



What factors are associated with the maintenance of PTSD after a motor vehicle accident? The role of sex differences in a help-seeking population

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Abstract

To investigate potential sex differences in factors that are associated with chronic PTSD, data from 223 participants were examined using logistic regression analyses. Each participant had been involved in a serious motor vehicle accident (MVA), which had occurred at least 6 months earlier (range 6 mos–37 years). Although men and women did not differ in the rate of diagnosed PTSD, four variables were found to interact significantly with sex in the prediction of chronic PTSD: peritraumatic experiences of helplessness, danger, and the certainty that one would die during the MVA and lack of employment. Follow up analyses indicated that although the peritraumatic experience variables were statistically significant, no notable differences emerged in the odds ratios of men and of women. In contrast, men who were unemployed were 9.94 times more likely to be diagnosed with PTSD, relative to men who were employed, while unemployed women were 2.85 times more likely to be diagnosed with PTSD, relative to women who were employed. Results are discussed in light of the role of functional limitations and their impact on the maintenance of PTSD in men and women.

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1. Introduction

In recent years, attention has been drawn to the fact that women are at greater risk than men for the development of posttraumatic stress disorder (PTSD) following a traumatic event (e.g., Breslau & Davis, 1992; Brewin, Andrews, & Valentine, 2000; Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995). Additionally, several studies have indicated that females are four times more likely than males to maintain PTSD symptoms once the disorder has developed (Breslau & Davis, 1992; Breslau, Davis, Andreski, & Peterson, 1991). Unfortunately, these conclusions are limited by comparison of male and female samples that have experienced different types of traumas (e.g., combat, sexual assault). Moreover, this type of comparison downplays relevant dimensions of the trauma, such as the nature of the event (e.g., on-going versus one-time trauma, Saxe & Wolfe, 1999). The present report will address these limitations by exploring the role of sex differences in the *maintenance* of PTSD among men and women who have experienced the same trauma, namely a serious motor vehicle accident (MVA). In this report, efforts will be made to identify factors that are differentially associated with chronicity of the disorder in men and women.

In reviewing the available literature, three salient questions emerge. First, are women more likely to develop PTSD? Several studies have examined this question with particular reference to the development of PTSD following a serious MVA. Blanchard and colleagues (1996) noted that gender failed to predict PTSD status and symptom severity in MVA survivors assessed one to four months after their accident. A more recent study prospectively followed 122 MVA survivors in the 1-month following their accident and examined various risk factors for their differential value in predicting PTSD in men versus women (Fullerton et al., 2001). Although the risk of developing PTSD at 1 month was 4.4 times greater for women, logistic regression analyses indicated that these sex differences were not associated with prior trauma, prior PTSD, major depression, other anxiety disorders, or passenger injury. Peritraumatic dissociation was the only factor which revealed sex differences, with women who reported dissociation being 7.6 times more likely than men who reported dissociation to develop PTSD. Taken together, these studies do not consistently identify factors that differentially place women at greater risk for the development of PTSD after a MVA.

A second salient question in this literature asks if women are more likely to experience chronic symptoms of PTSD, once the disorder has developed. To date, only a handful of studies have examined this issue among MVA survivors, with several studies suggesting that the greater risk conferred to women in the development of PTSD may not continue forward in time. In other words, although women appear to be at greater risk to develop PTSD, sex differences may not continue to exert an influence in the maintenance of the disorder. For example, Ursano et al. (1999) reported follow-up data from the same sample utilized by Fullerton et al. (2001). At 12 months post-trauma, females in this sample were 4.6 times more likely to be diagnosed with PTSD, relative to males. However, after adjusting for pre-existing PTSD diagnosis, income, lifetime anxiety disorder diagnoses, and Axis II diagnoses, women did not have a higher risk for chronic PTSD than men. Jeavons (2000) reported a lack of sex differences among 58 MVA survivors assessed 1 year after their accident in order to identify post-trauma problems. Freedman, Brandes, Peri and Shalev (1999) reported a similar lack of sex differences in a 4-month follow-up of 236 trauma survivors recruited from a general hospital's emergency room, many of whom were

MVA survivors. Although Ehlers, Mayou, and Bryant (1998) noted that female gender contributed to the prediction of PTSD one year following a serious MVA, sex differences did not emerge as one of the more salient predictors of PTSD in this study. Thus, studies which have examined sex differences in the maintenance of PTSD following a serious MVA have produced mixed results.

