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The Quality of the Intimate Relationships of Male Vietnam Veterans: Problems Associated with Posttraumatic Stress Disorder

David S. Riggs,[1,2] Christina A. Byrne,[3] Frank W. Weathers[1], and Brett T. Litz[1]

This study examined the quality of the intimate relationships of male Vietnam veterans. Heterosexual couples in which the veteran had posttraumatic stress disorder (PTSD; n = *26) were compared to couples in which the veteran did not have PTSD* (n = *24). Over 70% of the PTSD veterans and their partners reported clinically significant levels of relationship distress compared to only about 30% of the non-PTSD couples. Relationship difficulties appeared to encompass a wide range of areas, with PTSD veterans and their partners reporting that they had more problems in their relationships, more difficulties with intimacy, and had taken more steps toward separation and divorce than the non-PTSD veterans and their partners. The degree of relationship distress was correlated with the severity of veterans' PTSD symptoms, particularly symptoms of emotional numbing. Research and clinical implications of the results are discussed.*

KEY WORDS: PTSD; marriage; relationships; veterans.

There is a growing body of evidence that the impact of trauma and posttraumatic stress disorder (PTSD) extends beyond trauma victims to significantly disrupt their intimate relationships and families. For example,

[1]Department of Veterans Affairs Medical Center, National Center for PTSD, Boston, Massachusetts 02130; Tufts University School of Medicine, Department of Psychiatry, Boston, Massachusetts 02155.
[2]To whom all correspondence should be addressed at National Center for PTSD (116B-2), Boston DVAMC, 150 South Huntington Ave., Boston, Massachusetts 02130.
[3]Department of Veterans Affairs Medical Center, National Center for PTSD, Boston, Massachusetts. Christina A. Byrne is currently at the National Crime Victims Research and Treatment Center, Medical University of South Carolina, Charleston, South Carolina 29401.

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combat veterans with PTSD appear at risk for significant relationship problems (Card, 1987; Carroll, Rueger, Foy, & Donohoe, 1985; Jordan et al., 1990; Waysman, Mikulincer, Solomon, & Weisenberg, 1993). Veterans with PTSD are less satisfied with their intimate relationships (Carroll et al., 1985; Jordan et al., 1992), and these relationships are less cohesive, less expressive, more conflictual and more violent than are the relationships of veterans without PTSD (Carroll et al., 1985; Jordan et al., 1992; Solomon, Mikulincer, Fried, & Wosner, 1987). Data from a large epidemiological study of Vietnam veterans, the National Vietnam Veterans Readjustment Survey (NVVRS; Jordan et al., 1992; Kulka et al., 1990), indicate that male Vietnam veterans with PTSD are twice as likely as their non-PTSD counterparts to have been divorced and almost three times as likely to have experienced multiple divorces.

Partners of Vietnam veterans with PTSD also report significantly less satisfaction with their lives than partners of Vietnam veterans without PTSD (Jordan et al., 1992). The impact of PTSD on the partners of veterans may extend beyond the effects on relationships. Waysman et al. (1993) found that wives of Israeli veterans with PTSD reported higher psychiatric symptoms and impaired social relations compared to the wives of veterans without PTSD and attributed this to rigid and conflictual family interactions.

There are several possible reasons that individuals with PTSD experience difficulties within intimate relationships. Because emotional expression plays an important role in the intimate exchanges that are integral to well functioning relationships (Johnson & Greenberg, 1994), it seems likely that symptoms of emotional numbing (i.e., loss of interest in activities, detachment from others, restricted affect) contribute to relationship distress. Similarly, hyperarousal symptoms of PTSD, such as irritability and concentration problems, may adversely affect the way that the couple approaches problems, increasing conflict and distress within the relationship. Difficulties in intimate relationships may, in turn, contribute to the persistence of posttraumatic symptoms (Barrett & Mizes, 1988; Beiser, Turner, & Ganesan, 1989; Davidson, Hughes, Blazer, & George, 1991; Solomon, Waysman, & Mikulincer, 1990). Although these are reasonable hypotheses, the scarcity of empirical data on the specific relationship problems faced by veterans with PTSD hampers our understanding of the complex interaction of PTSD symptoms and intimate relationships. The present study examined several specific questions about the association of posttraumatic symptoms and difficulties in the intimate relationships of Vietnam veterans.

