Relationships Among Trauma Exposure, Chronic Posttraumatic Stress Disorder Symptoms, and Self-Reported Health in Women: Replication and Extension

Rachel Kimerling,[1] **Gretchen A. Clum,**[2] **and Jessica Wolfe**[3,4]

Fifty-two women who served during the Vietnam era were assessed for war-zone exposure, traumatic life events, posttraumatic stress disorder (PTSD), and self-reported health status. Symptoms of PTSD were examined as mediators in the relationship between traumatic exposure and subsequent reports of health problems. Results showed that PTSD symptoms accounted significantly for variance in health problems reported by women with prior traumatic stressor exposure. When the cardinal symptom domains of PTSD (reexperiencing, numbing, avoidance, hyperarousal) were analyzed separately, the symptom cluster representing hyperarousal accounted uniquely for the variance associated with health complaints, beyond that contributed by other symptom clusters. Discussion of the results focuses on mechanisms underlying the relationship between specific symptoms of PTSD and self-reported health. Implications for intervention within the medical system are also considered.

KEY WORDS: posttraumatic stress disorder; trauma; women; health.

Traumatic experiences seem to have a distinctly adverse effect on health status. Studies of clinical populations have described increases in self-reported physical symptoms and poorer ratings of global health in numerous populations exposed to traumatic stressors, including female Vietnam War veterans (Kulka

[1]Department of Psychiatry, University of California at San Francisco School of Medicine.

[2]Department of Psychology, University of Georgia.

[3]Department of Veterans Affairs Medical Center, Boston, and Department of Psychiatry, Tufts University School of Medicine.

[4]To whom correspondence should be addressed at National Center for Posttraumatic Stress Disorder, Women's Health Sciences Division, 116B-3, Veterans Affairs Medical Center, 150 South Huntington Avenue, Boston, Massachusetts 02130.

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et al., 1988, 1990; Wolfe, Schnurr, Brown, & Furey, 1994), survivors of criminal victimization (Koss, Koss, & Woodruff, 1991), and sexually assaulted individuals (Golding, 1994; Koss & Heslet, 1992; Waigandt, Wallace, Phelps, & Miller, 1990). Associations remain even when physical injuries from the event are excluded from health measures or analyses (Kimerling & Calhoun, 1994). These studies consistently document decrements in health-related quality of life ranging from 1 to more than 20 years after stressor exposure, suggesting the persistence of these problems following trauma (Sutker, Allain, & Johnson, 1993; Sutker, Uddo, Brailey, Allain, & Errera, 1994). Alterations in health-realted quality of life can result from changes in several components of the health construct: biological or physiological, physical symptoms, functional status, or general health perceptions. Psychological factors are theorized to have the most direct influence on physical symptom reports and general health perceptions (Wilson & Cleary, 1995). Thus, physical symptoms and general health perceptions are the components of health status that are the focus of the current investigation.

Diffuse physical symptoms have been posited as inherent components of posttrauma responses (McFarlane, Atchison, Rafalowicz, & Papay, 1994), as have other specific physical symptoms with anxiety disorders such as panic disorder or generalized anxiety. In a sample of firefighters, these authors found a heterogeneity of physical symptoms associated with a PTSD diagnosis. Wolfe et al. (1994) examined psychometric assessments in a sample of women veterans and found that severity of war-zone exposure was significantly related to physical symptom reports. When exposure was statistically controlled, PTSD significantly predicted increased reports of physical health symptoms. These results underscore that elements of the psychological reactions to traumatic stress, rather than exposure to a traumatic event per se, are at least partly responsible for some of the adverse changes in health symptoms and perceptions (Friedman & Schnurr, 1995).