The third salient question within this literature involves whether different factors are associated with the maintenance of PTSD in men and women. Most available studies have not directly contrasted the sexes with respect to maintaining factors, leaving a gap in our empirical knowledge. Thus, the purpose of the current report is to examine sex differences in chronic PTSD following a serious MVA. First, we were interested in examining if there would be sex differences in the rate of chronic PTSD following a serious MVA. Given conflicting results from previous studies, this appeared to be an important starting point. Second, the effect of trauma-related and demographic variables was examined to determine whether these differentially affected chronic PTSD in women versus men. Given the relative lack of research on this second issue, these variables were selected as a starting point for exploring sex differences in long-term trauma symptoms.

To examine these questions, a help-seeking sample was used. Because approximately 50% of MVA survivors who initially report PTSD show symptom remission within a 6-month interval (Blanchard & Hickling, 1997), a help-seeking sample is likely to represent individuals who continue to struggle with post-trauma problems. As such, this sample represents an appropriate choice for the study of factors involved in the maintenance of PTSD. Data were drawn from two research clinics in the northern area of New York State, which permitted a relatively large sample. Each participant had been involved in a serious MVA, which had occurred at least 6 months prior to evaluation, in keeping with the focus on chronic PTSD (American Psychiatric Association, 2000).

2. Method

2.1. Participants

Data from 223 individuals (162 women, 61 men, average age = 40.7, SD = 10.52) were included in this report. All participants had experienced a MVA that occurred at least 6 months before the assessment (range 6 months–37 years). In each case, the MVA had evoked feelings of fear, helplessness, horror, and/or the perception that one would die (Criteria A1 and A2 of the diagnostic criteria for PTSD in DSM-IV; APA, 2000). Thus, all participants met the conditions set forward by DSM-IV with respect to the traumatic nature of their MVA. Data from individuals presenting with neurological impairment, substance dependence and abuse in the 6 months preceding the assessment, psychotic symptoms, or acute suicidality were excluded. All participants were between 18 and 65 years of age and provided informed consent prior to participation.

Data were collected from two research clinics. The Buffalo MVA Clinic provides assessment and treatment services to community members in the greater Buffalo metropolitan region. The subsample from this site ($n = 120$) included individuals who were seeking assessment and treatment for mental health problems following their MVA. This sample was recruited using announcements to pain clinics, a local trauma center, physical therapists, and specialists in rehabilitation and internal medicine, as well as public service announcements. The Albany MVA Project provided assessment and treatment to

Table 1
Description of female and male samples

	Females (<i>n</i> = 162)	Males (<i>n</i> = 61)	<i>p</i>
Age	40.59 (10.29)	41.05 (11.20)	NS
Education level (%high school or less)	24	25	NS
Marital status (% married)	48	35	NS
% employed (full or part-time)	44	34	NS
Race (% Caucasian)	88	82	NS
Months elapsed since MVA	26.37 (38.75)	40.70 (66.75)	NS
Pain complaints from MVA? (% yes)	84	84	NS
Number of additional anxiety disorders	0.89 (1.07)	0.70 (0.95)	NS
Number of mood disorders	0.44 (0.53)	0.51 (0.57)	NS
Number of other stressful life events	3.31 (2.62)	3.70 (2.69)	NS
Feelings of fear during MVA (0–100)	79.63 (30.73)	65.47 (40.33)	0.01
Feelings of helplessness during MVA (0–100)	84.52 (28.91)	82.48 (30.73)	NS
Perceived danger during MVA (0–100)	74.61 (35.48)	72.03 (36.94)	NS
Certainty that would die during MVA (0–100)	41.21 (43.00)	38.07 (42.87)	NS

members of the Capital District community, as part of a treatment outcome study (Blanchard et al., 2003). One hundred and three participants were included from the Albany Project. Individuals from the Buffalo site participated in exchange for a thorough psychosocial evaluation of their post-MVA functioning. Individuals from the Albany site received \$50 compensation, in addition to a thorough psychosocial evaluation. At both sites, the evaluation included diagnostic interviews (to be discussed) and self-report measures. The data reported here were collected prior to the beginning of any psychological treatment.

