

LONG-TERM ADJUSTMENT AMONG ISRAELI WAR VETERANS: THE ROLE OF ATTACHMENT STYLE

RACHEL DEKEL^{a,*}, ZAHAVA SOLOMON^b, KARNI GINZBURG^b and
YUVAL NERIA^c

^a*School of Social Work, Bar-Ilan University, Ramat-Gan, Israel;* ^b*Tel-Aviv University, Israel;*
^c*Columbia University and New York State Psychiatric Institute*

This study examines the role of attachment in the long-term adjustment of Israeli veterans. The sample of participants comprised three groups of Israeli veterans who fought in the 1973 Yom Kippur War: 112 combat stress reaction (CSR) casualties, 98 veterans who received medals for bravery, and 189 controls. The CSR casualties reported higher levels of emotional distress than did participants in the two other groups. CSR veterans also showed the lowest levels of secure attachment characteristics. Additionally, the findings revealed different relationships between the avoidant style of attachment and emotional distress measures across the research groups. The implications of these findings are discussed according to two theoretical models of attachment.

Keywords: Attachment; Wartime performance; Post-traumatic stress disorder; CSR casualties; Decorated veterans

Participation in combat is a recognized pathogenic stressor. However, there is considerable variability in human reactions to war stress. Although most combatants are able to cope adequately, between 10 and 30% (Belenky *et al.*, 1987; Glass, 1973) are unable to marshal effective coping mechanisms to deal with the threatening stimuli, and they exhibit immediate psychological dysfunction known as combat stress reaction (CSR).

CSR is characterized by high variability and rapid changes in its manifestations. Among its prevalent features are restlessness, psychomotor deficiencies, withdrawal, increased sympathetic nervous system activity, stuttering, confusion, nausea, vomiting, and paranoid responses (Bartemeier, 1946; Grinker and Spiegel, 1945; Solomon, 1993). The polymorphic and labile nature of the clinical picture, along with the fact that the diagnostic criteria for acute stress reaction were established only recently (American Psychiatric Association, 1994), lead most armies to use a functional definition in which the defining feature is that the soldier ceases to function militarily and acts in a manner that endangers himself and his fellow combatants (Kormos, 1978).

*Corresponding author.

E-mail: dekel@mail.biu.ac.il

In many instances, CSR is not a transient episode. CSR casualties are more prone than other combatants to develop long-term psychiatric disorders such as posttraumatic stress disorder (PTSD), anxiety, and depression, as well as significant impairment in marital, parental, occupational, and social functioning. However, these findings are based on clinical impressions (Archibald, Long, and Miller, 1962), and on only one cohort of Israeli veterans (Solomon, 1993).

At the other end of the continuum of wartime duties are soldiers who exhibit exceptional performance and are recognized as war heroes. Their behaviors are characterized by self-sacrifice, persistence, and leadership (Blake and Butler, 1976; Gal, 1987, 1995). Consistent with these characteristics, McMillan and Rachman (1987) define bravery as persistence in the face of fear. We argue, by contrast, that heroes are not necessarily those who are fearless, but those who act despite their fear (Rachman, 1990). Notably, there is a lack of research dealing with the implications of decorated combatants' readiness to face danger and sacrifice their lives. Nor has our exhaustive survey of the literature identified any studies on the long-term adjustment of wartime-decorated heroes.

In an attempt to fill this gap, the present study examined long-term adjustment among the three groups of veterans: soldiers diagnosed by mental health professionals as CSR casualties; soldiers decorated for heroism, and a control group of soldiers who neither received medals nor "broke down". We hypothesized that the three groups of veterans will differ in their long-term mental adjustment. Specifically, the CSR participants were expected to exhibit more PTSD and psychiatric symptoms than the two other groups of veterans.

Given the apparent variability in long-term mental adjustment, the question arises as to why some veterans adjust better than others. Scholars who have addressed this question emphasize the importance of situational factors, such as level of exposure (Green *et al.*, 1990). Additionally, the variability may be accounted for, at least in part, by personality features such as attachment styles, which were examined in this study as possible predictors of long-term adjustment.

Attachment Styles

Attachment theory holds that the nature and quality of early interactions with the primary caregiver establishes the basis for subsequent interpersonal behavior (Bowlby, 1973, 1980). Scholars have identified three attachment styles: secure, anxious-ambivalent and avoidant, the latter two being insecure styles (Ainsworth *et al.*, 1978). Briefly stated, secure attachment is characterized by comfort with closeness and separateness, whereas avoidant attachment is characterized by distance and excessive self-reliance, and anxious-ambivalent attachment by a need for constant contact and inability to endure even short periods of separation (Hazan and Shaver, 1987; Collins and Read, 1990; Mikulincer and Erev, 1991).

