

# Relationships Among PTSD Symptoms, Social Support, and Support Source in Veterans With Chronic PTSD

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*The present study examined the temporal relationship between posttraumatic stress disorder (PTSD) and social support among 128 male veterans treated for chronic PTSD. Level of perceived interpersonal support and stressors were assessed at two time points (6 months apart) for four different potential sources of support: spouse, relatives, nonveteran friends, and veteran peers. Veteran peers provided relatively high perceived support and little interpersonal stress. Spouses were seen as both interpersonal resources and sources of interpersonal stress. More severe PTSD symptoms at Time 1 predicted greater erosion in perceived support from nonveteran friends, but not from relatives. Contrary to expectations, initial levels of perceived support and stressors did not predict the course of chronic PTSD symptoms.*

The relationship between social support and posttraumatic stress disorder (PTSD) is well established in the literature (e.g., Brewin, Andrews, & Valentine, 2000; Guay, Billette, & Marchand, 2006; Jankowski et al., 2004). Although a considerable amount of research has focused on the role of social support in the onset of PTSD, the relationship between social support and chronic PTSD is less well understood. Moreover, the effect of important aspects of the social support construct, such as source of support, on chronic PTSD remains largely unexamined in the research literature.

Different sources of social support may have differing effects on recovery from PTSD. Scarpa, Haden, and Hurley (2006) examined the effects of social support on the relationship between community violence victimization and PTSD severity among men and women. They found that family support reduced PTSD severity across trauma levels whereas friend support was only beneficial at low levels of victimization. Among sexually assaulted women, Filipas and Ullman (2001) found that reactions from various

sources (family, friends, and professionals) related differently to recovery. Specifically, positive reactions from friends were particularly helpful to recovery. However, the role of different sources of support in recovery from PTSD remains underexamined in the trauma literature.

The association between PTSD and relationship difficulties among male veterans has been well documented (e.g., Byrne & Riggs, 1996; Caselli & Motta, 1995; Cook, Riggs, Thompson, Coyne, & Sheikh, 2004; Jordan et al., 1992; Riggs, Byrne, Weather, & Litz, 1998; Ruscio, Weathers, King, & King, 2002). However, despite the clinical emphasis on the importance of peer relationships among veterans with PTSD stemming from military trauma, there is no research on the specific effect of these relationships on PTSD symptoms. A key rationale for the widespread use of group psychotherapy with veterans is that groups provide an opportunity for validation and support from peers (Ford & Stewart, 1999; Repasky, Uddo, Franklin, & Thompson, 2001).

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In our own clinical experience, veterans in treatment often report that they have better relationships with other veterans than with nonveterans, and they view such peer relationships as important to their recovery. However, to our knowledge, no research has specifically examined the role of veteran-to-veteran support in recovery from PTSD.

Lack of social support is a posttrauma risk factor for the development of PTSD among Vietnam veterans (Barrett & Mizes, 1988; Brewin et al., 2000; Fontana & Rosenheck, 1994; King, King, Fairbank, Keane, & Adams, 1998; King, King, Foy, Keane, & Fairbank, 1999; Schnurr, Lunney, & Sengupta, 2004). The link between low social support and the development of PTSD has also been found in cross-sectional (e.g., Andrykowsky & Cordova, 1998) and retrospective (e.g., Ullman & Filipas, 2001) studies using civilian samples, including among adults who were living in New York City on September 11, 2001 (Adams & Boscarino, 2006), victims of violent crimes (Andrews, Brewin, & Rose, 2003; Johansen, Wahl, Eilertsen, & Weisaeth, 2007), and female victims of both sexual and nonsexual assault (Zoellner, Foa, & Brigidi, 1999).

The body of research on the onset of PTSD indicates that various aspects of the social support construct predict the development of PTSD. Interpersonal stressors (such as friction and negative social reactions) and interpersonal resources (such as availability of emotional, instrumental, and perceived support) each predict PTSD onset. Negative social factors (i.e., interpersonal stressors such as friction and negative social reactions to trauma disclosure) are more predictive of PTSD than positive social factors (i.e., such as availability of emotional support, instrumental support, and support satisfaction). It has been proposed that negative social factors may emerge following trauma exposure through a path that is separate from the path between trauma and positive social factors (Kaniasty, Ullman, Maercker, & Lepore, 2006). Thus, it is important for research on the relationship between social support and PTSD to examine both negative and positive social factors within the same samples.