Although research has demonstrated that PTSD is associated with relationship difficulties, previous studies have used broad or unstandardized measures of relationship functioning (e.g., divorce rates, satisfaction), leav-

ing numerous questions as to specific problems within the relationships of veterans with PTSD. For example, while data from the NVVRS (Jordan et al., 1990) provide the strongest evidence of the negative impact of PTSD on relationships of Vietnam veterans, it is difficult to interpret these results within the larger literature on marital relationships because Jordan et al. (1990) did not include a standard measure of marital adjustment. Given the large number of individuals seeking clinical services for posttraumatic symptoms and the apparent difficulties that occur within their intimate relationships, the present study attempted to document the degree to which these relationship problems are clinically significant.

A second limitation of the existing studies in this area is their overreliance on veteran's reports. Although these reports provide important information, the failure to evaluate the partners' perceptions may produce a biased view of the relationship difficulties of individuals with PTSD. Those studies that did evaluate both veterans and their partners did not compare perceptions of relationship functioning within dyads (e.g., Jordan et al., 1990). Marital researchers have long acknowledged that husbands and wives may have quite different perceptions of the relationship and that in order to fully understand the quality of an intimate relationship one must examine reports from both members of the couple. In the present study, we assessed and systematically compared the perceptions of veterans and their partners.

In addition, although studies have documented that veterans with PTSD have less satisfying relationships, they have not examined the role of specific clusters of PTSD symptoms (i.e., reexperiencing, avoidance, increased arousal) that may differentially affect relationship quality. It is possible that the relationship difficulties experienced by individuals with PTSD reflect problems arising from specific PTSD symptoms (e.g., emotional numbing symptoms contributing to decreased intimacy). The present study examined the association of relationship difficulties with clusters of PTSD symptoms.

This study was designed to address some shortcomings of previous research on the relationships of combat veterans. We assessed the relationship quality of male Vietnam veterans and their female partners using standard measures of relationship distress, steps taken towards ending the relationship, relationship problems, and intimacy. We predicted that members of couples in which the veteran has PTSD would be more likely than members of couples in which the veteran does not have PTSD to report clinically significant levels of distress in their relationships. Second, we expected that this distress would be reflected in differences across a range of relationship quality measures with PTSD-positive veterans and their partners reporting more problems within the relationship, greater fear of

intimacy, and taking more steps toward separation than PTSD-negative veterans and their partners. Finally, we predicted that individuals' perceptions of relationship quality would be significantly correlated with the severity of veterans' PTSD symptoms, and that the strongest associations would emerge between measures of relationship quality and the severity of veterans' emotional numbing and hyperarousal symptoms.

Method

Participants

Participants were 50 male Vietnam veterans and their intimate female partners. Couples were recruited through newspaper ads and flyers placed in a Department of Veterans Affairs Medical Center in a large Northeastern city. All of the men served in the Vietnam theater of operations between 1965 and 1973. All of the couples were married or cohabitating for at least 1 year prior to participating in the study. None of the participants was actively psychotic at the time of the study and all were asked to refrain from alcohol or drug use for 24 hr prior to participating in the study. All participants were able to read and write sufficiently well to complete the questionnaires included in the study.

Measures

Dyadic Adjustment Scale (DAS). The DAS (Spanier, 1976) is a 32-item self-report questionnaire that has been used widely to assess relationship satisfaction. Internal consistency (alpha) coefficients are above .90 (Spanier, 1976). Scores below 98 on the total DAS are generally considered to reflect clinically significant distress within the relationship (Heyman, Sayers, & Bellack, 1994). To examine marital distress in the present sample, we used a joint distress estimate (i.e., the average of the husband and wife DAS scores) as well as individual husband and wife reports. In all cases, distress was operationally defined as a DAS score (couple average or individual) less than 98 (Heyman et al., 1994).

Marital Status Inventory (MSI). The MSI (Weiss & Cerreto, 1980) is a 14-item true/false questionnaire that assesses likelihood of separation and divorce. The MSI appears internally consistent, correlates significantly with measures of marital satisfaction, and differentiates couples seeking marital therapy from those seeking therapy for parent-child problems (Crane & Mead, 1980; Weiss & Cerreto, 1980).