A four-category typology of attachment styles based on Bowlby's theory was proposed to account for the individual's representation of the self and others. In this typology, attachment was dichotomized along two dimensions: a model of the self, which represents one's level of self-worth, and a model of others (Bartholomew, 1990). The dimensions of self are represented by secure versus preoccupied attachment, which are roughly equivalent to Ainsworth's (1978) secure and anxious/ambivalent types. The dimensions of others are represented by fearful and dismissing attachment, which

represent two kinds of avoidance. The fearful type is motivated by conscious fear of anticipated rejection; the dismissing type is motivated by defensive maintenance of self-sufficiency (Bartholomew and Shaver, 1998).

Researchers and theoreticians have suggested that attachment style affects the way in which the individual copes with stress. In this context, it has been argued that secure attachment is an inner resource that facilitates adjustment and improves well-being in adverse situations. Findings show that secure persons perceive themselves in a positive and coherent way, possess good problem-solving skills, tend to view stressful situations optimistically, and believe that others will help them in time of need. These qualities enable them to confront stress with a sense of mastery, to choose effective coping strategies, and to make use of social support in stressful situations (Mikulincer and Florian, 1998). Several studies provide evidence that secure attachment buffers the detrimental psychological effects, even in cases of traumatic stressors such as missile attacks (Mikulincer *et al.*, 1993), extreme life-endangering conditions (Mikulincer *et al.*, 1999), and captivity (Solomon *et al.*, 1998).

Insecure attachment, in contrast, is viewed as a risk factor that may detract from the individual's resilience in times of stress. Findings have shown, for example, that compared with secure individuals, people with an insecure attachment style have less confidence in their ability to cope with difficulties, have poorer problem-solving skills, view difficult situations as less controllable and more threatening, and tend to distrust others. This style leads to more anxious, hostile, and distressed behavior in stressful situations (Shaver and Hazan, 1993; Kobak and Sceery, 1988).

There is also an indication that attachment style is associated with long-term adjustment following traumatic stress. In a study that examined Israeli prisoners of war (POWs) 18 years after their release, both avoidant and anxious-ambivalent ex-POWs showed higher levels of posttraumatic symptoms, anxiety, depression, obsessive symptoms, somatization, hostility, and phobia compared to POWs with a secure attachment style (Solomon *et al.*, 1998).

The second aim of the study is to examine the contribution of attachment styles to long-term adjustment. We hypothesize that secure attachment style will be inversely related to the severity of posttraumatic and psychiatric symptoms, whereas avoidant and anxious-ambivalent attachment styles will be positively related to the severity of posttraumatic and psychiatric symptoms. Moreover, the study examines whether attachment styles moderate the differences between the groups in long-term psychological adjustment.

METHOD

Sample

Participants in the study were 399 Israeli veterans of the 1973 Yom Kippur War, who were categorized into three groups:

Decorated veterans The sample consisted of 150 soldiers who received medals for bravery in the 1973 Yom Kippur War. Of these, 16 were outside of Israel at the time of the study. Of the remaining 134 veterans in the sample, 98 participated in the study, constituting a 73% response rate.

CSR casualties The research team obtained the medical records of a treatment clinic where therapists diagnosed and treated a total of 178 combat stress reaction casualties during the Yom Kippur War. Nine of these men were outside Israel at the time of the study. Of the remaining CSR casualties, 112 participated in the study, constituting a 66% response rate.

Controls A group of 280 combat veterans of the Yom Kippur War was sampled from the Israel Defense Forces' computerized databases. Twenty were outside Israel at the time of the study and five were deceased. Of the remaining veterans in the sample, 189 participated in the study, constituting a 74% response rate.

Examination of sociodemographic variables revealed that the groups differed in age, ethnic background, marital status, educational background, and military rank during the war (see Table I). CSR casualties and decorated veterans were older during the war ($M = 25.27$, $SD = 3.85$; $M = 26.79$, $SD = 6.96$, respectively) than the controls ($M = 22.30$, $SD = 3.60$; $F(2,370) = 30.71$; $p < 0.001$). There were more CSR casualties among those whose fathers were of Asian-African origin, and who had fewer years of schooling. Members of this group had lower military ranks than the controls and decorated veterans. Among the group of decorated veterans, 75% had Israeli-born fathers. Most of the decorated heroes had a high school education and more than half were officers during the war. These background differences will be considered in the analysis of the results.