Few studies have differentiated social factors involved in maintenance (rather than onset) of PTSD. Among Vietnam veterans who reported lifetime PTSD, lower current social support was associated with maintenance of PTSD (Schnurr et al., 2004). Dirkzwager, Bramsen, and van der Ploeg (2003) examined the relationship between social support and PTSD symptoms among two groups of Dutch former peacekeepers several years after deployment. A higher degree of supportive social interactions at Time 1, after controlling for Time 1 PTSD symptoms, was significantly associated with fewer PTSD symptoms 2 years later. One examination of the directionality of the relationship between PTSD symptom severity and social support among Gulf War veterans found that PTSD symptom severity eroded social support whereas social support did not predict later PTSD symptom severity (King, Taft, King, Hammond, & Stone, 2006).

In summary, the relationship between PTSD and source of support, an important aspect of the construct, remains underexamined. Research to date on the relationship between social support (interpersonal resources and stressors) and PTSD has focused on the development rather than the maintenance of PTSD. Based on existing research, it appears that negative and positive social support are related to PTSD through different paths; thus, both negative and positive support should be examined within the same samples.

The present study examines the relationships between PTSD symptom severity and positive and negative social support (interpersonal resources and interpersonal stressors) received from various sources by veterans treated for chronic PTSD. The perceived quality of interpersonal resources and stressors were assessed for each of the following support sources at two time points: spouses, relatives, nonveteran friends, and veteran peers. The study has three aims: (a) to examine the social network composition of veterans with chronic PTSD and how different sources of support are perceived by veterans (e.g., which support source provides the highest level of interpersonal resources and lowest level of interpersonal stress), (b) to test the hypothesis that higher PTSD symptom severity at Time 1 will predict decreased interpersonal resources and increased interpersonal stressors at follow-up, and (c) to test the hypothesis that greater interpersonal resources and lower interpersonal stressors at Time 1 will predict decreased PTSD symptom severity at follow-up.

## METHOD

### Participants

Study participants were 128 male veterans who completed a residential treatment program for PTSD. The mean age of the sample was 57 and the mean number of years of education was 13.8. The majority (97%) of the sample was unemployed. Ethnicity data were obtained from participants' electronic medical records and were available for two thirds of the sample. Among participants whose ethnicity was known, 73.8% were Caucasian, 13.9% African American, 9.9% Hispanic/Latino, 1.6% mixed ethnicity, and the rest (0.8%) endorsed "other." Nearly half (45%) were currently married, and about half were either divorced (39%) or separated (9%). Only 5% were widowed and only 2% had never married.

### Measures

Symptoms of PTSD were assessed with the PTSD Checklist-Military version (PCL-M; Weathers & Ford, 1996), a well-validated self-report instrument with items corresponding to diagnostic criteria for PTSD in the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (DSM-IV; American Psychiatric Association, 1994). Based on preliminary analyses showing high

intercorrelations among the three PCL-M symptom cluster subscale scores in our current sample, we used the overall total score ( $\alpha = .94$ ) rather than subscale scores in all analyses.

The size of participants' social networks was assessed for each of the following support sources: family, nonveteran friends, and veteran peers. Participants indicated how many members within each separate source (i.e., how many family members, how many veteran peers) provided support in four areas within the previous 6 months. Participants were asked for each separate source how many members they could have talked to about personal problems, how many they actually talked to about personal problems, how many helped them with practical things, and how many they had regular contact with.

The interpersonal resources and interpersonal stressors subscales of the Life Stressors and Social Resources Inventory (LISRES; Moos, Fenn, & Billings, 1988) were used. The Interpersonal resources subscale is comprised of six items assessing helpful aspects of relationships (e.g., Does he or she really understand how you feel about things?) and the interpersonal stressors subscale is comprised of five items that tap stressful aspects of relationships (e.g., Is he or she critical or disapproving of you?). Responses use a Likert scale ranging from 1 (*never*) to 5 (*often*). The two subscales are completed for specific sources separately. For the present study, the following referents were included: spouse, family, nonveteran friends, and veteran peers. Thus, each of the two subscales was completed by respondents four times, once for each source. The LISRES subscales exhibited good internal reliability for all four sources of support. Internal consistency ranged between .78 and .84 for the interpersonal resources subscale, and between .85 and .90 for the interpersonal stressor subscale.