Specific clusters of PTSD symptoms may be differentially associated with reports of poorer health. The DSM-III-R and IV organize psychological symptoms of PTSD into three clusters: reexperiencing, numbing/avoidance, and hyperarousal. These constructs are assumed to have theoretical validity, although a factor analysis of PTSD symptoms in an acute population has suggested factors of arousal/avoidance, numbing, and reexperiencing (Foa, Riggs, & Gershuny, 1995). These symptom clusters differ from the DSM-IIIR and IV model in that numbing and avoidance are posited as separate mechanisms. The authors propose a model of effortful avoidance, a coping strategy for distress stemming from hyperarousal and reexperiencing symptoms (Foa & Riggs, 1993). If these symptom clusters involve

[5]Psychogenic amnesia for the traumatic event(s) was not included in either rationally derived subcluster of criterion C symptoms because, in the authors' view, this symptom represents neither active avoidance nor emotional numbing, but dissociative phenomena. This view was empirically supported: no correlations among psychogenic amnesia symptom scores from the CAPS and other criterion C symptoms achieved statistical significance, and the inclusion of psychogenic amnesia exerted a notable decrease in internal consistency in both subclusters.

separate mechanisms, their associations with measures of health status could be differentiated.

This question has been examined in one previous study where the Impact of Events Scale (Horowitz, Wilner, & Alvarez, 1979) intrusion subscale was significantly associated with physical symptom reports, although only symptom clusters of intrusion, avoidance, and dissociation were tested (McFarlane et al., 1994). Literature regarding the somatization of psychological distress suggests that both increased physiological sensations and increases in negative affect can influence the interpretation of those common bodily sensations as evidence of disease (Berry & Pennebaker, 1993; Pennebaker & Watson, 1991). Individuals suffering from PTSD experience restrained positive affect as a result of numbing symptoms, and thus this phenomenon may be especially pronounced. This effect could be further heightened by hyperarousal symptoms, which typically produce increases in physiological sensation, reactivity (e.g., tachychardia), and personal scrutiny of interoceptive cues (Barlow, 1988). These explanations implicate two primary PTSD symptom clusters—numbing and hyperarousal—in mediating the relationship between traumatic stress and reports of health symptoms. By this process specific symptoms of PTSD may actually be interpreted as health symptoms, helping to explain persistent decrements in subjective health status in trauma survivors.

The present study seeks to replicate and extend previous findings which demonstrated symptoms of PTSD as a mediator in the relationship between exposure to traumatic events and subjective health status. Subjective health status was operationalized using global health perceptions, a core component of health-related quality of life (Hennessy, Moriarty, Zack, Scherr, & Brackbill, 1994), and self-reported physical symptoms, a more specific measure of subjective health status. Stressor exposure included both war-zone exposure and high-magnitude stressors experienced before, during, and after military duty. We examine PTSD as a continuous measure of both frequency and intensity of DSM-III-R symptoms. Analyses also test differential associations among the distinct reexperiencing, avoidance, numbing, and hyperarousal subclusters. The study test two hypotheses: that PTSD symptom totals would mediate the relationship between increased stressor exposure and decreased subjective health status and that symptoms of hyperarousal and affective numbing would account predominantly for the negative impact on health.

Method

Participants

Fifty-two female Vietnam veterans participated in the study. The mean age of the sample was 48.7 (SD = 4.8) years. The mean age for entry into military service was 22.30 (SD = 3.06) and the mean number of years of service was 7.75 (SD = 8.54). Only 9.4% of the women were either in active military duty

or in the reserves at the time of data collection, while 79.2% of the participants had served in combat areas. All but two of the women were Caucasian; one was African-American and one was Native American. Mean and modal incomes were $20,000 per year, and 74% of the sample were employed full or part-time. Twenty percent of the sample lived alone, while the remainder lived with spouses, family, or roommates.