Measures

Post-Traumatic Stress Disorder (PTSD) Inventory The PTSD Inventory used in this study is a self-report scale based on DSM-III-R criteria (American Psychiatric Association, 1987). The questionnaire consists of 17 statements corresponding to the

TABLE I Frequencies of socio-demographic variables by study group

	<i>CSR Casualties</i>		<i>Controls</i>		<i>Decorated Veterans</i>		
	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	
<i>Ethnic background</i>							
Israeli-born	58	52	108	59	75	81	
Asian/African	47	42	63	34	12	13	
European/ American	7	6	13	7	6	6	$X^2 = 22.11^{***}$, $df = 4$
<i>Marital status</i>							
Single	44	39	134	74	49	53	$X^2 = 35.51^{***}$, $df = 2$
Married	68	61	48	26	44	47	
<i>Education</i>							
Less than 12 years	46	41	47	25	13	14	
12 years and more	65	59	136	75	87	86	$X^2 = 19.70^{***}$, $df = 2$
<i>Military rank</i>							
Privates	88	81	116	65	31	34	
Sergeants/Corporals	9	8	18	10	4	3	
1st/2nd lieutenants	10	9	41	23	36	39	
Lt. col./majors	2	2	4	2	21	22	$X^2 = 83.39^{***}$, $df = 8$

*** $p < 0.001$.

17 PTSD symptoms listed in the DSM-III-R (American Psychiatric Association, 1987). For each statement, participants were asked to indicate whether or not they had experienced symptoms at two points in time: “since the war” and “during the last month”. Based on the number of PTSD symptoms reported, two scores were computed to reflect the intensity of the syndrome both in the present and in the past.

Cronbach’s Alpha the 17 items was high (0.89 for the past and 0.86 for the present), and the scale was found to have a high convergent validity when compared with diagnoses based on structured clinical interviews (Solomon *et al.*, 1993).

SCL-90 The questionnaire is a self-report measure that inquires about 90 psychiatric symptoms during the two weeks preceding the assessment (Derogatis, 1977). The scale assesses both the Global Severity Index (GSI), which reflects the clinical severity of all symptoms, and is computed by averaging participants’ answers on the 90 symptoms, and the severity of the nine symptom categories: somatization, obsessive-compulsive problems, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psycho-ideation.

The SCL-90’s proven psychometric properties have consistently been reported (e.g., Derogatis and Clearly, 1977; Derogatis *et al.*, 1976), and it is widely used among survivors of traumatic events (e.g., Kamphuis and Emmelkamp, 1998). Cronbach’s Alphas for the current sample ranged from 0.80 to 0.92, Alpha for the GSI total score was 0.97.

Attachment Styles Attachment styles were assessed via a questionnaire developed by Mikulincer and others (Mikulincer and Erev, 1991; Mikulincer *et al.* 1990). Participants responded to 15 statements, based on the descriptions by Hazan and Shaver (1987) of how people typically feel in close relationships. Five items represented each of the attachment styles: secure (e.g., “I find it relatively easy to get close to others”; “I don’t worry about someone getting too close to me”); avoidant (e.g., “I am somewhat uncomfortable being close to others”, “I am nervous when anyone gets too close”); and anxious-ambivalent (e.g., “I find that others are reluctant to get as close as I would like”; “I sometimes want to merge with another person, and this desire sometimes scares people away”).

Participants were asked to indicate the extent to which each statement applied to them, on a 7-point scale ranging from 1 (“not at all”) to 7 (“very much”). Each participant received three scores, based on the mean of the items that corresponded to each factor. Cronbach’s Alpha values were 0.53 for the secure attachment, 0.64 for the avoidant style, and 0.73 for the anxious style.

Procedure

Participants received letters in the mail inviting them to take part in the study. A few days after the letters were sent, research assistants phoned all of the potential participants to clarify the purpose of the study and schedule appointments for an interview.

Participants were seated in groups of 30–50 to complete a battery of questionnaires. Prior to filling out the questionnaires, they were assured that the data would remain confidential and signed an informed consent form.

RESULTS

To examine whether the study groups differed in PTSD and psychiatric symptoms and in the attachment dimensions, two MANCOVAs were performed. In the first MANCOVA, posttraumatic symptoms in the past, in the present, and GSI were the dependent variables. In the second MANCOVA, the dependent variables were the three attachment dimensions (secure, anxious, and avoidant). In both analyses, research group was used as a dependent variable with age, ethnic background, military rank, and education as covariates. Both of the MANCOVAs yielded significant main effects: $F(6,686) = 4.52$; $p < 0.001$ for the adjustment measures, and $F(6,678) = 2.20$; $p < 0.05$ for attachment dimensions. Univariate analyses, followed by Scheffe contrasts indicated that the three groups differed in all three long-term adjustment measures: PTSD in the past, PTSD in the present, and GSI. Scheffe contrasts revealed higher levels of PTSD symptoms in the past and present as well as GSI for CSR casualties, compared to both the control and decorated groups. No significant differences were found between the control and the decorated groups.

Regarding the differences in the attachment dimensions significant group differences were found in the secure measure. Scheffe contrasts further revealed lower scores on secure attachment for CSR casualties, compared with the control and the decorated groups. Table II presents means and standard deviations of PTSD symptoms in the past and present, as well as GSI scores on the three attachment dimensions for the three research groups.