## Procedure

Eligible participants were male veterans with chronic PTSD who graduated from a PTSD residential treatment program within the 6 months to 2 years prior to the study. The study was conducted between November 2003 and October 2004. All eligible participants were mailed a questionnaire packet with the study consent form, survey, and postage prepaid envelopes to return the survey and consent form separately. Those who consented to complete the follow-up were mailed the same survey 6 months later. Of 354 eligible participants, 188 participated in the survey (53%) and 128 completed the 6-month follow-up (36%).

Participants who completed the Time 2 assessment did not differ in age and marital status from those who only completed Time 1. However, those who completed the Time 2 survey were slightly more educated ( $M = 13.8$ ,  $SD = 1.9$ ) than those who only completed Time 1 ( $M = 13.0$ ,  $SD = 2.0$ ),  $t(185) = 2.24$ ,  $p < .05$ . In addition, participants who completed Time 1 only had somewhat lower initial PTSD symptom severity ( $M = 61.4$ ,  $SD = 12.9$ ) than those who completed Times 1 and 2 ( $M = 65.7$ ,  $SD = 12.0$ ),  $t(185) = 2.19$ ,  $p < .05$ .

## Data Analysis

The number of veteran peers, nonveteran friends, and family members in participants' social networks were compared using nonparametric analyses (Kendall's  $W$ ). Participants' ratings of the level of perceived interpersonal resources and stressors among different sources were assessed using paired  $t$  tests.

Path analysis (Arbuckle & Wothke, 1999) was conducted to examine the longitudinal relationships among perceived support, interpersonal stressors, and PTSD symptoms. Analyses were conducted separately for each source of support except spouse (due to insufficient sample size).

Statistical power for the study was high (.96), given the sample size ( $N = 128$ ) and a medium effect size ( $r = .40$ ; Brewin et al., 2000). To obtain adequate power (.80 or higher, given  $r = .40$ ) for the path analyses conducted for each support source separately, a sample size of at least 71 was required. Therefore, the path analysis for spouse ( $n = 58$ ) was excluded.

## RESULTS

Participants' mean score on the PTSD Checklist-Military (Weathers & Ford, 1996) was 61.4 ( $SD = 13.0$ , range = 20–84). A score of 50 on this measure is considered indicative of probable PTSD.

### Composition of Social Network

Table 1 lists the Time 1 means of number of people within each category who provided support in four different ways within the 6 months prior to study participation. Across all four indicators, participants reported having more veteran peers than nonveteran friends in their social network. Participants reported they were in regular contact with and received instrumental assistance ("help with practical things") from roughly equal numbers of family members and veteran peers. However, they reported having significantly more veteran peers than family members and more family members than nonveteran friends whom they could or did turn to for emotional support.

### Perceived Quality of Interpersonal Relationships

Participants provided ratings of the perceived quality of their relationships with various sources of support. Nearly all participants had relatives ( $n = 119$ , 93%), or veteran peers ( $n = 111$ , 87%) whom they could rate as potential support sources. Almost half of participants had a spouse ( $n = 58$ , 45%) and two thirds ( $n = 84$ , 66%) had relationships with nonveteran friends they could rate.

As shown in Figure 1 initial ratings of perceived interpersonal resources were highest for veteran peers and for spouses, followed by nonveteran friends and relatives. Within-subjects  $t$  tests indicated that perceived levels of interpersonal resources

**Table 1.** Size of Social Network by Source at Time 1

Support category	Number of relatives		Number of nonveteran Friends		Number of veteran peers		W <sup>b</sup>	χ <sup>2</sup> (2, N = 120)
	M <sup>a</sup>	SD	M <sup>a</sup>	SD	M <sup>a</sup>	SD		
Could talk to about personal problems	2.26 <sup>c,d</sup>	5.26	1.28 <sup>d</sup>	2.58	3.79 <sup>c</sup>	5.96	.17	41.53 <sup>***</sup>
Actually talked to about personal problems	1.23 <sup>c,d</sup>	3.23	0.81 <sup>d</sup>	1.52	2.48 <sup>c</sup>	4.13	.09	21.70 <sup>***</sup>
Helped you with practical things	1.16 <sup>c</sup>	5.89	0.87 <sup>d</sup>	2.02	1.29 <sup>c</sup>	2.84	.03	6.11 <sup>*</sup>
Have regular contact with you	3.65 <sup>c</sup>	3.76	2.70 <sup>d</sup>	3.86	4.01 <sup>c</sup>	5.88	.11	27.75 <sup>***</sup>

Note. Group comparisons were conducted using Wilcoxon Signed Ranks Test. Means with different superscripts differ significantly at  $p < .05$ .