Relationship Problems Scale (RPS). The RPS (Riggs, 1993) is a 32-item questionnaire that assesses the severity of problems within relationships. Respondents rate each item as no problem (0), a minor problem (1), a moderate problem (2), or a major problem (3). Responses are summed to produce a total problem score. The RPS total problem score has good internal consistency (alpha = .86) and correlates with reports of relationship aggression.

Fear of Intimacy Scale (FIS). The FIS (Descutner & Thelen, 1991) is a 35-item self-report measure designed to assess a person's anxiety about close relationships with another. The FIS is internally consistent, reliable over time and has demonstrated adequate concurrent validity (Descutner & Thelen, 1991; Doi & Thelen, 1993).

PTSD Checklist Military Version (PCL-M). The PCL-M (Weathers, Litz, Herman, Huska, & Keane, 1993) is 17-item self-report questionnaire. Items on the PCL-M correspond to the DSM-IV diagnostic criteria for PTSD and include five reexperiencing symptoms, seven avoidance/ numbing symptoms, and five hyperarousal symptoms. Respondents indicate the extent to which they have been bothered by each symptom in the past month using a 5-point Likert type scale ranging from "Not at all" to "Extremely." The PCL-M is internally consistent, reliable over time, and appears to be a valid measure of PTSD symptomatology (Weathers et al., 1993). In the present study, veterans were diagnosed with PTSD based on their responses to the PCL-M. Items endorsed as "moderate" (rating of 3) or above were scored as present. Following DSM-IV, veterans with one reexperiencing, three avoidance and two arousal symptoms were categorized as PTSD-positive.

Procedure

Potential participants telephoned a member of our research team who described the study and scheduled an appointment with the couple. When they arrived at the clinic, members of the couple were greeted by a researcher who explained the procedures of the study. After signing consent forms, the members of the couple were placed in separate rooms to complete the questionnaires. After they completed the study, men and women met separately with the researcher to ask questions and discuss any concerns raised by their participation in the study. The researcher then debriefed the couple as to the hypotheses and procedures of the study.

Data Preparation and Analytic Plan

Prior to data analyses, we examined each participant's responses for completeness. Any participant missing 15% or more items from a particular scale

were omitted from the analysis of that scale. For participants missing less than 15% of the items from a scale, we prorated their responses to approximate full scale scores. Composite relationship satisfaction scores were computed by averaging the Dyadic Adjustment Scale (DAS) scores of veterans and their partners. Relationships were classified as distressed (DAS < 98) or satisfied (DAS ≥ 98) based on veteran, partner and composite couple scores.

Based on their responses to the PTSD Checklist (PCL-M), 26 of the 50 veterans were classified as having PTSD (mean PCL-M = 58.7), and the remaining 24 were designated as non-PTSD (mean PCL-M = 10.8). Couples and partners were also designated as PTSD-positive or PTSD-negative based on the *veteran's* responses on the PCL-M. Thus, the term "PTSD-positive" refers to veterans with PTSD, their partners, and relationships; "PTSD-negative" refers to veterans without PTSD, their partners and relationships. Participants were largely Caucasian (90%), Catholic (50%) or Protestant (19%), almost all were high school graduates (95%) and a number (29%) had college degrees. Analyses revealed only one difference in demographic characteristics: PTSD-positive veterans (M = 47.3 years) were slightly younger than the PTSD-negative veterans (M = 50.3 years), F (1, 48) = 5.04, $p < .05$.

Data analyses proceeded as follows. First, we compared the proportion of dyads in the PTSD-positive and PTSD-negative groups who reported clinically significant levels of relationship distress using chi-square tests. Second, analyses of variance were used to compare PTSD groups and genders on the four measures of relationship quality (Dyadic Adjustment Scale, Marital Status Inventory, Relationship Problems Scale, Fear of Intimacy Scale). Finally, we examined the association of the relationship measures to the severity of PTSD symptom clusters (reexperiencing, avoidance, arousal) using correlations and regression analyses.