As can be seen in Table 1, participants were primarily Caucasian (87% overall), with some college education (75% overall), and tended to report on-going pain problems from injuries sustained during the MVA (84% overall). A minority (41%) was employed (either full or part-time). The male and female sub-samples differed only with respect to fear experienced during the MVA, with males reporting lower fear at the time of their accident (see Table 1; $t = 2.41$, $p < 0.01$). Participants from the two sites did not differ with respect to sex or race distribution, marital status, or the presence or absence of pain, although individuals from the Buffalo site were significantly more likely to be employed ($\chi^2(1) = 6.71$, $p < 0.01$, Buffalo 49% employed, Albany 32% employed) and to report a longer elapsed interval since their MVA ($t = 4.15$, $p < 0.0001$, Buffalo mean = 41.5 mos, Albany mean = 17.2 mos). As well, participants from the Buffalo site were diagnosed with more additional anxiety disorders, relative to participants from Albany ($t = 2.67$, $p < 0.008$; Buffalo mean = 1.00, SD = 1.09, Albany mean = 0.64, SD = 0.95) although the two samples did not differ on any other dependent variable.

2.2. Measures

2.2.1. PTSD diagnosis

The clinician-administered PTSD scale (CAPS; Blake, Weathers, Nagy, Kaloupek, Charney et al., 1995a; Blake, Weathers, Nagy, Kaloupek, Gusman et al., 1995b), a

structured interview that assesses the 17 symptoms of the disorder identified in DSM-IV (APA, 2000) was used to determine PTSD diagnosis, using the previous month as the time frame of interest. The CAPS includes standardized questions to determine the frequency and severity of symptoms using five-point Likert scales (e.g., 0 indicates that the symptom does not occur or does not cause distress and 4 indicates that the symptom occurs nearly every day or causes extreme distress and discomfort, respectively). In order to meet diagnostic criteria, an individual needed to endorse symptoms with ratings of at least 1 for the frequency of occurrence of the symptom and 2 for its severity (Blanchard et al., 1996). Additionally, interference in social or occupational domains must have been noted. CAPS data were used to determine the presence/absence of PTSD at both sites.

At the Buffalo site, the CAPS was administered by trained clinicians who were advanced doctoral students in clinical and counseling psychology. All clinicians received extensive training in use of the CAPS. All interviews were videotaped and 26% ($n = 31$) were randomly selected and reviewed by an independent diagnostician to establish diagnostic reliability. At the Albany site, the CAPS was administered by doctoral students after extensive training. All interviews were audiotaped and 48% ($n = 49$) were randomly selected and reviewed by an independent diagnostician to establish diagnostic reliability. Inter-diagnostician agreement in PTSD diagnosis, reflected by the κ statistic, was acceptable at both sites (Buffalo, $k = 0.94$; Albany, $k = 0.77$). The CAPS has strong support for its reliability and validity (e.g., Weathers, Keane, & Davidson, 2001) and is regarded as “the gold standard” for instruments to diagnosis PTSD.

2.2.2. Peritraumatic experiences and pain

In order to evaluate participants' emotional responses at the time of the MVA and immediately afterwards, a brief structured interview that assessed characteristics of the MVA was administered (Blanchard & Hickling, 1997). Included in this interview were questions about the individual's emotional response to the accident, including feelings of fear, helplessness, danger, and perceptions that they might die. Each of these emotional responses to the MVA was rated on a 0–100 Likert-type scale, where 0 = “not at all” and 100 = “extreme”. This interview also included questions concerning the nature of physical injuries sustained during the MVA and whether the individual was still experiencing pain complaints stemming from these injuries (coded as yes/no).

2.2.3. Additional anxiety and mood diagnoses

In order to evaluate the presence of other anxiety and mood disorders, participants were administered a second structured interview. At the Buffalo site, the Anxiety Disorders Interview Schedule (ADIS-IV; DiNardo, Brown, & Barlow, 1994) was administered. The ADIS-IV is a semi-structured interview designed to evaluate each of the anxiety and mood disorders. The PTSD section was omitted from the ADIS-IV. The same clinicians who administered the CAPS also administered the ADIS-IV. All interviewers received extensive training in use of the ADIS-IV, following procedures outlined by DiNardo, Moras, Barlow, Rapee, and Brown (1993). As with the CAPS, 26% ($n = 31$) were randomly selected and reviewed by an independent diagnostician. Agreement between diagnosticians was strong for panic disorder ($k = 1.00$), social phobia ($k = 0.89$), generalized anxiety disorder (GAD; $k = 0.94$), major depressive disorder (MDD; $k = 0.80$) and specific phobia ($k = 0.87$), and moderate for panic disorder with agoraphobia ($k = 0.72$). Use of the

ADIS-IV is recognized as providing reliable and valid diagnoses (Brown, DiNardo, Lehman, & Campbell, 2001).