<sup>a</sup>Estimated marginal means. <sup>b</sup>Kendall's W. <sup>c</sup>Compared to number of nonveteran friends. <sup>d</sup>Compared to number of veteran peers.

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

from spouses were significantly greater than perceived resources from either nonveteran friends,  $t(61) = 3.08, p < .01$ , or relatives,  $t(86) = 7.29, p < .001$ . Perceived levels of interpersonal resources from veterans were significantly greater than perceived resources from nonveteran friends,  $t(79) = 4.28, p < .001$ , or relatives,  $t(108) = 8.40, p < .001$ . There were no significant differences in perceived interpersonal resources from veterans and spouses.

Within-subjects  $t$  tests indicated that all interpersonal stressors ratings differed significantly across sources. Participants reported having a significantly lower level of perceived interpersonal stressors with veteran peers than with nonveteran friends,  $t(79) = 3.57, p < .01$ , relatives,  $t(107) = 6.48, p < .001$ , or spouses,  $t(78) = 9.75, p < .001$ ; lower level of perceived inter-

personal stressors with nonveteran friends than with relatives,  $t(83) = 3.51, p < .01$ , or spouses,  $t(61) = 7.11, p < .001$ ; and lower level of perceived interpersonal stressors with relatives than with spouses,  $t(85) = 4.10, p < .001$ . Thus, participants reported having the lowest level of perceived interpersonal stressors with veteran peers, followed by nonveteran friends, relatives, and spouses.

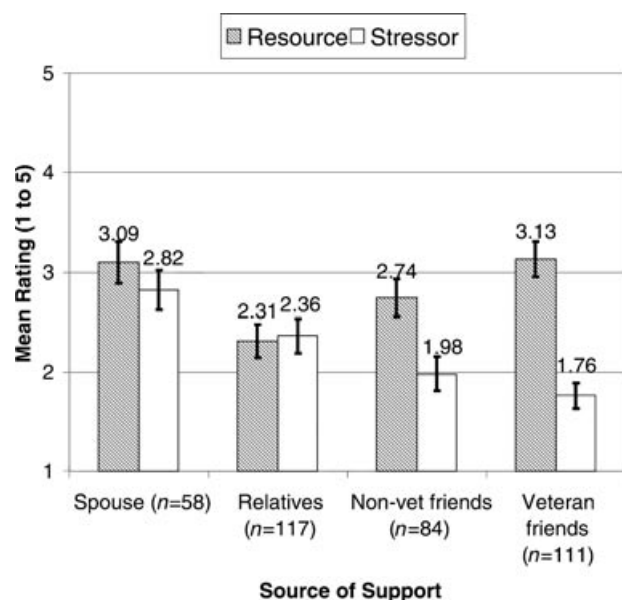
Relationships with both veteran peers and nonveteran friends were generally seen as involving more interpersonal resources than stressors,  $t(164) = 12.43, p < .001$  for veterans and  $t(122) = 3.76, p < .001$  for nonveterans. In contrast, there were no significant differences between relatives and spouses in interpersonal resources and stressors; thus, patients perceived their relationships with relatives and spouses as containing roughly equal amounts of interpersonal resources and stressors.

### Correlations Among Variables

Bivariate correlations among study variables are shown in Tables 2 and 3. Initial PTSD severity was cross-sectionally correlated with greater interpersonal stressors with all sources of support, and with lower perceived interpersonal resources from all sources except veteran peers (see Table 2). A longitudinal examination of the data indicated that PTSD symptoms at Time 1 were bivariate correlated with significantly less interpersonal resources and greater interpersonal stressors with nearly all sources of support at follow-up (see Table 3). Initial level of perceived interpersonal resources from spouse and relatives were bivariate correlated with fewer PTSD symptoms at follow-up whereas initial level of interpersonal stressors from spouse and veteran peers were correlated with more PTSD symptoms at follow-up (see Table 3).