Following these tests, a series of multiple hierarchical regression analyses were performed to examine the relative, unique contribution of group, background variables, and attachment styles to current and past posttraumatic symptoms, as well as to GSI. The variables in each regression were entered in chronological order starting with the research groups, which were forced to enter as two demi-variables (CSR versus others, Decorated versus others). The following variables were entered in a stepwise procedure. Background variables (age, education, rank, and ethnic background) were entered in the second step, and the three attachment styles (secure, avoidant and anxious/ambivalent) were entered in the third step. Finally, to test the moderate effect of the attachment styles interactions between attachment styles and study groups were entered.

Post-Traumatic Symptoms in the past The independent variables explained 21% of the variance in PTSD symptoms in the past. The research groups contributed 11.36% to

TABLE II Adjusted means and standard deviations of outcomes and attachment measures according to study groups

	CSR		Controls		Decorated		<i>F</i> (2,345)	<i>Eta</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
PTSD symptoms in the past	7.20	(4.49)	4.78	(3.86)	4.77	(3.00)	$F(2,345) = 12.94^{***}$	0.26
PTSD symptoms in the present	3.17	(4.19)	1.80	(2.91)	1.85	(2.18)	$F(2,345) = 6.11^{**}$	0.18
GSI score	0.50	(0.59)	0.37	(0.47)	0.32	(0.25)	$F(2,345) = 3.47^*$	0.14
Secure	4.19	(1.15)	4.55	(1.10)	4.66	(0.91)	$F(2,341) = 4.54^{**}$	0.16
Anxious	2.64	(0.94)	2.59	(0.86)	2.62	(0.79)	$F(2,341) = 0.09$	
Avoidant	3.21	(1.09)	3.13	(1.03)	3.43	(1.04)	$F(2,341) = 1.75$	

* = $p < 0.05$; ** = $p < 0.01$; *** = $p < 0.001$.

the explained variance, and mainly demonstrated the effect of CSR (as reflected in the first demi-variable). CSR casualties suffered from higher levels of post-traumatic symptoms in the past than did the two other groups ($\beta = -0.30, p < 0.001$). Background variables contributed 3.76% to the explained variance, and officers had fewer symptoms than did other combatants ($\beta = 0.21, p < 0.001$). Attachment styles contributed 5.69% to the explained variance, and the avoidant style was the only one that contributed significantly. Combatants with high avoidant characteristics had more post-traumatic symptoms than did participants in the other two groups ($\beta = 0.24, p < 0.001$). None of the interactions entered the equation.

Current Post-Traumatic Symptoms The independent variables explained 18% of the variance of current post-traumatic symptoms. Wartime performance contributed 6.68% to the explained variance and again demonstrated the effect of CSR, where CSR casualties had more current PTSD symptoms than did participants in the other two groups ($\beta = -0.23, p < 0.001$). Background variables contributed 6.36% to the explained variance. Combatant officers ($\beta = 0.13, p < 0.05$) whose parents were of European–American origin ($\beta = 0.12, p < 0.001$), as well as combatants with higher education ($\beta = -0.11, p < 0.05$) had less post-traumatic symptomatology than did participants in the other groups. Anxious and avoidant styles contributed 4.75% to the explained variance: the more avoidant ($\beta = 0.11, p < 0.05$), and anxious ($\beta = 0.16, p < 0.01$) the veteran's attachment style, the higher their post-traumatic symptoms. None of the interactions were significant.

GSI The independent variables explained 31% of the variance in the GSI. Wartime performance contributed 5.1% to the explained variance. CSR casualties suffered from higher levels of psychiatric symptoms than did the decorated heroes ($\beta = -0.15, p < 0.01$), and the controls ($\beta = 0.12, p < 0.05$). Background variables contributed 6.78% to the explained variance. Combatants whose parents were of European–American origin ($\beta = 0.18, p < 0.001$), and officers ($\beta = 0.17, p < 0.01$) reported fewer symptoms. Attachment styles contributed 17.74% to the explained variance: the more avoidant ($\beta = 0.24, p < 0.001$), and anxious ($\beta = 0.26, p < 0.001$) the participants were, and the less secure their attachment style ($\beta = -0.09, p < 0.05$), the higher their psychiatric symptoms. Due to these variables, the contribution of the research groups was insignificant. As for the differences in GSI (Table 2), they may be attributed to differences in attachment styles that characterized the respective groups. Finally, the interaction between avoidant style and research group contributed significantly toward explaining GSI ($\beta = 0.14, p < 0.05$). Correlations calculated to understand the significance of the interaction revealed a significant positive relationship between avoidant attachment style and GSI among the CSR and control groups ($r = 0.45$ and $r = 0.36, p < 0.001$, respectively). As for the decorated group, the correlation was insignificant ($r = 0.15$).