Results

PTSD and Relationship Distress

Chi-square tests were used to compare the rates of relationship distress in the PTSD-positive and PTSD-negative groups. Analysis of composite distress score (based on the mean veteran and partner Dyadic Adjustment Scale scores) indicated that PTSD-positive dyads were more likely to be distressed than PTSD-negative dyads (75% vs. 32%), $\chi^2(1, N = 49) = 9.09$, $p < .01$. Separate analyses of veteran and partner reports revealed similar differences. PTSD-positive veterans were more likely than PTSD-negative veterans to report clinically significant distress levels (72% vs. 24%), $\chi^2(1, N = 50) = 8.19$, $p < .005$. PTSD-positive partners were also more likely

Table 1. Mean Relationship Quality Scores Broken Down by Veteran's PTSD Status and Gender

	PTSD Positive Couples (n = 26)		PTSD Negative Couples (n = 24).		
	Men	Women	Men	Women	Effect[a]
Dyadic Adjustment Scale[b]	87.0	92.7	107.6	105.5	a
Fear of Intimacy Scale[c]	104.0	76.5	76.0	63.9	a,b
Marital Status Inventory[d]	2.2	2.9	1.2	2.2	a,b
Relationship Problems Scale[e]	28.8	22.7	12.2	15.5	a,c

[a]a = significant PTSD effect; b = significant gender effect; c = significant PTSD by gender interaction.
[b]Higher numbers reflect better adjustment.
[c]Higher numbers reflect greater intimacy problems.
[d]Higher numbers reflect more moves toward separation.
[e]Higher numbers reflect more problems.

to indicate clinical levels of relationship distress than were PTSD-negative partners (71% vs. 36%), $\chi^2(1, N = 49) = 7.35, p < .01$.

PTSD and Measures of Relationship Quality

A 2 (veteran's PTSD status) by 2 (gender) MANOVA was conducted on the global relationship quality scores (Dyadic Adjustment Scale, Marital Status Inventory, Fear of Intimacy Scale, Relationship Problems Scale). Following the suggestion of Kenny (1988), couples were the unit of analysis and gender was treated as a within subject factor. One couple was omitted from these analyses because the partner failed to complete the Dyadic Adjustment Scale. Group means for these measures are presented in Table 1. This analysis revealed significant main effects of veteran's PTSD status, $F(4, 44) = 7.49, p < .001$, and of gender, $F(4, 44) = 12.54, p < .001$, modified by a significant PTSD by gender interaction, $F(4, 44) = 3.33, p < .02$ (all F values based on Wilk's Lambda).

To examine differences on individual relationship measures, follow-up 2 (veteran's PTSD status) by 2 (gender) analyses of variance (ANOVAs) were conducted. Due to the number of analyses involved, a probability value of $p < .01$ was used to identify significant effects. Results of these analyses indicated that PTSD-positive couples, compared to PTSD-negative, experienced more relationship distress (Dyadic Adjustment Scale), $F(1, 47) = 17.54, p < .001$, more difficulties with intimacy (Fear of Intimacy Scale), $F(1, 48) = 22.37$, $p < .001$, and more problems in their relationships (Relationship Problems Scale), $F(1, 48) = 32.65, p < .001$. Significant gender effects indicated that men had more difficulty than women with regard to intimacy issues (Fear of Intimacy Scale), $F(1, 48) = 31.99, p < .001$. There was also a significant uni-

Table 2. Regression of Relationship Quality Measures on Veterans' PTSD Symptom Clusters Including Zero-order Correlations

	Regression Equation							
	Beta Weights					Zero-order Correlations		
Scale	Reex[a]	Avoid[b]	Arous[c]	Total R^2	Sig. of Equation	Reex[a]	Avoid[b]	Arous[c]
Veterans								
DAS[d]	.03	−.47[e]	−.11	.26	<.005	−.43[f]	−.51[f]	−.45[f]
FIS[h]	−.15	.50[g]	.31	.41	<.001	.53[f]	.63[f]	.59[f]
MSI[i]	.22	.68	−.57[g]	.22	<.01	.29[g]	.38[f]	.18
RPS[j]	−.20	.49[g]	.38	.45	<.001	.54[f]	.65[f]	.62[f]
Partners								
DAS[d]	.22	−.47[e]	−.16	.19	<.05	−.31[g]	−.43[f]	−.37[f]
FIS[h]	.01	−.01	.32	.10	>.15	.27[g]	.26[g]	.32[g]
MSI[i]	−.20	.41	.01	.07	>.30	.15	.24[g]	.18
RPS[j]	−.29	.31	.35	.16	<.05	.27[g]	.26[f]	.36[f]