### Longitudinal Relationships for Each Support Source Among Social Support Variables and PTSD Symptoms

Path analysis was used to examine the longitudinal relationships between PTSD symptoms and social support (interpersonal resources and interpersonal stressors) for relatives, nonveteran friends, and



**Figure 1.** Mean interpersonal resource and interpersonal stressor scores by support source.

**Table 2.** Correlations Among Initial Posttraumatic Stress Disorder (PTSD) Symptom and Social Support Variables

	T1 PTSD	T1 Spouse resources	T1 Spouse stressors	T1 Relative resources	T1 Relative stressors	T1 Friend resources	T1 Friend stressors	T1 Veteran resources
T1 Spouse resources	-.35**	-	-	-	-	-	-	-
T1 Spouse stressors	.42**	-.55**	-	-	-	-	-	-
T1 Relative resources	-.30**	.49**	-.21*	-	-	-	-	-
T1 Relative stressors	.36**	-.28**	.34**	-.40**	-	-	-	-
T1 Friend resources	-.28**	.28**	-.22*	.49**	-.22*	-	-	-
T1 Friend stressors	.34**	-.29**	.40**	-.22**	.58**	-.39**	-	-
T1 Veteran resources	-.10	.32**	-.09	.38**	-.25**	.40**	-.11	-
T1 Veteran stressors	.28**	-.14	.20*	-.13	.34**	-.18	.60**	-.32**

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

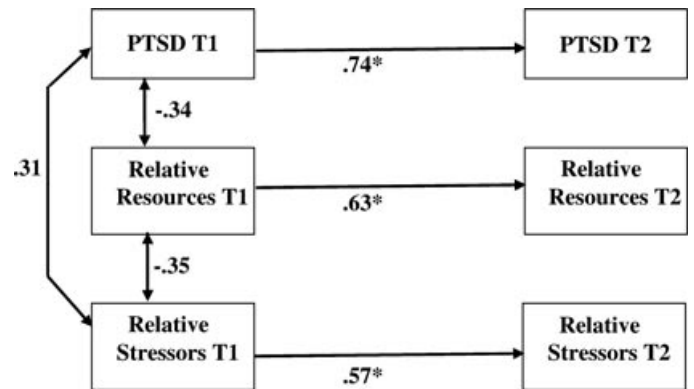
**Table 3.** Correlations Among Initial and Follow-Up Posttraumatic Stress Disorder (PTSD) Symptom and Social Support Variables

	T1 PTSD	T1 Spouse resources	T1 Spouse stressors	T1 Relative resources	T1 Relative stressors	T1 Friend resources	T1 Friend stressors	T1 Veteran resources	T1 Veteran stressors
T2 PTSD	.75**	-.39**	.27**	-.22**	.16	-.21	.21	-.17	.25**
T2 Spouse resources	-.35**	.83**	-.59**	.36**	-.42**	.13	-.10	.12	-.01
T2 Spouse stressors	.27**	-.45**	.71**	-.29**	.24*	-.22	.37**	.01	.09
T2 Relative resources	-.30**	.26*	-.18	.61**	-.25**	.25*	-.06	.20*	-.05
T2 Relative stressors	.24**	-.26**	.47**	-.27**	.57**	-.15	.39**	-.11	.32**
T2 Friend resources	-.44**	.35**	.01	.23*	-.28**	.48**	-.15	.24*	-.15
T2 Friend stressors	.29**	-.28*	.39**	-.09	.51**	-.16	.61**	.02	.55**
T2 Veteran resources	-.23*	.31**	-.15	.23*	-.30**	.26*	-.07	.60**	-.12
T2 Veteran stressors	.14	-.14	.34**	-.03	.37**	-.10	.55**	-.12	.67**

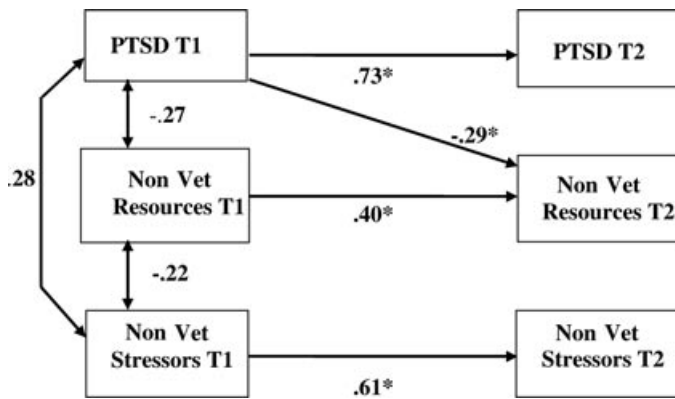
\*  $p < .05$ . \*\*  $p < .01$ .

veteran friends separately (see Figure 2). The three models were examined to test the hypotheses that, within each support source, higher initial PTSD symptom severity would predict decreased interpersonal resources and increased interpersonal stressors at follow-up, and that greater interpersonal resources and lower interpersonal stressors at Time 1 would predict decreased PTSD symptom severity at follow-up. In addition to focusing on the specific paths for the hypotheses, all possible longitudinal paths were estimated because all variables were potential predictors of each other over time. Although initial analyses suggested a trend towards Time 1 spousal resources predicting lower PTSD symptoms at Time 2, the sample size was insufficient to test this relationship formally.

