

# Making Meaning of Trauma: Trauma Exposure Doesn't Tell the Whole Story

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**Abstract** Although traumatic experiences are relatively common, there is wide variability in individuals' responses to them. This study examined trauma exposure, meaning making efforts (indexed by post-traumatic cognitions), and post-traumatic stress symptoms (PTS) in a non-clinical volunteer student sample ( $N = 631$ ). We further examined the moderating role of gender, the importance of trauma type (interpersonal vs. non-interpersonal), and the impact of cumulative traumatic experiences. About 75% of the sample reported past trauma ( $n = 475$ ). Women reported more interpersonal trauma than did men. For both genders, trauma exposure was associated with more PTS. A dose–response relationship was found between the extent of trauma exposure and negative post-traumatic cognitions. Importantly, post-traumatic cognitions predicted PTS controlling for amount of trauma exposure. It appears that it is not merely exposure to negative events that matters, but how we construe and make sense of these experiences. This study extends our understanding of gender differences, meaning-making, and responses to trauma exposure, and suggests avenues of clinical treatment.

**Keywords** Trauma · PTSD · Post-traumatic cognitions · Meaning · Gender

## Introduction

Most people experience some kind of potentially traumatic event in their lifetime (Sledjeski et al. 2008), yet fewer than 8% will develop posttraumatic stress disorder (PTSD; Kessler et al. 2005). An abundance of literature also suggests there are gender differences in experiences of, and reactions to, trauma. Men typically report experiencing more trauma but women consistently experience more symptoms of PTSD (Barlow and Cromer 2006; Kessler et al. 2005; Tolin and Foa 2002). There are several theorized mechanisms for these gender differences. For example, the types of trauma disproportionately experienced by women may be more fear-inducing (Tolin and Foa 2002) and females are more often victimized in childhood by caregivers than are males (Barlow and Cromer 2006). It has also been suggested that women may be more impacted by interpersonal betrayal (DePrince and Freyd 2002). Possibly, there are gender differences in meaning making after trauma.

According to emotional processing theory, posttraumatic cognitions act either to buffer negative effects or to inhibit healthy coping (Foa and Rothbaum 1998). Foa and Cahill (2001) theorized that people who do not develop PTSD after a trauma are better able to generate healthy, balanced thoughts out of their daily activities and experiences. Healthy coping means building a repertoire of experiences that disconfirm perceptions of the world as dangerous. In contrast, victims with unhealthy responses see the world or others as dangerous and the self as vulnerable and/or helpless. When the meaning of the trauma is that the world is dangerous, it may lead to avoidance-based coping. Avoidance fails to provide evidence that disputes perceptions of a vulnerable self and dangerous world and impedes recovery (Foa and Cahill 2001). Within a fear

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structure information processing network, treatment targets the real or imagined fear. As a consequence of un-learning a fear response, meanings about the world can be changed to more adaptive (i.e., less negative) cognitions about the world and self (Foa and Cahill 2001). In support of this approach, Foa and Rauch (2004) found that a therapeutic intervention focused on improving positive beliefs about the world subsequently reduced PTSD symptoms in trauma patients.

In examining emotion processing of posttraumatic cognitions, Foa and colleagues have found evidence for gender differences. As compared to male trauma victims, female trauma victims are more likely to self-blame and to see themselves negatively, as well as to view the world as dangerous (e.g., Tolin and Foa 2002). This suggests that gender differences may contribute to perceptions that the world is dangerous. Thus, examination of posttraumatic cognitions may help us understand gender differences in PTSD. Posttraumatic cognitions are related to PTSD symptoms for a wide variety of traumas. Posttraumatic cognitions can be used to discriminate between trauma victims with and without PTSD (Foa et al. 1999), and are associated with peri-traumatic Acute Stress Disorder following non-sexual assault and motor vehicle accidents (Nixon and Bryant 2005). In fact, posttraumatic cognitions predict PTSD even after controlling for depression (Kolts et al. 2004), and combined depression and anxiety (Moser et al. 2007), suggesting negative thoughts and beliefs are not merely epiphenomena of greater dysphoria.