At the Albany site, the Structured Clinical Interview for DSM-IV (SCID-I; First, Spitzer, Gibbon, Williams, & Benjamin, 1996) was used. The SCID-I is a structured interview, designed to diagnose axis I disorders. Advanced graduate students administered the SCID-I, after extensive training in its use from the fourth author. Twenty interviews were randomly selected (19%) for reliability checks on the most common co-morbid conditions, MDD and GAD. κ was 0.86 and 0.80, respectively, reflecting strong agreement. For data from both sites, the number of current additional anxiety disorders (excluding PTSD) was recorded as well as the number of current mood disorders (including MDD, dysthymia, and the bipolar disorders).

2.2.4. Demographic features

Each participant was administered a brief questionnaire to assess relevant demographic information. Included were questions pertaining to race, sex, current employment status, marital status, and the date of the MVA (to determine the length of the interval since the event). For the purposes of this report, race, employment, and marital status were coded into dichotomous variables (Caucasian or not, not employed or employed, and married or not).

2.2.5. Stressful life events

The life events checklist (LEC; Blake et al., 1995a) was used to evaluate other stressful life events that the participant may have experienced. The LEC is a 17-item scale, which was developed in conjunction with the CAPS to assess the individual's overall exposure to stressful life events. The individual is asked to indicate whether they have experienced, witnessed, or learned about each of a series of stressful life events (e.g., unwanted sexual experience, fire, accident). Although this measure was not originally designed to index the number of stressful life experiences, it was selected for this report because it provided a standardized assessment of stressful life events across the two research sites. In this report, any event (other than the MVA) that was experienced or witnessed was counted as a stressful event.

2.3. Procedure

The assessment procedures were explained to the participant and informed consent was obtained. Each participant was interviewed individually, beginning with the MVA interview and then completing the CAPS and the site-specific interview to assess additional anxiety and mood diagnoses. Participants then completed self-report measures, which were not utilized in the current report (see Blanchard & Hickling, 1997).

3. Results

3.1. Analytic strategy

First, the percentage of men and women diagnosed with chronic PTSD was examined, to determine if sex differences were noted. Because this analysis examined the relative proportion of men and women with PTSD, it controls for the fact that the sample contained more women overall.

Second, the effect of potential factors on the relationship of sex and chronic PTSD was examined using multiple logistic regression and χ^2 analyses. Logistic regression allows one to predict a categorical outcome (in this case, PTSD present or absent), using selected predictor variables. In conducting this analysis, we used a hierarchical stepping approach. In the first step, each variable (peritraumatic reactions [fear, helplessness, danger, and certainty that one would die during the MVA], whether or not chronic pain was present, the number of additional anxiety disorders, the number of additional mood disorders, whether or not the individual was married, employed, and Caucasian, the interval in months since the MVA, the number of stressful life events [excluding the MVA] that the person had experienced, and sex) was entered in a block. In the second step, the interaction of sex and each variable was entered as a block, after the main effects had been entered. Each continuous variable was centered in the formation of these interaction terms, to reduce problems with multicollinearity. Examination of the cumulative significance of the interaction effects then was determined by examining how much the model χ^2 changed from the first to the second step (subtracted model χ^2 from the first step from model χ^2 from the second step). In the event that this produces a significant model χ^2 , it indicated that the block containing the interaction effects was significant. If this occurred, we planned to use separate multiple logistic regression analyses for men and for women, in order to examine the odds ratios for significant predictors from the previous analysis. Logistic regression produces coefficients to form the natural logarithm of an odds ratio, which is the probability of an individual's being classified as PTSD or non-PTSD divided by the probability of being non-PTSD. Stated differently, the odds ratio reflects the ratio of the odds of developing the disorder for persons with the significant factor versus those without the risk factor (Tabachnick & Fidell, 2001).