Figures 2 through 4 show the significant paths and the standardized coefficients ( $\beta$ ) indicating the strength of the associations between PTSD and social support. The models fit the data well (fit statistics reported in Figures 2–4). More PTSD symptoms at Time 1 predicted greater erosion in perceived level of interpersonal resources at follow-up from nonveteran friends ( $\beta = \leq .29$ ,

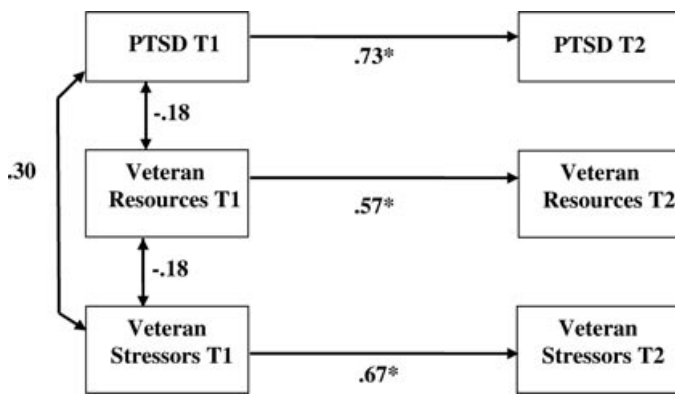


**Figure 2.** Relatives' resources and stressors and veterans' posttraumatic stress disorder symptoms. Model:  $\chi^2 = (9, N = 116) = 11.03, p = .27, GFI = .968, NFI = .954, RMSEA = .045 (CI = .000-.120)$ . \*  $p < .05$ .



**Figure 3.** Nonveteran friends' resources and stressors and veterans' posttraumatic stress disorder symptoms. Model:  $\chi^2(8, N=76)=12.14$ ,  $p=.18$ , GFI=.946, NFI=.916, RMSEA=.083 (CI=.000-.171).

\* $p < .05$ .



**Figure 4.** Veteran friends' resources and stressors and veterans' posttraumatic stress disorder symptoms. Model:  $\chi^2(8, N=102)=15.46$ ,  $p < .05$ , GFI=.953, NFI=.928, RMSEA=.096 (CI=.000-.168).

\* $p < .05$ .

$p < .01$ ) and there was a trend in the same direction from veteran peers ( $\beta = \leq .15$ ,  $p < .10$ ). Time 1 PTSD symptoms did not predict Time 2 interpersonal resources from relatives nor interpersonal stressors for any support source. Interpersonal resources and interpersonal stressors at Time 1 did not predict Time 2 PTSD symptoms.

## DISCUSSION

The study findings indicate that veteran peers are an important and highly valued component of veteran PTSD patients' social

networks. Veterans were the largest (most numerous) component of participants' social network. Although participants reported receiving instrumental assistance from roughly equal numbers of veterans and relatives, veteran peers were their most common source of emotional support. This is consistent with clinical reports that veterans who have sought PTSD treatment tend to seek support from other veterans more than they do from nonveteran friends and even from their families.

Results further indicate that levels of perceived interpersonal resources and stressors are rated differently for diverse sources of support. Relationships with veteran peers were rated as being both supportive and relatively stress-free. These findings provide empirical support to anecdotal reports about veteran peers previously mentioned and highlight the important role of other veterans as sources of social support. In contrast, marital relationships were generally characterized by relatively equal levels of both support and stress.