DISCUSSION

The findings of this study indicate that CSR is not a transient episode. Veterans who had CSR on the battlefield reported more PTSD symptoms in the past and in the

present, and higher level of psychiatric symptoms than did the two other groups. Several explanations can be offered for the long-term vulnerability among the CSR veterans.

First, according to Titchner and Ross (1974) the PTSD syndrome among CSR veterans is a direct result of a breakdown on the battlefield. The profound feelings of helplessness and anxiety they experienced during combat persisted over time, and their war wounds crystallized into a chronic syndrome. Second, the long-term vulnerability of these veterans may be due to the psychiatric label accompanying the breakdown. In Israeli society where masculine identity, is associated with military service, breakdown in combat is associated with blame. This explanation is consistent with findings that CSR veterans have low self-esteem (Dekel *et al.*, in press).

In contrast to the CSR veterans, the decorated group exhibited very good mental health. Although we could not locate studies that directly assessed the long-term mental adjustment of war-decorated heroes, Dutch citizens who resisted the Nazis in World War II were found to have high levels of posttraumatic symptoms (Van Der Veld *et al.*, 1994). This discrepancy may be due to the differential responses to that behavior in society at large. Whereas the Israeli veterans were recognized for their behavior and received considerable honor and respect, the Dutch citizens received no recognition from the official authorities or from society.

With regard to attachment, findings show that CSR veterans had lower levels of secure attachment characteristics than did veterans in the other two groups. This finding suggests that the vulnerability of the CSR veterans is not limited to emotional distress, but extends to a basic personality feature. Whether the vulnerability preceded or followed their war experience, however, is unknown. The literature views attachment style as a stable personality feature formed in infancy and early childhood, which is resistant to subsequent change (Feeney and Noller, 1996; Levy *et al.*, 1998; Klohnen and Bera, 1998). This view has been challenged, and various researchers have presented findings pointing to the instability of attachment style over time (Kirkpatrick and Hazan, 1994; Baldwin and Fehr, 1995). Other investigators have found a relationship between negative life events and stability, where the stability among people who have experienced negative life events was lower (Waters *et al.*, 2000). It is possible that a decline in secure characteristics is one of many after-effects of the traumatic war experience.

The regression analyses revealed a salient and the direct contribution of the attachment characteristics to stress residues. In all three groups, participants with anxious style or avoidant attachment styles reported more PTSD symptoms and more psychiatric symptoms than did those with a secure style. These findings are consistent with previous research, that examined the effects of anxious and avoidant attachment on general well-being and adjustment (Hazan and Shaver, 1990; Priel and Shamai, 1995), specifically following exposure to various types of traumatic events (Solomon *et al.*, 1998; Mikulincer and Florian, 1997; Mikulincer *et al.*, 1993, 1999).

We found only one significant interaction between attachment style and research group. Specifically, the decorated veterans with an avoidant attachment style were less vulnerable to emotional maladjustment than were avoidant veterans in the CSR and control groups. In light of these findings, this attachment style will be discussed comprehensively below.

The traditional theoretical perception views avoidant attachment as part of a broader category of insecure styles, along with anxious style. According to Bowlby (1980), insecure attachment, i.e., anxious or avoidant attachment, develops when caregivers disregard stress signs conveyed by an infant, and causes individuals to be vulnerable to stress situations. This view has supported by research that found similar levels of distress among avoidant and anxious individuals (Priel and Shamai, 1995; Hazan and Shaver, 1990).

An additional tool for measuring adult attachment is Bartholomew's four-category classification (Bartholomew, 1990; Bartholomew and Horowitz, 1991). *Secure* attachment is characterized by a positive model of the self and the other. The *preoccupied* attachment style, which corresponds to the anxious type, is characterized by a negative perception of the self and a positive perception of the other. The two other styles represent two forms of adult avoidance: *Fearful-avoidant*, characterized by a negative model of the self and the other, in which the individual experiences frustrated attachment needs. These individuals desire social contact and intimacy, but experience pervasive interpersonal distrust and fear of rejection. The last avoidant style is *dismissing* attachment, characterized by negative perceptions of others and positive perceptions of the self. This style reflects a way of maintaining a positive self-image in the face of rejection by attachment figures, by distancing one's self and developing a model of the self as fully adequate and hence invulnerable to negative feelings. These individuals avoid close relationships, value independence, and claim that close relations with others are not important. They can maintain their high self-esteem by perceiving others as less important than themselves.

Although the two-avoidant types of individuals tend to avoid close relations, they differ in the importance that they attribute to approval from others. Whereas the dismissing type achieves independence and self-esteem instead of intimacy, the fearful type has problems in both areas. This model has gained broad empirical support over the last decade (Bartholomew and Horowitz, 1991; Cozzarelli *et al.*, 1998; Feeny *et al.*, 1994; Fraley *et al.*, 1998; Levy *et al.*, 1998).