3.2. Are there sex differences in the rate of chronic PTSD following a serious MVA?

Examination of the rates of PTSD in men and women did not reveal a significant difference ($\chi^2(\text{df} = 1) = 0.93, p = 0.34$). Specifically, 60.5% ($n = 98$) of women and 53.3% ($n = 32$) of men received diagnoses of PTSD.

3.3. Sex differences and their role in chronic PTSD

After deletion of 14 cases with missing data,¹ 209 cases were available for the logistic regression. In the first step, a test involving the main effects only predicting PTSD revealed a significant model ($\chi^2(13) = 74.89, p < 0.0001$; Nagelkerke $R^2 = 0.41$), indicating that the predictors as a set reliably distinguished between individuals with and without PTSD. In the second step, inclusion of the interaction of each variable with sex also produced a significant model ($\chi^2(25) = 107.92, p < 0.0001$; Nagelkerke $R^2 = 0.54$). Because the difference in these two models was statistically significant ($\chi^2(12, n = 209) = 33.04, p < 0.001$), the next step involved examination of specific interaction terms, with the goal of considering whether differences would be detected between men and women. Four interaction terms were significant ($p < 0.05$), as noted in Table 2:

¹Among participants who were missing data, 12 individuals were missing ratings of peritraumatic experiences, one individual was missing information on marital status, and one individual was missing information on race.

Table 2

Summary of significant interactions with sex derived from logistic regression analysis predicting PTSD

	<i>B</i>	Wald test (df = 1)	<i>p</i>
Helplessness × sex	0.07	4.35	0.04
Danger × sex	0.08	5.48	0.01
Current employment × sex	2.82	5.34	0.02
Certainty would die × sex	−0.08	8.12	0.004

Table 3

Odds ratios for men and women, reflecting relative risk of PTSD

	Men (<i>n</i> = 56)		Women (<i>n</i> = 157)	
	Odds ratio	Confidence interval	Odds ratio	Confidence interval
Helplessness (0–100)	1.04	1.01–1.07	1.01	0.99–1.02
Danger (0–100)	1.02	0.99–1.04	0.99	0.98–1.01
Certainty that would die (0–100)	0.99	0.97–1.01	1.01	0.99–1.02
Not employed	9.94	2.14–46.18	2.85	1.46–5.58

sex × helplessness, sex × danger, sex × employment, and sex × certainty that one would die.²

To follow-up these significant interactions, separate multiple logistic regression analyses were computed for men and for women, in order to examine the odds ratios for the significant predictors separately by sex. Separate odds ratios for men and women are shown in Table 3. To facilitate interpretation, an odds ratio indicates change in the odds of maintaining PTSD with a one-unit increase in the predictor variable. Odds ratios greater than 1.0 indicate the increase in odds of having PTSD, while ratios less than 1.0 indicate the decrease in these odds. As can be seen in Table 3, despite significant interactions with sex, similar odds ratios emerged for men and women when examining feelings of helplessness, danger, and the perception that one could die. These values suggest that although statistical significance was obtained for the interaction of sex and these variables in the previous analytic step, the observed differences between men and women are not clinically meaningful.

In contrast, the odds ratios obtained for employment indicate that lack of employment is associated with PTSD and that this association is stronger for men than for women. Men who were unemployed were 9.94 times more likely to be diagnosed with PTSD, relative to men who were employed, while women who were unemployed were 2.85 times more likely to be diagnosed with PTSD, relative to women who were employed.

²In order to check that these results were not influenced by the number of variables contained within this analysis, a stepwise logistic regression using forward stepping was conducted. This secondary analysis yielded identical results.

4. Discussion

The current report examined the role of sex differences in chronic PTSD after a serious MVA. Although men and women did not differ in the rate of diagnosed PTSD, four variables were found to interact significantly with sex in the prediction of chronic PTSD, specifically peritraumatic experiences of helplessness, danger, and the certainty that one would die during the MVA and lack of employment. Follow up analyses indicated that although interaction effects with the peritraumatic experience variables were statistically significant, no notable differences emerged in the odds ratios of men and of women. In contrast, men and women had substantially different odds ratios for employment status. Men who were unemployed were 9.94 times more likely to be diagnosed with PTSD, relative to men who were employed, while unemployed women were 2.85 times more likely to be diagnosed with PTSD, relative to women who were employed. Thus, it appears that lack of employment impacts the chronicity of PTSD in men to a much greater extent, relative to women.