[a]Reexperiencing symptoms severity score.
[b]Avoidance symptom severity score.
[c]Arousal symptom severity score.
[d]Dyadic Adjustment Scale.
[e]$p < .10$.
[f]$p < .01$.
[g]$p < .05$.
[h]Fear of Intimacy Scale.
[i]Marital Status Inventory.
[j]Relationship Problems Scale.

variate gender by veteran's PTSD status interaction on the Relationship Problems Scale, $F(1, 48) = 12.78, p < .002$. To further investigate the interaction effect on the Relationship Problem Scale, simple effects analyses (Keppel, 1982) were conducted examining PTSD effects within veterans and partners separately. Results indicated that both PTSD-positive veterans and partners reported more problems than PTSD-negative veterans and partners; this effect was significant for veterans, $F(1, 48) = 30.40, p < .001$, but only a trend emerged for partners' data, $F(1, 48) = 6.20, p < .05$.

Association of Relationship Quality and PTSD Symptom Clusters

A dichotomous PTSD diagnosis neglects potentially important differences among the three clusters of PTSD symptoms (i.e., reexperiencing, avoidance, arousal). To examine these differences, Pearson correlation coefficients were computed between the four relationship quality measures and the subscales of the PTSD Checklist (see Table 2). The veteran's relationship quality measures were strongly correlated with their self-reported symptom severity with only one of the 12 correlations failing to reach traditional levels

of statistical significance (i.e., $p < .05$). In general, this pattern held for the women as well, although the absolute magnitude of the correlations between women's relationship quality measures and the veteran's PTSD severity were somewhat smaller than those found among the men.

To further examine the association of relationship quality to PTSD symptom clusters, we conducted simultaneous regression analyses in which the measures of relationship quality were regressed on the three PTSD symptom cluster scores (see Table 2). Analyses of the veteran's four relationship variables each produced significant regression equations with R^2 values ranging from .22 to .45. The beta weights associated with the symptom clusters indicated that the avoidance symptoms were most likely to contribute unique variance to the equations. Regression of the partners' relationship quality scores produced significant equations only in the cases of the Dyadic Adjustment Scale ($R^2 = .19$) and Relationship Problems Scale ($R^2 = .16$). In neither equation were the beta weights associated with any of the symptom cluster scores significant, though the beta weight of avoidance scores predicting Dyadic Adjustment Scale responses approached significance ($p < .08$).

Emotional Numbing and Effortful Avoidance Associated with Relationship Difficulties

Although emotional numbing and effortful avoidance symptoms are included in the avoidance cluster of PTSD symptoms, they appear distinct (Foa, Riggs, & Gershuny, 1995). Further, numbing symptoms would seem particularly salient to relationship issues. Therefore, we conducted exploratory analyses of the association between the emotional numbing and effortful avoidance symptoms and relationship quality measures. Numbing and effortful avoidance scores were computed by summing the responses to appropriate PTSD Checklist items (i.e., (1) emotional restriction, (2) detachment from others, and (3) loss of interest in pleasurable activities for *numbing* and (1) attempts to avoid reminders and (2) attempts to avoid thoughts and feelings for *effortful avoidance*). Among veterans, both effortful avoidance and emotional numbing scores were significantly correlated with all four relationship quality measures (see Table 3). Veterans' emotional numbing scores were also correlated with partners' Dyadic Adjustment Scale, Relationship Problems Scale and Marital Status Inventory scores, however, veteran's effortful avoidance scores were not correlated with any of the partners' relationship quality measures.