It can be assumed that the avoidant participants in the CSR group are the fearful type, whereas the avoidant participants in the decorated group are the dismissing type. Accordingly, based on their experience in the war, the CSR veterans have negative perceptions of themselves and the other. As for the decorated veterans, they also did not rely on others as a potential source of help, but contrary to their fearful counterparts, they perceived themselves as being capable of coping with the stressful situations in light of their positive experience in the war. Notably, this assumption deserves further empirical investigation. In addition, the four types of attachment should be further explored and developed.

On the whole, the findings indicate that higher rank, Western ethnic origin, and higher education contribute to adjustment. Officers in the Israel Defense Forces represent an elite group of soldiers whose selection criteria include high IQ, high motivation to serve in the army, high self-esteem, and emotional maturity. Rank may be considered as an indication of robustness and personality resources, which give officers an advantage over their lower-ranking counterparts. In addition, it is possible that because of their special training and the responsibility they bore for their subordinates, the significance of combat was greater for officers, and helped them achieve some control in face of the threat, which promoted short-term and long-term

resiliency (Waysman *et al.*, 1998). Similarly, education is associated with qualities such as motivation and persistence that foster coping and endurance. This finding is consistent with other studies, which have also shown that education improves adjustment to stress (Menagham, 1983; Neria *et al.*, 2000).

Most of the research on the relationship between country of origin and adjustment is based on American studies that compared white and black veterans. Although some studies found an effect for ethnic background (e.g., Frueh *et al.*, 1996; Sutker *et al.*, 1995), others did not (Frueh *et al.*, 1997). Moreover, it is not clear whether the differences in levels of distress are due to difference in reporting styles. It is important to bear in mind that ethnic background may affect the way individuals ask for help, to what they consider to be a problem, and even the prognosis for overcoming distress (Hughes, 1993). Finally, the results of this study emphasize the importance of examining the entire spectrum of functioning as implicated in the three groups. However, the research data were collected through retrospective self-reports, which, as is well known, may be affected by peculiarities of memory and bias. In addition, the attachment questionnaire used in the current paper describes feelings and behaviors in close relationships that are intended to reflect Ainsworth's three types of infants. Participants were asked which of the items best characterizes them in close relationships. However, subsequent studies have revealed that attachment styles are best conceptualized as regions in a two-dimensional space of attachment anxiety and attachment avoidance (Brennan *et al.*, 1998). The individual's locations on these two dimensions are measured by two reliable scales developed by Brennan *et al.*, (1998), which are based on factor analyses of previous measures. In future studies, it would be worthwhile to employ prospective designs and better conceptualization of attachment in an attempt to gain a better understanding of the relationship between attachment and immediate functioning, in addition to clarifying the mechanisms that underlie each attachment style, especially avoidance.

References

- Ainsworth, M.D.S., Blehar, M., Waters, E., and Wall, S. (1978). *Patterns of attachment: A psychological study of strange situation*. Hillsdale, NJ: Erlbaum.
- American Psychiatric Association. (1987). *Diagnostic and statistical manual of mental disorders (III-R ed.)*. Washington, DC: American Psychiatric Association.
- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders (4th ed.)*. Washington, DC: American Psychiatric Association.
- Archibald, H.C., Long, D.M. and Miller, C. (1962). Gross stress reactions to combat: A 15 years follow up. *American Journal of Psychiatry*, **119**, 317–322.
- Baldwin, M.W. and Fehr, W.B. (1995). On the instability of attachment style ratings. *Personal-Relationships*, **2**, 247–261.
- Bartemeier, L.H. (1946). Combat exhaustion. *Journal of Nervous and Mental Disease*, **104**, 359–425.
- Bartholomew, K. (1990). Avoidance of intimacy: An attachment perspective. *Journal of Social and Personal Relationship*, **7**, 147–178.
- Bartholomew, K. and Horowitz, L.M. (1991). Attachment styles among young adults: a test of four-category model. *Journal of Personality and Social Psychology*, **61**, 226–244.
- Bartholomew, K. and Shaver, P.R. (1998). Methods of assessing adult attachment: Do they converge? In: Simpson J.A. and Rholes W.S. (Eds.), *Attachment theory and close relationship*, pp. 25–45. Guilford Press, New York.
- Belenky, G.L., Noy, S. and Solomon, Z. (1987). Battle stress, morale, cohesion, combat effectiveness, heroism and psychiatric casualties: The Israeli experience. In: Belenky G.L. (Ed.), *Contemporary studies in combat psychiatry*, pp. 11–20. Green Greenwood Press Inc. Westport, CT.