The study hypotheses about the longitudinal relationships between PTSD symptoms and social support were not confirmed. The hypothesis that PTSD symptoms would erode interpersonal resources and increase interpersonal stressors was partially supported. Posttraumatic stress disorder symptoms significantly predicted erosion of perceived interpersonal resources from nonveteran friends and there was a similar trend for veteran peers. However, there was no significant evidence for greater symptoms contributing to greater interpersonal stressors with any source of support. A potential explanation for this finding might be the presence of ceiling effect; however, given that mean scores of initial levels of perceived interpersonal stressors were between 1.76 and 2.82 (on the lower half of the scale range), there was room for interpersonal stressors to increase. The lack of a significant finding may be due to a trauma type or gender by support interaction. For instance, female sexual assault victims might receive more positive and negative reactions due to reaching out for help, talking to others, and generally seeking more support. On the other hand, perhaps in middle-aged veterans with chronic PTSD, higher symptom severity leads to greater self-isolation and distancing from members of the social network, which would result in their not receiving either positive or negative support.

Even though social support and social stress are well-established factors in the onset of PTSD, it is unclear whether they influence the maintenance of PTSD symptoms. The final hypothesis, that social factors would influence symptom course, was not supported. Levels of interpersonal resources and stressors at Time 1 did not predict Time 2 PTSD symptom severity. This null finding replicates results obtained by King et al. (2006) with Gulf War veterans. They found that initial PTSD severity predicted erosion of social support, yet initial social support did not predict PTSD severity 5 years later. Future research on the influence of support sources should examine the influence of spouse support on the course of PTSD given that the sample size in the current study was insufficient to conduct path analyses for spouse resources and stressors.

Some elements of the study may have prevented detection of longitudinal effects over time. The study included veterans (primarily of the Vietnam War) with long-standing chronic PTSD who had problems severe enough to warrant prior residential treatment. These are veterans in whom the PTSD disease process is well-advanced and who experience relatively little symptom change over time (Fontana & Rosenheck, 1997; Johnson, Lubin, Rosenheck, Fontana, Charney, & Southwick, 1999). Moreover, they have experienced the effects of many years of social disruption, including multiple divorces, conflicts with relatives, and disrupted friendships; thus, the social damage may have already been done. It is notable that veterans' mean ratings of perceived support from even their best sources of support (spouses or veteran peers) were only about a "3" on a 1 to 5 scale. Given the long-standing course of their illness (roughly 30 years for most participants), 6 months may be too short a time window to see significant changes in either symptoms or social relationships.

There are several important limitations that need to be noted. First, the generalizability of the study is quite limited. The sample was not randomly drawn and may not be representative of all male veteran PTSD patients. The demographic information of those who did not participate in the study was not available; thus, it is not possible to determine how similar the final sample was to other male veterans who graduated from the residential treatment program. The study results cannot be generalized to female, community, and civilian samples, and they may or may not apply to veterans of recent conflicts, such as veterans returning from Iraq and Afghanistan.

The study relied exclusively on self-report measures and the severity of PTSD symptomatology might have influenced participants' responses about interpersonal resources and stressors. However, research has shown that the long-term impact of received support on mental health is mediated through perceived support (Norris & Kaniasty, 1996). It also should be noted that the social support measure used in this study did not assess other types of social support (e.g., received social support). Thus, these results cannot be applied to different aspects of social support. Finally, there may not have been enough variance available to predict follow-up PTSD and social support measures. This is due to both measurement error and the strong correlations between Time 1 and Time 2 data (see Tables 2 and 3).

In conclusion, the present findings confirm that veteran peers play a large role in the social networks of veterans treated for PTSD, and that these peer relationships are seen as uniquely supportive and undemanding. However these relationships are not "bullet-proof"—severe PTSD symptoms may erode perceived support from veteran peers. As in most studies of perceived social support, it is hard to disentangle changes in veterans' *perceptions* of others' availability from changes in others' *actual* availability and willingness to help. For instance, in the present study PTSD symptoms predicted reductions in perceived support from nonveteran friends; however, in post hoc analyses PTSD symptoms did not

predict changes in structural support (i.e., number of nonveteran friends).

## Implications

The present findings raise several questions about the nature of the relationship between social support and chronic PTSD. The findings suggest that social support might have a different effect on the course of PTSD than on PTSD onset. More specifically, it appears that among veterans the benefits of social support are reduced once PTSD becomes chronic. Furthermore, support source seems to have an impact on the relationship between chronic PTSD and social support. Greater severity of PTSD symptoms predicted increased interpersonal stress from nonveteran friends (and there was a similar trend for veteran friends). However, greater PTSD symptom severity did not seem to have a significant impact on the interpersonal resources and stressors perceived from relatives. Further research is needed to differentiate how depressive perceptions, self-imposed social withdrawal, and alienation or burnout of social resources contributes to changes in PTSD patients' reports of perceived social support from family, friends, and peers.

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