Procedure

A database of 250 female veterans who were willing to be contacted for research purposes was compiled through extensive outreach (e.g., civilian health centers, veteran-oriented newsletters, public speaking engagements, and leafleting at veterans organizations) over a 5-year period. All women in the database were mailed a letter inviting them to participate in the current study, which stated the following requirements: lived in or were able to visit the New England area, able to spend a full day at a VA Medical Center to participate in research, had no diagnosed neurological disease, had not currently or previously received mental health treatment from the National Center for PTSD at the Boston VAMC, and were veterans or volunteers of Vietnam. Fifty-five women in the database responded and participated in this study. Three of these women were excluded from the study due to a history of neurological problems, active psychosis, or active substance use as reported on the SCID (described in the following).

All participants gave written informed consent and were provided with a full debriefing following protocol administration. In addition, participants received a telephone call from a clinician 1 to 2 days following their participation to address any distress following protocol administration. Participants were given the option to place their names on a mailing list to receive updated information about the study and, eventually, the results of the study. All women were compensated $100 for participation and were treated in accordance with the APA ethical guidelines.

Psychological Assessment

Trained master's- and doctoral-level psychology staff conducted all diagnostic interviewing. Diagnostic decisions were made by the concurrence of two interviewers or on the basis of senior clinician consensus by reviewing all relevant assessment materials at a weekly PTSD case conference. All cases reached total diagnostic consensus among interviewers.

Psychometric Measures

Clinician Administered PTSD Scale (CAPS; Blake et al., 1995). The CAPS was administered by masters or doctoral level clinical staff trained by the authors of the instrument. The CAPS is a structured interview which yields both a

dichotomous measure of diagnostic criteria and a continuous measure of severity of PTSD symptoms. Interviewers rate symptoms in terms of both frequency and intensity. The CAPS-1 was administered, which assesses current and lifetime PTSD symptoms and has demonstrated excellent reliability and validity.

Structured Clinical Interview for DSM-III-R (SCID; Spitzer, Williams, Gibbon, & First, 1992). All participants were interviewed by trained masters or doctoral level clinicians using the SCID. The SCID was used to assess Axis I disorders other than posttraumatic stress disorder.

Women's Wartime Stressor Scale (Wolfe, Brown, Furey, & Levin, 1992). This self-report scale is designed to measure female veterans' exposure to war-time stressors. Components of the WWSS include stressful aspects of vocational role, physical context, and social milieu. The WWSS has a Likert-type format and consists of 27 statements. Items are accompanied by rating scales ranging from 0 (*no exposure*) to 4 (*maximum exposure*). The scale yields a continuous total score ranging from 0 to 108. The WWSS demonstrated adequate internal consistency (Cronbach's $\alpha = .89$) and test–retest reliability (12- to 18-month interval, $r = .91$). The WWSS correlates significantly with the SCL-90 GSI ($r = .39$), the Mississippi Scale for PTSD ($r = .43$), and the MMPI PTSD subscale ($r = .35$).

Life Stressor Checklist (LSC; Wolfe, Kimerling, Brown, & Chrestman, 1997). The LSC is a 22-item, self-report questionnaire that assesses a variety of high- and low-magnitude stressors over the course of the lifetime. Events are rated for occurrence (coded 0 for no and 1 for yes) and for impact both at the time of occurrent and over the past year on a 6-point Likert-type scale ranging from 0 (not at all) to 5 (extremely). The current analyses use seven items which query traumatic exposure: exposure to a natural or human-made disaster, traumatic injury or accident, traumatic death of close other, being mugged or robbed, physical assault, sexual assault, and rape. Ratings of the impact at the time of occurrence for each item were summed to create a component of the trauma exposure variable. The LSC yields estimates of the frequency of traumatic events similar to other standard assessment measures of traumatic exposure and has demonstrated good predictive validity, as it is positively associated with both symptoms of depression (Kimerling, Armistead, & Forehand, 1999) and posttraumatic stress disorder (Kimerling et al., 1999).