- Brennan, K.A., Clark, C.L. and Shaver, P.R. (1998). Self-report measurement of adult attachment: An integrative overview. In: Simpson J.A. and Rholes W.S. (Eds.), *Attachment theory and close relationships*, pp. 46–76. Guilford Press, New York.
- Blake, J.A. and Butler, S. (1976). The medal honor structure in the U.S. military. *The Sociological Quarterly*, **17**, 561–567.
- Bowlby, J. (1973). *Attachment and loss: Separation, anxiety and anger*. New York: Basic Books.
- Bowlby, J. (1980). *Attachment and loss: Sadness and separation*. New York: Basic Books.
- Collins, N.L. and Read, S.J. (1990). Adult attachment, working models, and relationship quality in dating couples. *Journal of Personality and Social Psychology*, **58**, 644–663.
- Cozzarelli, C., Sumer, N. and Major, B. (1998). Mental models of attachment and coping with abortion. *Journal of Personality and Social Psychology*, **74**, 453–467.
- Dekel, R., Solomon, Z., Elklit, A. and Ginzburg, K. (in press). Cognitive Schemes and Course of PTSD. *Journal of Social Psychology*.
- Derogatis, R.L. (1977). *The SCL-90 manual F: Scoring, administration and procedures for the SCL-90*. Baltimore: John Hopkins University, School of Medicine, Clinical Psychometrics Unit.
- Derogatis, L.R. and Clearly, P. (1977). A confirmation of the dimensional structure of the SCL-90: A study in construct validity. *Journal of Clinical Psychology*, **33**, 981–989.
- Derogatis, R.L., Rickles, K. and Roch, A. (1976). SCL-90 and the MMPI: A step in the validity of a new self report scale. *British Journal of Psychiatry*, **128**, 280–289.
- Feeney, J.A. and Noller, P. (1996). *Adult attachment*. Sage, Thousand Oaks, CA.
- Feeney, J.A., Noller, P. and Hanrahan, M. (1994). Assessing adult attachment. In: Sperling, M.B. and Berman, W.H. (Eds.), *Attachment in adults: Clinical and developmental perspectives*, pp. 128–154. Guilford, New York.
- Fraley, R., Davis, K.E. and Shaver, P.R. (1998). Dismissing-avoidance and the defensive organization of emotion, cognition and behavior. In: Simpson, J.A. and Rholes, W.S. (Eds.), *Attachment theory and close relationships*, pp. 249–279. Guilford, New York.
- Frueh, B.C., Gold, P.B., Arellano, M.A. and Brady, K.L. (1997). A racial comparison of combat veterans evaluated for PTSD. *Journal of Personality Assessment*, **68**, 692–702.
- Frueh, B.C., Smith, D.W. and Libert, J.M. (1996). Racial differences on psychological measures in combat veterans seeking treatment for PTSD. *Journal of Personality Assessment*, **68**, 692–702.
- Gal, R. (1987). Combat stress as an opportunity: The case of heroism. In: Belenky, G.L. (Ed.), *Contemporary studies in combat psychiatry*, pp. 31–46. Greenwood, Westport, CT.
- Gal, R. (1995). Personality and intelligence in the military: the case of war heroes. In: Saklofske, D.H. and Zeidener, M. (Eds.), *International handbook of personality and intelligence*, pp. 727–757. Plenum Press, New York, NY.
- Glass, A.J. (1973). Lessons learned. In: Mullins, W.S. and Glass, A.J. (Eds.), *Neuropsychiatry in World War II. Vol II, overseas theaters*. U.S. Government Printing Office, Washington, DC.
- Green, B.L., Grace, M.C., Lindy, J.D. and Gleser, G.C. (1990). War stressors and symptom persistence in posttraumatic stress disorder. *Journal of Anxiety Disorder*, **4**, 31–39.
- Grinker, R.P. and Spiegel, J.P. (1945). *Men under stress*. Blakistan, Philadelphia.
- Hazan, C. and Shaver, P.R. (1987). Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology*, **52**, 511–524.
- Hazan, C. and Shaver, P.R. (1990). Love and work: An attachment-theoretical perspective. *Journal of Personality and Social Psychology*, **59**, 270–280.
- Hughes, C.C. (1993). Culture in clinical psychiatry. In: Gaw, A.C. (Ed.), *Culture ethnicity and mental illness*, pp. 3–42. American Psychiatric Press, Washington, DC.
- Kamphuis, J.K. and Emmelkamp, P.M.G. (1998). Crime-related trauma: Psychological distress in victims of bank robbery. *Journal of Anxiety Disorders*, **12**, 199–208.
- Kirkpatrick, L. and Hazan, C. (1994). Attachment styles and close relationships: A four-year prospective study. *Personal-Relationships*, **1**, 123–142.
- Klohn, E.C. and Bera, S. (1998). Behavioral and experiential patterns of avoidantly and securely attached women across adulthood: A 31-year longitudinal perspective. *Journal of Personality and Social Psychology*, **74**, 211–223.
- Kobak, R.R. and Sceery, A. (1988). Attachment in late adolescence: Working models, affect regulation, and representations of self and others. *Child Development*, **59**, 135–46.
- Kormos, H.R. (1978). The nature of combat stress. In: Figley, C.R. (Ed.), *Stress disorders among Vietnam veterans*, pp. 3–22. Brunner/Mazel, New York.
- Levy, K.N., Blatt, S.J. and Shaver, P.R. (1998). Attachment styles and parental representations. *Journal of Personality and Social Psychology*, **74**, 407–419.
- McMillan, T.M. and Rachman, S.J. (1987). Fearlessness and courage: A laboratory study of paratrooper veterans of the Falklands war. *British Journal of Psychology*, **78**, 375–383.

