coping than the Jewish students, which also supports previous research that found Arabs to be patient in the face of difficulty (Haj-Yahia, 1994). They believe that fate is predetermined and do not view emotional needs as requiring intervention (Ben-Ari, 2004). These values may encourage Bedouin Arabs to be passive in the face of challenges and lead to a preference for avoidant coping strategies.

As in other studies, the Bedouin students reported more psychological and academic difficulties than their Jewish counterparts (Abu-Kaf & Priel, 2008; Zeidner, 1992). Bedouin Arab students, as members of the minority Arab group within Israeli society, are faced with additional

difficulties. They are generally less prepared academically than their Jewish peers and also experience a variety of nonacademic stresses: personal, social, financial, and cultural (Ben-Ari, 2004).

As expected, female students reported higher levels of social support, active coping, and depression than male students. In general, it has been found that females tend to cope using social support, the tend-and-befriend response to stress, emotionally focused strategies, affective release, and emotional regulation, whereas male coping efforts tend to be directed toward gaining control over the situation and disengagement (Taylor et al., 2000). Contrary to our prediction, however, we observed a higher level of avoidant coping among female Bedouin students than among the Bedouin males. The fact that cultures vary in the degree to which sex roles are emphasized could contribute to this difference. Williams and Best (1990) confirmed that men and women in traditional cultures (i.e., Arab culture in this case) emphasize sex role differences, whereas those in more modern cultures (i.e., the Israeli Jewish culture) minimize them. Presumably, such values could affect the development of gender differences, especially among Bedouin students.

Our main aim, however, related to the potential pathways between vulnerability factors and depression among Bedouin Arab and Jewish students. Among the Bedouin students, the effect of self-criticism was amplified through the indirect effects of avoidant coping. Our findings underscore the claim that self-criticism constitutes a severe vulnerability to depression (Abu-Kaf & Priel, 2008; Besser & Neria, 2010; Blatt, 2004). Moreover, our findings extend previous research on the mechanisms by which self-criticism associates with depression. The present study suggests that self-critical individuals from Israeli Jewish and Bedouin Arab cultures tend to have higher levels of depression, but that the effect of self-criticism on depression develops via different pathways in these different cultures. The self-critical Bedouin Arabs tend to be more depressed because they tend to use avoidant coping strategies more often, that is, they attempt to reduce tension by avoiding dealing with problems (i.e., behavioral disengagement, self-distraction, denial, and self-blame), whereas self-critical Jewish individuals tend to be more depressed as a direct result of their higher levels of self-criticism, exaggerated preoccupation with issues of self-definition, harsh standards, heightened striving for mastery and achievement, and marked need for acknowledgment.

The most notable finding of this study was related to the role of avoidant coping. We found that the Bedouin Arab cultural context underscores the role of avoidant coping in the relationship between self-criticism and depression. This finding lends support to previous research on self-criticism that has suggested that withdrawal is one of the main strategies used by self-critical individuals facing distress in American and Jewish Israeli cultural contexts (Beebe et al., 2007; Besser & Priel, 2003). Moreover, avoidant coping strategies were found to be the best predictors of negative mental health in Japanese and Arab cultural contexts (Braun-Lewensohn et al., 2010; Lambert et al., 2004).

An interesting finding is that perceived social support did not predict depressive symptoms among the Jewish Israeli sample. This finding may support the buffering model (interactive effect), but not the main effect model among the Jewish sample. The buffering model posits that social support does not have a direct effect on mental health, but does diminish the effect of other variables (such as stress) on depression (Kawachi & Berkman, 2001).

The present study also contributes to the understanding of cultural differences in coping with stressors in the context of higher education by suggesting that students from different cultural backgrounds who exhibit high levels of self-criticism tend to have different and distinct pathways to depression. However, as our design is cross-sectional, we cannot totally exclude the possibility that, cognitively, depression may lead to greater self-criticism and that, behaviorally, depression may lead to lowered motivation and high levels of avoidance and withdrawal.

Limitations and Directions for Future Research

The current study has some limitations, and there are areas that warrant further attention in future research. First, the study is cross-sectional and thus we cannot make any claims of causality. Moreover, we should be cautious not to make claims about depression as a diagnosis, but only with regard to depressive symptoms. In addition, our findings were based on self-report measures and further research using other methods of data collection (e.g., interviews, diaries, and observer ratings) would be beneficial and important for the evaluation of the validity of the obtained findings. Third, the generalizability of the present results should be examined in other Bedouin Arab populations facing different kinds of stress. There is also the question of how representative our samples of students are of their respective cultures. Future research including nonstudent Bedouin and Jewish samples would allow the evaluation of the generalizability of the observed results. Another avenue for future research might be to extend the present model by examining variables such as stress levels and different types of stresses (e.g., academic, interpersonal, and family), independent measures of cultural factors, such as self-construal, and the dependent measure of somatization, which may be an important indicator of emotional distress in Arab cultural contexts (Hamdi, Amin, & Abou-Saleh, 1997; Kleinman, 2004).

Clinical Implications

The current research has several potential intervention implications. Research relating personality predispositions to depression may be of limited immediate clinical value, in as much as it is difficult to modify personality vulnerabilities directly. Research has shown that self-criticism is relatively difficult to treat and is best suited to long-term interventions (Blatt, 2004; Zuroff et al., 2004). The fact that these personality vulnerabilities affect distress and adjustment largely through the adoption of specific coping behaviors, most notably avoidant coping, holds more clinical promise. Individuals from the Bedouin Arab cultural context who are coping ineffectively can be trained to identify the specific aspects of college that they find most stressful, to observe ineffective coping behaviors they may use in response to such stressors, and to develop a repertoire of alternative adaptive coping responses. This kind of coping training has been successful in improving individuals' abilities to cope with other stressful events (Meichenbaum, 1996) and may ultimately hold more clinical promise than a focus on personality predispositions.

Our study provides a comparison between Bedouin and Jewish students coping with stress in terms of self-criticism, social support, coping, and depression. Such knowledge is expected to help academic departments understand the different factors and aspects of coping and distress that characterize each group of students. Bedouin and Jewish students may need different interventions to help them adjust to academic life. Thus, psychological counseling and guidance programs should be tailored to the specific needs of each group.

Conclusion

The importance of this study lies in its examination of cultural differences and similarities in the relationship between self-criticism and depression among Bedouin Arab and Jewish college/university students. The present study highlights the possibility that, through the use of coping strategies (especially avoidant coping), self-criticism explains a large portion of depressive symptoms observed in Bedouin Arab cultural contexts. That is, the Bedouin Arab cultural context underscores the role of avoidant coping in the pathway between self-criticism and depressive symptoms, whereas the Israeli Jewish cultural context underscores the direct effect of self-criticism on the levels of depressive symptoms.

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