Women's Background Questionnaire. This is a self-report questionnaire assessing premilitary, military and post-military demographic information. The questionnaire is routine for women veterans participating in psychological evaluations. Included was an item asking women to rate their overall physical health in the past year. Ratings were made on a 5-point Likert-type scale ranging from 1 (extremely poor) to 5 (excellent). This item is a standard assessment of health perceptions. Global health perceptions are an integral component of health-related quality of life and have been suggested to be good proxy indicators of poor health status as defined by multiple disease conditions, poor medical prognosis, or medical comorbidity (Hennessy et al., 1994).

Women's Medical History Questionnaire. This health questionnaire is based on items surveyed in the National Vietnam Veterans Readjustment Study (Kulka et al., 1988, 1990). In addition to all physical health items from the NVVRS, the questionnaire incorporated several additional items from the Cornell Medical Index (Brodman, Erdman, Lorge, & Wolff, 1949) to afford greater specificity for women's health complaints (e.g., menstrual problems). The WMHQ is scored to provide several summary scores: lifetime self-diagnosed chronic conditions, lifetime physician-diagnosed chronic conditions, chronic conditions diagnosed in the past year, and acute physical symptoms reported in the past month. Only the summary score for acute physical symptoms reported in the past month was used on the current analyses.

Results

Descriptive Statistics

Scores on the Women's Wartime Stressor Scale ranged from 2 to 72, with an average of 28.08 ($SD = 15.14$). The most frequently endorsed items on the WWSS were lack of rest and relaxation (R&R) time (78%), being in danger of physical injury or death (74%), having to perform exceeding competencies (74%), functioning in an unusually uncomfortable environment (72%), viewing streams of casualties (64%), and pressure to fraternize with male officers (64%). Table 1 shows high-magnitude stressors other than war-zone exposure reported by participants. Of these traumatic events, 86.8% of women reported at least one which occurred during active military duty, and 83% reported at least one traumatic stressor occurring before military duty. The most frequently endorsed physical symptoms are shown in Table 2. Table 3 illustrates the first-order correlations among traumatic exposure, posttraumatic stress disorder symptoms, health perception, and self-reported physical symptoms.

Table 1. Frequencies and Impact of Lifetime Traumatic Stressors ($N = 50$)

Event	Exposed (%)	Severity [M (SD)]
Natural/human-made disaster	54	1.9 (2.0)
Witnessed disaster	40	1.6 (2.0)
Traumatic accident or injury	30	1.4 (2.2)
Traumatic death of close other	48	2.3 (2.4)
Mugged or robbed	36	1.5 (2.0)
Physical assault	18	0.82 (1.8)
Sexual assault	60	2.4 (2.1)
Rape	26	1.1 (1.9)
One or more traumatic events in addition to war-zone exposure	90	1.6 (1.2)

Table 2. Most Frequently Endorsed Physical Symptoms

Symptom	PTSD+ (n = 12)		PTSD− (n = 39)	
	% Endorsed	M (SD)	% Endorsed	M (SD)
Forgetfulness	100	2.6 (1.4)	56**	1.4 (1.5)*
Fatigue	90	2.7 (1.5)	64	1.5 (1.5)*
Early morning awakening	91	2.7 (1.4)	59*	1.2 (1.3)**
Restless sleep	80	2.8 (1.6)	65	1.4 (1.2)*
Inability to fall asleep	73	1.9 (1.6)	62	1.2 (1.2)
Backaches	73	1.6 (1.4)	59	1.3 (1.4)
Stomach cramps/gas	73	2.1 (1.6)	51	1.1 (1.5)*
Muscle weakness	73	2.2 (1.7)	46	1.1 (1.5)*
Blank spots in memory	82	2.3 (1.6)	41*	0.8 (1.3)**
Neckaches or stiffness	73	1.9 (1.5)	39*	1.0 (1.5)

Note. Frequencies compared by chi-square test; means compared by *t* test.
 *p < .05.
**p < .01.