- Menaghiam, E.G. (1983). Individual coping efforts: Moderators of the relationship between life stress and mental health outcomes. In: Kaplan, H.B. (Ed.), *Psychosocial stress: Trends in theory and research*, pp. 157–191. Academic Press, New York, NY.
- Mikulincer, M. and Erev, E. (1991). Attachment style and the structure of romantic love. *British Journal of Social Psychology*, **30**, 273–291.
- Mikulincer, M. and Florian, V. (1997). Are emotional and instrumental supportive interactions beneficial in times of stress? The impact of attachment style. *Anxiety, Stress, & Coping*, **10**, 109–127.
- Mikulincer, M. and Florian, V. (1998). The relationship between adult attachment styles and emotional and cognitive reactions to stressful events. In: Simpson, J.A. and Rholes, W.S. (Eds.), *Attachment theory and close relationships*, pp. 143–165. Guilford, New York.
- Mikulincer, M., Florian, V. and Tolmacz, R. (1990). Attachment styles and fear of personal death: A case study of affect regulation. *Journal of Personality and Social Psychology*, **58**, 273–280.
- Mikulincer, M., Florian, V. and Weller, A. (1993). Attachment styles, coping strategies, and posttraumatic psychological distress: The impact of the Gulf War in Israel. *Journal of Personality and Social Psychology*, **64**, 817–826.
- Mikulincer, M., Horesh, N., Eilati, I. and Kotler, M. (1999). The association between adult attachment style and mental health in extreme life-endangering conditions. *Personality and Individual Differences*, **27**, 831–842.
- Neria, Y., Solomon, Z. and Dekel, R. (2000). Adjustment to war captivity: the role of sociodemographic background, trauma severity, and immediate responses, in the long-term mental health of Israeli ex-POWs. *Anxiety, Stress, & Coping*, **13**, 229–246.
- Priel, B. and Shamai, D. (1995). Attachment style and perceived social support: Effects on affect regulation. *Personality and Individual Differences*, **19**, 235–241.
- Rachman, S.J. (1990). *Fear and courage*. W. E. Freeman Company, New York.
- Shaver, P.R. and Hazan, C. (1993). Adult romantic attachment: Theory and evidence. In: Perlman, D. and Jones, W. (Eds.), *Advances in personal relationships*, Vol. 4, pp. 29–70. Kingsley, London.
- Solomon, S. (1993). *Combat stress reaction: The enduring toll of war*. Plenum Press, New York.
- Solomon, Z., Benbenishty, R., Neria, Y., Abramowitz, M., Ginzburg, K. and Ohry, A. (1993). Assessment of PTSD: Validation of the revised PTSD Inventory. *Israel Journal of Psychiatry and Related Sciences*, **30**, 110–115.
- Solomon, Z., Ginzburg, K., Mikulincer, M., Neria, Y. and Ohry, A. (1998). The role of attachment in coping with war captivity. *European Journal of Personality*, **12**, 271–285.
- Sutker, P.B., Davis, J., Uddo, M. and Ditta, Shelly. (1995). Assessment of psychological distress in Persian Gulf troops: Ethnicity and gender comparisons. *Journal of Personality Assessment*, **64**, 415–427.
- Titchner, J.L. and Ross, W.D. (1974). Acute or chronic stress as determinants of behavior, character & neurosis. In: Ariety, S. and Brody, E.B. (Eds.), *Adult clinical psychiatry: American handbook of psychiatry*, Vol. 3. Basic Books, New York.
- Van Der Velde, W.O., Wouters, E. and Pelsler, H.E. (1994). The price of heroism: Veterans of the Dutch resistance to the Nazi occupation and the Holocaust in World War II. *Holocaust and Genocide Studies*, **8**, 335–348.
- Waters, M., Treboux, D., Crowell, J. and Albersheim, L. (2000). Attachment security in infancy and early adulthood: A twenty-year longitudinal study. *Child Development*, **71**, 684–689.
- Waysman, M., Solomon, Z. and Schwarzwald, J. (1998). Long-term positive changes following traumatic stress among Israeli prisoners of war, *Megamot*, **39**, 31–55. (Hebrew).