

# Prediction of PTSD Symptoms: The Role of Emotional Pain and Depression

Cameron L. Randall, Alison M. Vargovich, Pete Warman, Christina Hamer, Ben Weinstein, and Daniel W. McNeil



West Virginia University: Department of Psychology, Eberly College of Arts and Sciences



Anxiety, Psychophysiology, and Pain Research Laboratory

## ABSTRACT

The current study, in part, aimed to predict PTSD symptoms based on measures of emotional pain, depression, and anxiety. Community-dwelling adult participants took part in a semi-structured interview to assess for emotional pain and completed a battery of verbal report instruments regarding depression, anxiety, and PTSD symptoms. PTSD symptoms were predicted by depression and current levels of emotional pain, but not by anxiety sensitivity nor by any retrospective ratings of emotional pain. As expected, depression was positively associated with PTSD symptoms. Curiously, however, emotional pain was negatively associated with PTSD symptoms.

## INTRODUCTION

- ❖ Emotional pain is an aversive sensory and emotional experience that is felt in response to distressing or traumatic experiences, particularly loss; often it involves nociceptive sensations in addition to distressing emotional feelings (Eisenberger, Lieberman, & Williams, 2003; Macdonald & Leary, 2005).
- ❖ Work by our laboratory, and others, suggests that the emotional pain experience is remarkably similar to the experience of physical pain, though the two may have distinct affective and sensory qualities (Kross et al., 2011; Mee et al., 2006, Weinstein & McNeil, 2011).
- ❖ Emotional pain can be related to traumatic stress, but appears to be an independent construct from anxiety and depression.
- ❖ This goals of this study were to determine:
  1. the nature of the associations between emotional pain, depression, anxiety sensitivity, and PTSD symptoms.
  2. whether PTSD symptoms can be predicted by measures of depression and anxiety sensitivity.
  3. whether PTSD symptoms can be predicted by past and current ratings of emotional pain resulting from a previously experienced distressing or traumatic event.

## METHOD

- ❖ Participants
  - ❖ 32 (62.5% female) community-dwelling adults (ages 18-70 years,  $M = 50.25$ ,  $SD = 14.19$ )
  - ❖ Demographics: 97% Caucasian, 3% Asian
  - ❖ Received \$50 compensation
- ❖ Measures
  - ❖ Emotional Pain Interview – semi-structured interview assessing the topography and intensity of a previously experienced distressing or traumatic event; includes self-report ratings (0-100) of emotional pain immediately after the event, at one month, six months, and one year after the event, and a current rating
  - ❖ Beck Depression Inventory–II (BDI-II; Beck, Steer, & Brown, 1996)
  - ❖ Anxiety Sensitivity Index (ASI; Peterson & Heilbronner, 1987)
  - ❖ PTSD Checklist – Civilian Version (PCL-C; Weathers et al., 1993)
- ❖ Procedure
  - ❖ Participants responded to newspaper ads asking them to come into the laboratory to discuss an emotionally painful event or a particularly joyful event.
  - ❖ Regardless of recruitment group, participants discussed an emotionally painful event according to the Emotional Pain Interview.
  - ❖ Participants then completed the BDI-II, the ASI, and the PCL-C.
  - ❖ Hierarchical regression analysis was used to determine whether PTSD symptoms are predicted by depression, anxiety sensitivity, and emotional pain.

## RESULTS

- ❖ Regression analysis demonstrated that PTSD symptoms were predicted by depression,  $\beta = .68$ ,  $p < .001$ , but not by anxiety sensitivity.
- ❖ PTSD symptoms were predicted by current ratings of emotional pain,  $\beta = -.33$ ,  $p = .01$ , but not any retrospective ratings of emotional pain.
- ❖ As expected, depression was positively correlated with PTSD symptoms,  $r(30) = .68$ ,  $p < .001$ .
- ❖ Controlling for depression, current rating of emotional pain intensity was negatively correlated with PTSD symptoms,  $r(29) = -.44$ ,  $p = .01$ .
- ❖ Anxiety sensitivity was not significantly associated with PTSD symptoms.

## DISCUSSION

- ❖ Most interesting was our finding that current intensity of emotional pain predicts PTSD symptoms and that the association between the two variables is negative.
- ❖ It is possible that emotional pain serves as a protection factor from PTSD symptoms. Emotional pain may operate like pain induced by physical causes, in that it may compete with other negative emotional states. Perhaps the “rawness” of currently experienced emotional pain demands sufficient attention and other cognitive and behavioral resources that PTSD symptoms are less likely to be experienced.
- ❖ Limitations of this study include the relatively small sample size, the homogeneity of the sample, and the reliance on self-report measure alone to assess emotional pain, depression, anxiety sensitivity, and PTSD symptoms.
- ❖ The current study clearly suggests that depression and emotional pain are significant predictors of PTSD symptoms, but additional work is needed to understand how and why these phenomena are related.
- ❖ Research in this area is important as we attempt to define the experience of emotional pain and understand its outcomes.

## TABLES

Regression model for PTSD symptoms (PCL-C)

Predictor Variable	Unstandardized regression coefficient (B)	Standard Error	Standardized Regression Coefficient ( $\beta$ )	Significance Value ( $p$ )
Depression (BDI – II)	1.04	.20	.68	<.001
Anxiety Sensitivity (ASI)	.19	.17	.15	.25
Current Rating of Intensity of Emotional Pain	-.15	.05	-.33	.01

## CONTACT INFORMATION

Cameron L. Randall & Daniel W. McNeil, Ph.D.  
Department of Psychology, West Virginia University  
53 Campus Drive, Box 6040  
Morgantown, WV 26505-6040  
cameron.randall@mail.wvu.edu; daniel.mcneil@mail.wvu.edu