Table 3. Correlations Among Variables

	1	2	3	4	5	6	7
1. Trauma exposure							
2. PTSD total	.44**						
3. Reexperiencing	.36*	.84**					
4. Avoidance	.26	.78**	.74**				
5. Numbing	.33*	.85**	.66**	.73**			
6. Hyperarousal	.35*	.90**	.70**	.59**	.66**		
7. Health perception	−.38**	−.55**	−.50**	−.40**	−.38**	−.53**	
8. Physical symptoms	.46**	.71**	.50**	.42**	.53**	.74**	−.67**

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

Twelve women in the sample met full criteria for current PTSD according to the DSM-III-R. Five additional women met partial criteria for PTSD (i.e., met criteria for two of three symptom clusters) but were classified as not having the disorder. Of the 40 women who did not meet full criteria for PTSD, 12 had met criteria for a lifetime diagnosis at some point following their military service. A range of comorbid disorders was present in women with PTSD, including major depression ($n = 2$), dysthymia ($n = 1$), panic ($n = 1$), social phobia ($n = 2$), simple phobia ($n = 2$), and undifferentiated somatoform disorder ($n = 1$).

Test of Mediation

According to Baron and Kenny (1986), a priori hypotheses of mediation can be supported in three steps. First, the relationship between the hypothesized mediator and the predictor variable must be statistically significant. Second, the

Table 4. Hierarchical Multiple Regressions Predicting Physical Symptoms and Health Perception

	Physical Symptoms				Health Perception			
Variable	B	SE	β	ΔR^2	B	SE	β	ΔR^2
Step 1				.19**				.10*
Exposure	.65	.20	.43**		.03	.01	−.32*	
Step 2				.35**				.21**
Exposure	.27	.17	.19		.01	.01	−.11	
PTSD total score	.73	.13	.64**		.03	.01	−.50**	

$^*p < .05.$
$^{**}p < .01.$

relationship between the outcome variable and the predictor variable must be statistically significant. Third, when the outcome variable is regressed on both the predictor variable and the mediator, the equation must be statistically significant, the mediator must exert a significant effect on the dependent variable, and the variance in the dependent variable accounted for by the independent variable must be reduced or nonsignificant.

PTSD symptoms were examined as mediators of the relationship between stressor exposure and both self-reported physical symptoms and health perception in this manner. Because of the high rates of multiple trauma in the present sample, and to make the test of mediation more stringent, the stressor exposure variable combined the summed items regarding traumatic exposure from the LSC and WWSS total score. The correlation matrix in Table 3 illustrates the first condition for mediation: the significant association between traumatic exposure and PTSD symptoms ($r = .44$). To test the next two conditions for mediation, two hierarchical multiple regression equations were calculated regressing physical symptoms and health perception each on trauma exposure in the first block and PTSD symptoms in the second block. These regressions are illustrated in Table 4. Full mediation was supported for both models. Trauma exposure and PTSD symptoms significantly predicted both physical symptoms [$F(2,47) = 25.9$, $p < .01$] and health perception [$F(2,46) = 9.9$, $p < .01$], and the direct effect of trauma exposure on these health outcome variables was accounted for by the indirect effects of trauma exposure through PTSD symptoms.

Associations with PTSD Symptom Clusters

Symptom clusters of PTSD (reexperiencing, avoidance, numbing, and hyperarousal) were examined for differential relationships with physical symptoms. Because of the high intercorrelations among the symptom clusters of PTSD, symptom clusters were simultaneously entered into regression equations predicting each health variable, to examine their unique predictive power while controlling for the effects of the other symptom clusters (see Table 5). Symptom clusters accounted for a statistically significant proportion of variance in self-reported physical symptoms

Table 5. Multiple Regression Equations Predicting Physical Symptoms
and Health Perception from PTSD Symptom Clusters

	Physical Symptoms			Health Perception		
Variable	B	SE B	β	B	SE B	β
Reexperiencing	−.15	.75	−.03	−.05	.05	−.24
Avoidance	−.74	1.38	−.09	−.01	.09	−.03
Numbing	1.30	1.52	.14	−.03	.10	.07
Hyperarousal	2.31	.47	.73*	−.06	.03	−.39*

*$p < .01$.