To further examine the role of emotional numbing and effortful avoidance in the relationship difficulties of veterans, we regressed the four relationship quality measures on the veterans' numbing and effortful avoidance scores (see Table 3). Among the veterans, all regression analyses produced significant equations with R^2 values ranging from .14 to .48. Beta weights associated with these

Table 3. Regression of Relationship Quality Measures on Veterans' Effortful Avoidance and Emotional Numbing Including Zero-order Correlations

	Regression Equation					
	Beta Weights				Zero-order Correlations	
Scale	Effortful Avoidance[a]	Emotional Numbing[b]	R^2	Sig. of Equation	Effortful Avoidance[a]	Emotional Numbing[b]
Veterans						
DAS[c]	−.06	−.46[d]	.25	<.002	−.38[d]	−.50[d]
FIS[e]	.10	.54[d]	.38	<.001	.45[d]	.61[d]
MSI[f]	.31[g]	−.10	.14	<.05	.37[d]	.30[h]
RPS[i]	−.08	.74[d]	.48	<.001	.40[d]	.69[d]
Partners						
DAS[c]	.03	−.41[h]	.15	<.05	−.23	−.39[d]
FIS[e]	.06	.19	.05	>.25	.18	.22
MSI[f]	−.14	.39[h]	.10	>.08	.11	.30[h]
RPS[i]	−.26	.58[d]	.21	<.005	.12	.41[d]

[a]Effortful avoidance symptom severity score.
[b]Emotional numbing symptom severity score.
[c]Dyadic Adjustment Scale.
[d]$p < .01$.
[e]Fear of Intimacy Scale.
[f]Marital Status Inventory.
[g]$p < .10$.
[h]$p < .05$.
[i]Relationship Problems Scale.

analyses revealed that only the emotional numbing scores contributed significantly to the prediction of veterans' Dyadic Adjustment Scale, Relationship Problems Scale and Fear of Intimacy Scale scores; neither emotional numbing or effortful avoidance was associated with a significant beta weight in the Marital Status Inventory analysis. Regression of partners' relationship quality measures on veterans' numbing and effortful avoidance scores produced significant equations for the Dyadic Adjustment Scale ($R^2 = .15$) and the Relationship Problems Scale ($R^2 = .21$). In both cases only the emotional numbing symptoms were associated with significant beta weights.

Discussion

The present results add to the literature documenting difficulties in the relationships of persons with PTSD. Vietnam veterans with PTSD and their partners, as compared to veterans without PTSD and their partners, reported more relationship distress, intimacy difficulties, and problems in their relationships. PTSD-positive veterans and their partners had also taken more steps toward separation than PTSD-negative veterans and their

partners. The importance of these relationship difficulties is highlighted given the potential contribution of intimate partners to the process of coping with chronic stress or psychological symptoms. Intimate partners typically serve as a primary source of social support (Beach, Martin, Blum, & Roman, 1993; McLeod, Kessler, & Landis, 1992; Syrotuik & D'Arcy, 1984) and positive intimate relationships appear to serve as a buffer when one is confronted with significant stress (Barrett & Mizes, 1988; Beiser et al., 1989; Davidson et al., 1991; Flannery, 1990; Solomon et al., 1990).

The present findings indicate that the difficulties in the relationships of veterans with PTSD are serious. Over 70% of veterans with PTSD and their partners had Dyadic Adjustment Scale scores in the clinically significant range of dyadic distress, suggesting that relationship difficulties need to be addressed clinically in this population. The present results suggest that relationships in which one member suffers from PTSD might benefit from interventions designed to improve communication and problem solving skills (Baucom & Epstein, 1990; Cordova & Jacobson, 1993; Jacobson & Margolyn, 1979) and increase comfort with intimacy (Greenberg & Johnson, 1988; Johnson & Greenberg, 1985, 1987). The efficacy of these treatments with traumatized individuals and their partners has not been examined empirically. Given the complex interaction between an individual's PTSD symptoms and difficulties in their relationships, further research is necessary to determine whether individual or relationship problems should be addressed first in treatment.

Veterans with PTSD and their partners reported more problems in their relationships than veterans without PTSD and their partners. It is not clear from the present study whether these problems reflect differences in the type or severity of problems confronting the relationships of PTSD-positive and PTSD-negative veterans (e.g., financial difficulties, legal problems; Kulka et al., 1990) or differences in the ability of PTSD-positive and PTSD-negative dyads to solve the problems they face (Nezu & Carnevale, 1987). In either case, the present findings highlight the need for additional research examining the association between PTSD symptoms and the daily problems in veteran's relationships.