These data suggest that there are no sex differences in the rate of chronic PTSD after a serious MVA in this help-seeking sample, in keeping with [Jeavons \(2000\)](#), and [Freedman et al. \(1999\)](#). In light of the fact that some investigators note that women are more likely than men to maintain PTSD for at least 1 year after a trauma (e.g., [Breslau, David, Andreski, & Peterson, 1991](#); [Ursano et al., 1999](#)), greater consideration needs to be paid to methodological factors in resolving this discrepancy. For example, it is possible that prospective longitudinal studies are more likely to note sex differences in the rate of chronic PTSD (e.g., [Ehlers et al., 1998](#)), whereas cross-sectional methodology is less likely to yield such differences. Additionally, although one might expect that sex differences would be more apparent in a sample seeking help for mental health problems, the present results do not indicate this difference. It is apparent that continued work is needed to definitively answer whether women are more likely to report chronic problems pertaining to PTSD, even while controlling for characteristics of the traumatic event.

Despite a lack of difference in the rate of chronic PTSD in men and women in this study, significant interactions with sex were noted for four variables. Three of the four variables that showed significant interactions with sex involved peritraumatic experiences that occurred during the MVA. However, when these interactions were explored further, the odds ratios for men and women were not different. It is notable that the only factor identified by [Fullerton et al. \(2001\)](#) to show a significant interaction with sex was peritraumatic dissociation occurring during the MVA. Clearly, greater study of emotional reactions during a traumatic event may be helpful, particularly in light of recent theorizing about the role of negative affectivity and gender-linked coping styles in the face of adversity ([Craske, 2003](#)).

The fourth variable, employment status, showed differences between the male and female subsamples when considering the odds ratios. It is important to note that the direction of causality is impossible to determine in interpreting these data, as is more common in logistic regression ([Tabachnick & Fidell, 2001](#)). Rather, it is only possible to determine that lack of paid employment is associated with greater odds of having PTSD in men, relative to women. Importantly, this finding was not accompanied by a significant interaction between pain complaints and sex, suggesting that functional impairment (such as lack of employment) may be more related to PTSD than physical limitations (e.g., [Shipherd, Beck, Hamblen, Lackner, & Freeman, 2003](#)). Ideally, further examination of the

separate and interactive effects of PTSD and physical pain complaints as these contribute to disability and functional limitations would be helpful in understanding the synergy between chronic pain and chronic PTSD (Sharp & Harvey, 2001).

In considering the current report, several limitations deserve recognition. First, these data utilized cross-sectional methodology, which could have influenced the results. As discussed previously, cross-sectional studies appear to produce different results and to come to different conclusions about sex differences in the maintenance of chronic PTSD, relative to prospective studies. A related methodological component involved the use of retrospective recall of certain variables, specifically peritraumatic experiences. It is possible that these ratings were influenced by differential recollection between individuals with and without PTSD (e.g., Southwick, Morgan, Nicolaou, & Charney, 1997). Additionally, data on additional anxiety and mood disorders were collected using different structured interviews at the two sites. Although both of these interviews closely follow DSM criteria, no direct comparison of them has been conducted, leaving unknown the impact of this between-site difference. As well, because the two samples were comprised of individuals who were seeking treatment for psychological distress after their MVA, the current results may not generalize to unselected community samples. Given the cross-site nature of this study, the selection of potential predictor variables was limited by areas of overlap between the two data sets. Future investigations of sex differences in chronic PTSD could benefit from inclusion of a broader array of variables, particularly theoretically driven factors such as appraisals of the traumatic event, memory processes, and maladaptive behavioral and cognitive coping strategies (e.g., Clark, 1999; Craske, 2003; Dunmore, Clark, & Ehlers, 1999; Ehlers & Clark, 2000).

In sum, this study reveals differences in variables that are associated with the maintenance of PTSD in men and women, despite relatively equivalent rates of the disorder. Importantly, because participants had all been involved in the same type of traumatic event (a motor vehicle accident), one can be more certain that these variables are reflective of sex differences, rather than different types of traumatic events that tend to occur to men versus to women. The results suggest the importance of functional impairment, such as the lack of employment, as differentially associated with chronic PTSD in men and women and highlight the importance of further study of the processes through which PTSD is maintained.

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