$[R^2 = .56, F(4,45) = 14.41, p < .01]$. Among symptom clusters, only increased hyperarousal symptoms were significantly related to higher levels of physical symptoms. Similarly, symptom clusters significantly predicted health perception $[R^2 = .31, F(4,45) = 5.06, p < .01]$, but only increased hyperarousal symptoms were significantly associated with poorer health perception.

Discussion

Our results demonstrate that in a female trauma sample PTSD symptoms were associated with reports of greater physical health impairment. This association was found in both of the self-reported health indices we examined, namely, global health perception and reports of specific physical symptoms. We believe that our results are among the first to examine whether certain hallmark criteria of catastrophic stress (i.e., PTSD) mediate reports of poor health. This finding replicates and confirms the preliminary data reported by Wolfe and colleagues (1994). Taken in conjunction with previous meta-analytic data which suggest that these effects are not be accounted for by other symptomatic reactions to traumatic stress, such as depression (Golding, Cooper, & George, 1997), these data suggest a unique role for PTSD symptoms, as opposed to other psychological symptoms, in relation to health-related quality of life in trauma survivors. Because the current study had no longitudinal or chronological health data, the possibility of preexisting, underlying disease cannot be ruled out. Still, women with PTSD symptoms described health concerns within the past month. Thus, it is probable that PTSD symptoms play some role in the process by which poorer health perceptions emerge.

We also found that, among PTSD symptom clusters, hyperarousal symptom clusters (defined by the DSM-III-R), were uniquely predictive of increased physical symptom reports and poorer assessments of health status. This finding stands in contrast to two previous studies which identified reexperiencing symptoms as uniquely associated with both physical symptoms (McFarlane et al., 1994) and chronic pain severity (Beckham et al., 1997). However, the current sample and that of McFarlane et al. differed by gender and chronicity of PTSD symptoms, both of which may contribute to the differences in these findings. Additionally,

the current study included the hyperarousal symptom cluster in analyses. The current participants also differed from the Beckham et al. sample by gender, help-seeking status, and the current study did not specifically examine chronic pain but acute somatic symptoms as dependent measure, all factors which may contribute to different findings. Although symptoms of PTSD may uniquely affect health status, such data suggest that specific symptoms of PTSD may affect different domains of functioning or health-related perception.

Contrary to our hypotheses, numbing symptoms were not uniquely associated with self-reported health. With respect to physical symptom reports, affective numbing may result only in a dampening of positive affect, and not necessarily an increase in negative affect. The lack of association between numbing symptoms and health perception and symptoms could be a consequence of the relative independence of positive affect in the relationship between negative affect and increased physical symptom reports.

Recent biological and physiological research in PTSD increasingly demonstrates that individuals with PTSD have stable neurobiologic alterations across a range of systems (Friedman, Charney, & Deutch, 1995). These abnormalities exist in cardiovascular reactivity, autonomic arousal, sleep, adrenergic regulation, thyroid functions, and HPA activity (for review see Friedman & Schnurr, 1995). The current data suggest that individuals with PTSD interpret those disturbances related to the hyperarousal symptoms, such as cardiovascular and autonomic alterations, as alterations in health status. The increased negative affect (e.g., increased arousal and irritability) associated with this criterion may further contribute to negatively biased attributions (Kirmayer, Robbins, & Paris, 1994). Some investigators have suggested a strong relationship between chronic autonomic hyperreactivity and diverse physiological symptomatology in PTSD [e.g., shortness of breath, diminished pain tolerance, increased startle (Orr, Lasko, Shalev, & Pitman, 1995; Shalev, Orr, & Pitman, 1993)]. The presence of these symptoms therefore could contribute to the tendency to interpret both routine (i.e., baseline) and syndromal physical sensations as somatic illness (Berry & Pennebaker, 1993; Pennebaker & Watson, 1991).