The present study seeks to extend earlier work by examining gender differences in trauma exposure, PTSD symptoms, and cognitions about trauma in a college student sample. Research indicates that about two-thirds of college students have had a serious adverse life experience by the age of 18 (e.g., Smyth et al. 2008). College students also experience high rates of violence exposure during the academic year (Saewyc et al. 2009). Moser et al. (2007) examined college students' posttraumatic cognitions in relation to PTSD symptoms. They found that gender predicted PTSD symptoms, although most participants had sub-clinical threshold PTSD symptoms. Anxiety and negative posttraumatic cognitions about self also predicted PTSD symptoms in college students who had each experienced a single traumatic event. The authors concluded that cognitions about trauma, specifically cognitions related to negative views of the self (but not self-blame) are important for addressing (sub-clinical) PTSD symptoms in treatment. The authors also speculated that gender differences in PTSD may be due to women experiencing more sexual abuse (see also Barlow and Cromer 2006).

The present study uses a college sample to examine gender differences in meaning making attempts following trauma. We also investigated if a non-clinical sample of

men and women are differentially sensitive to negative sequelae. Given that both theoretical and empirical evidence highlights the central role of interpersonal trauma, we explored gender differences following both interpersonal and non-interpersonal trauma. Given past work with college students, we expected that, although overall exposure rates would be similar by gender, that the types of these traumas would differ. Specifically, we predicted that females would report more interpersonal trauma and, conversely, males would report more non-interpersonal trauma. Consistent with the college student literature, we also predicted that females would exhibit more PTSD symptoms than would men, and that PTSD symptoms would increase in a "dose-response" format with exposure to multiple traumas. This relationship should be largely driven by interpersonal trauma, with little influence of non-interpersonal trauma on PTSD severity.

Examining the meaning of trauma as indexed by post-traumatic cognitions, we expect that greater trauma exposure should result in more negative cognitions about self and world, but not self-blame (Beck et al. 2004; Moser et al. 2007). This relationship should be present for both interpersonal and non-interpersonal trauma. We will also test the prediction that women are more sensitive than men to negative views of self and world following interpersonal trauma (but not for self-blame). Similarly, women will experience greater PTSD symptomatology than do men following interpersonal trauma, but no gender differences will be observed for non-interpersonal trauma.

Lastly, we will examine the relation of post-traumatic cognitions to PTSD symptom severity. Overall, we expect that greater levels of negative views (of the self, of the world, of self-blame) will be predictive of greater PTSD symptom severity. Furthermore, we expect that post-traumatic cognitions will remain significant predictors of PTSD symptoms among college students even after accounting for trauma exposure (indicating that failure to find positive meaning uniquely predicts PTSD severity above and beyond merely experiencing trauma).

## Method

### Participants

Participants for this study were drawn from a sample of 635 (264 males, 370 females, 1 unknown) college students in introductory psychology who participated in partial fulfillment of a course requirement. Participants self-selected to the study by way of a human subjects pool website and completed questionnaires online. The informed consent advised that participation was voluntary and anonymous. Participants who experienced a trauma in

their lifetime (as measured by the PDS) were included in the analyses. The final sample of 475 (191 males, 284 females) had a *mean* age of 18.85 years ( $SD = 1.08$ ; range = 18- to 26-years-old; Median = 19). In the final sample, 62% of participants were Caucasian/non-Hispanic, 15% Asian, 6.5% African American, 6.5% Hispanic, 9.9% indicated “other” and 1.1% declined to answer.