Veterans with PTSD reported a greater sense of anxiety around intimacy with their partners than did veterans without PTSD, a finding consistent with the results of earlier studies (Carroll et al., 1985; Solomon et al., 1987). Notably, in the present study partners of veterans with PTSD expressed greater fear of intimacy than partners of veterans without PTSD. It is not clear why women involved with PTSD-positive veterans would experience anxiety around intimate interactions but two alternatives seem likely. First, it is possible that the differences in fear of intimacy reflect an adjustment to the veteran's distress at intimate interaction. Thus, the

women experience anxiety because earlier intimate interactions with the veteran have been problematic. Second, the differences may arise because of some bias in the selection of partners. That is, people who are anxious about intimacy may be attracted to partners who are similarly anxious and therefore do not make intimacy demands. Future research should examine underlying psychological mechanisms that lead to intimacy problems in PTSD-positive relationships.

As expected, the cluster of avoidance symptoms were closely related to relationship quality. Further, within the avoidance cluster, emotional numbing symptoms were more strongly related to relationship quality than effortful avoidance symptoms. The central role of emotional numbing symptoms within the construct of PTSD had been discussed elsewhere (Foa et al., 1995; Litz, 1992); the present results suggest that these symptoms contribute uniquely to the relationship difficulties of traumatized individuals.

Although there is controversy over how best to characterize the emotional numbing component of PTSD, it is generally accepted that it includes some deficit in the experience and/or expression of positive emotions (Litz, 1992). Emotional expression is theorized to play an important role in the intimate exchanges integral to well functioning relationships (Greenberg & Johnson, 1986, 1988), and the absence of positive feelings toward a partner or the inability to express those feelings would likely diminish the quality of the relationship. Thus, the numbing of positive emotions associated with PTSD may contribute directly to difficulties in maintaining or establishing positive intimate relationships.

In sum, although the association between PTSD and relationship quality appears robust, it is not clear how best to characterize this association. It is possible that the presence of PTSD symptoms contributes to problem solving deficits that lead to increased conflict in intimate relationships or that difficulties in intimacy arise as the result of emotional numbing symptoms. Alternatively, it is possible that individuals who have difficulty maintaining positive intimate relationships are at increased risk for developing PTSD in the wake of trauma. Because social support appears to play an important role in coping with stress in general and combat stress in particular (Keane, Scott, Chavoya, Lamparski, & Fairbank, 1985; Solomon et al., 1990; Solomon, Mikulincer, & Habershaim, 1990), the lack of a positive intimate relationship may increase the likelihood that the individual fails to adequately adjust following the trauma.

There are a number of limitations to the present study that should be noted. First, participants were volunteers and it is likely that treatment seeking individuals are overrepresented in the PTSD-positive group. This may explain why the group differences in the present study are somewhat larger than those reported previously (Carroll et al., 1985; Jordan et al., 1990). Sec-

ond, although the PTSD Checklist appears relatively effective in establishing a PTSD diagnosis (Weathers et al., 1993), the reliance on a single self-report measure of PTSD may be problematic (Keane, Wolfe, & Taylor, 1987). Third, the present study used a sample of Vietnam veterans. The generalizability of these findings to other traumatized populations is unknown. Fourth, although participants were asked to refrain from substance use during the 24 hr immediately prior to the study, the relatively short time period leaves open the possibility that substance use might have affected participants' responses. Finally, the present study did not assess a number of comorbid problems and disorders faced by veterans with PTSD that likely impact on their relationships. Veterans with PTSD are more likely than their non-PTSD counterparts to abuse alcohol and other drugs, be depressed, face legal problems, have difficulty retaining jobs, and experience chronic physical health problems (Keane & Wolfe, 1990; Kulka et al., 1990; Litz, Keane, Fisher, Marx, & Monaco, 1992). All of these factors may adversely influence marital relationships. Depression and substance abuse in particular have been implicated in marital difficulties similar to those observed in the present study. Future research should examine the role of these other factors in order to more fully understand the impact of trauma and PTSD on the intimate relationships of traumatized individuals.

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