The process by which increased arousal is interpreted as physical symptoms by traumatized individuals has been conceptualized as disordered information processing (McFarlane, Weber, & Clark, 1993). Visual inspection of the most frequently endorsed physical symptoms, however, reveals significant overlap with core components of PTSD, specifically the hyperarousal symptom cluster, such as sleep disturbance or concentration problems. One explanation is that individuals "mislabel" these psychological phenomena as health impairment or overemphasize physical sensations normative to PTSD. An alternative explanation is that trauma patients experience symptoms such as severe sleep disturbance and pseudoneuological symptoms as signs of illness because often these symptoms do belie actual health problems. Such an attribution would be the result of appropriate stimulus

discrimination, where patients recognize a reaction to the traumatic event but do not recognize the false dichotomy between medical and psychological symptoms (Resnick, Acierno & Kilpatrick, 1997). If the presence of specific psychological distress can further facilitate attributions of symptoms as signs of illness, such phenomena may also partially explain increased rates of medical utilization in trauma-exposed individuals.

Several other pathways exist by which PTSD might impact health perception and health status. For example, women with PTSD often have poor health habits and deficits in self-care such as excessive smoking or substance abuse (Acierno, Kilpatrick, Resnick, & Saunders, 1996; Dansky, Brady, Saladin, & Killeen, 1996; Dansky, Brewerton, Kilpatrick, & O'Neil, 1997). Accordingly, individuals with PTSD could be at greater risk for reporting physiological and somatic problems based on direct or indirect links to unhealthy lifestyles. In fact, PTSD serves as a significant risk factor for medical morbidity in a variety or organ system in male veterans, even after hypochondriasis, health behaviors, socioeconomic status, and premorbid medical history are controlled (Boscarino, 1997). More detailed empirical research is required to separate components of poor health perception which may be due to the effects of organic illness from those related primarily to the somatic components of psychiatric conditions. Such research will help delineate the role of violence and trauma in women's health.

Limitations of the study should be noted in the interpretation of results. Specifically, the current sample represents a convenience, rather than a probability sample of female veterans, so generalization is somewhat limited. Despite this limitation, the current results represent one of the few studies of traumatic stress and health status in female individuals and may be better generalized to other samples of women than studies of men. However, due to the sampling limitations and the small sample size, replication in another sample of women would ensure the reliability the association between the hyperarousal symptoms of PTSD and self-rated health. The consistency of this relationship in our data for two measures representing somewhat different conceptualizations of self-assessed health status suggests that this association is potentially reliable.

In summary, PTSD symptoms appear to be important mechanisms by which some women make judgments about their physical health. This attributional process may represent underlying physical health problems or demonstrate the extent to which psychological variables affect more global judgments. Research that addresses attributional style and associated functional health status (e.g., health-related quality of life) could help explicate this issue (Rosenblatt & Attkisson, 1993). Results also suggest that traumatic stress may play an etiological or maintaining role in symptoms of women who report noteworthy, recurrent somatic distress, particularly in the absence of organic pathology (Walker, Gelfand, Gelfand, Koss, & Katon, 1995; Walker et al., 1995). Mental health interventions have demonstrated improved physical status in similar cases (Smith, Rost, & Kashner,

1995; Weaver, Nishith, & Resick, 1998). Given the widespread prevalence of lifetime trauma in women and the documented effects of its sequelae on medical utilization and health perception, assessment of PTSD in primary care settings has the potential both to increase efficacy of medical care and to reduce medical cost. Treatment interventions should proceed in tandem with empirical studies attempting to identify the complex mechanisms underlying the relationship between traumatic stress and health status.

Acknowledgments

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