

# Further Examination of the Relationship between the PTSD Symptom Clusters and Depressive Symptoms

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## Introduction

- The co-occurrence of posttraumatic stress disorder (PTSD) and major depressive disorder (MDD) has been documented in clinical, community, and veteran samples (e.g., Blanchard et al., 1998; Kessler et al., 1995).
- Although several studies have investigated the prevalence of this co-occurrence, few studies have explored the relationship between co-occurring PTSD and depressive symptoms.
- Existing research suggests that the onset of anxiety symptoms typically precedes the onset of depressive symptoms (Kessler et al., 1995); accordingly, it may be that symptoms associated with PTSD influence symptoms of low mood.
- There is also initial evidence suggesting that hyperarousal (Erickson et al., 2001) and numbing (Asmundson et al., 2002) symptoms are significant predictors of depressive symptoms among veterans.
- Additional investigation of the relationship between PTSD and depressive symptoms in women and other trauma-exposed samples is warranted. The purpose of this study was to further investigate the relationship between the PTSD symptom clusters and depressive symptoms in a community sample of women.

## Method

- Participants included 190 women (ages 18 to 63;  $M_{age}=30.1$ ,  $SD_{age}=10.9$ ) who participated in a large questionnaire-based study approved by the University Research Ethics Board.
- All participants were exposed to prior traumatic experiences (e.g., sexual assault; see Table 4).
- Demographics were supplemented with:
  - Center for Epidemiologic Studies Depression Scale (CESD; Radloff, 1977)
  - Posttraumatic Checklist-Civilian Version (PCL-C; Weathers et al., 1993)
  - A questionnaire regarding traumatic life experiences
- The PCL-C was subdivided into four subscales corresponding to the dimensions of PTSD symptoms (re-experiencing, avoidance, numbing, and hyperarousal) identified in recent factor analytic studies (e.g., Asmundson et al., 2004a).
- A Pearson correlation was calculated to assess the interrelationships between all variables.
- A regression analysis was used to assess variance accounted for in depressive symptoms by the subscales of the PCL-C.
- The CESD total score was entered as the dependent variable, with the four PCL-C subscale scores entered as the independent variables.

## Results

- Means and standard deviations are presented in Table 1.
- All of the Pearson correlations were statistically significant (all  $p < .01$ ; Table 2).

Table 2. Correlations

	CESD	PCL-C Reexp	PCL-C Avoid	PCL-C Numb
PCL-C Reexp	.59	-		
PCL-C Avoid	.44	.71	-	
PCL-C Numb	.62	.67	.61	-
PCL-C Hyper	.69	.74	.59	.70

- Results of the regression analyses suggested that the PCL-C scores accounted for 51% of the variance in CESD scores.
- Hyperarousal ( $r=.27, p<.01$ ) and numbing ( $r=.17, p<.01$ ) symptoms were significantly associated with depressive symptom severity (see Table 3).
- Re-experiencing and avoidance symptoms were not significantly associated with depressive symptoms.

## Discussion

- The present study investigated the inter-relationships between PTSD and depressive symptoms. The predictive roles of the PTSD symptom clusters for depressive symptoms were also assessed.
- The regression analysis suggested that, in general, the PCL-C total score has a significant relationship with depressive symptoms. In addition, numbing and hyperarousal symptoms were significant predictors of depressive symptoms (accounting for 3% and 7% of the variance, respectively). Re-experiencing and avoidance symptoms were not significantly associated with depressive symptoms. This is consistent with previous findings (e.g., Asmundson et al., 2004b) in male veterans.
- Future research should focus on assessing the effects of PTSD symptoms on depressive symptoms in prospective studies, where possible. Additional research is needed to further investigate the temporal sequence of the onset of depressive and PTSD symptoms, particularly with respect to the numbing and hyperarousal symptoms.
- These findings may have treatment implications for individuals with co-occurring depressive and PTSD symptoms. Targeting hyperarousal and numbing symptoms may be particularly effective in reducing depressive symptomatology.

Table 1: Descriptive statistics

	CESD	PCL-C Reexp	PCL-C Avoid	PCL-C Numb	PCL-C Hyper
<i>n</i>	190	190	190	190	190
<i>M</i>	17.80	11.44	4.85	10.07	11.14
<i>SD</i>	12.56	5.14	2.44	4.88	5.47

CESD: Center for Epidemiologic Studies Depression Scale; PCL-C Reexp: Re-experiencing symptoms subscale; PCL-C Avoid: Avoidance symptoms subscale; PCL-C Numb: Numbing symptoms subscale; PCL-C Hyper: Hyperarousal symptoms subscale

Table 3. Regression model, ANOVA summary table, coefficients

	<i>Adjusted R<sup>2</sup></i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	$\beta$	<i>t</i>	<i>p</i>
Regression	.51	15390.71	4	3847.68	49.27			<.01
Residual		14447.69	185	78.10				
Total		29838.40	189					
(Constant)						-1.40	.16	
PCL-C Reexp						.15	1.70	.09
PCL-C Avoid						-.09	-1.14	.26
PCL-C Numb						.26	3.33	<.01
PCL-C Hyper						.44	5.30	<.01

  

	Correlations		
	Zero-order	Partial	Part
(Constant)	-	-	-
PCL-C Reexp	.59	.12	.09
PCL-C Avoid	.44	-.08	-.06
PCL-C Numb	.62	.24	.17
PCL-C Hyper	.69	.36	.27

Table 4. Frequency of Traumatic Events

	Prevalence (%)
Natural disaster (e.g., tornado, flood)	14.7
Motor vehicle accident	66.3
Other serious accident (e.g., industrial, farm)	8.9
Fire	13.7
Seeing someone being seriously injured or killed	21.6
Sexual assault	31.1
Physical assault	36.3
Military combat or peacekeeping in a war zone	1.6
Civilian (i.e., non-military) living in a war zone	1.1
Terrorist attack	1.1
Torture	2.1
Unexpected death of loved one	70.5
Armed robbery	4.7
Serious illness (e.g., cancer, AIDS)	41.1