## Measures

**Posttraumatic Cognitions Inventory (PTCI; Foa et al. 1999)** is a 36 item measure of trauma-related cognitions. There are three subscales: negative cognitions of the self (PTCI-Self), negative cognitions about the world (PTCI-World) and self blame (PTCI-Blame). An example of a PTCI-Self item is, “I am a weak person”. Negative beliefs about others and the world (PTCI-World) include, “People can’t be trusted”, and “The world is a dangerous place”. PTCI-Blame includes self-blame for the trauma, such as “The event happened because of the way I acted”. Each item is rated on a seven point scale where 1 = *totally disagree*, 4 = *neutral*, and 7 = *totally agree*. Mean scores were computed for each subscale. Foa et al. (1999) reported good internal consistency and test–retest reliability. In the present sample, Cronbach’s alpha is .96, .89, and .84 for PTCI-self, PTCI-world and PTCI-blame, respectively.

**PTSD. Posttraumatic Stress Diagnostic Scale (PDS; Foa et al. 1997)** is a two part scale. First, participants indicate on a 12-item checklist if they have experienced any traumas. We score this as 0 (no) or 1 (yes) and then sum to compute an index of amount of trauma. Participants are then asked to refer to the most difficult trauma they have experienced, and indicate how frequently they experience each of 17 PTSD symptoms. These are rated from 0 = *not at all or only one time*, to 3 = *5 or more times a week/ almost always*. The PDS has high internal consistency ( $r = .92$ ) and good test–retest reliability. It has been shown to have high sensitivity to PTSD (.89) and good specificity (.75) compared to the Structured Clinical Interview for DSM-IV (Foa et al. 1997). The PDS also includes a checklist of 11 traumatic events that participants indicate either happened to them or they witnessed, and a twelfth item, “other traumatic event”, that they can complete. For this study, the checklist was summed into two subscale scores of interpersonal trauma, such as non-sexual assault and sexual contact, and non-interpersonal trauma, such as life-threatening illness, serious accident, or natural disaster.

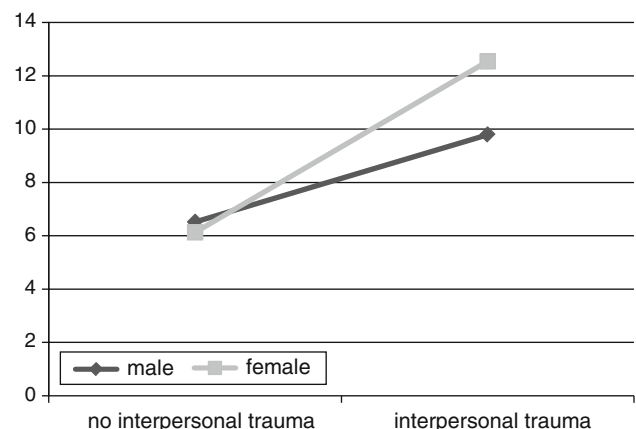
## Results

From the original sample of 635 college students, 72.6% of males and 77.2% of females endorsed at least one

traumatic event on the PDS. This subset was used in analyses that examined individuals with trauma histories. PTSD scores on the PDS for males  $M = 8.04$  ( $SD = 8.52$ ) and females  $M = 8.99$  ( $SD = 8.63$ ), although below the diagnostic cut off (on the PDS) found in clinical populations, are within the range of PDS scores observed for other traumatized populations with and without PTSD (Foa et al. 1999). The current sample had higher PDS scores than observed in another college sample in which PTSD was examined in relation to post-trauma cognitions ( $M = 6.03$ ;  $N = 379$ ; Moser et al. 2007), one-sample  $t(452) = 6.42$ ,  $p < .001$ .

## Hypothesis Testing

As predicted, of the total sample, relatively more females (68.6%) experienced interpersonal trauma than did males (31.4%),  $\chi^2(1, N = 635) = 10.29$ ,  $p < .001$ . Contrary to our prediction, the proportion of males (69.6%) who experienced non-interpersonal trauma did not exceed the proportion of females (69.8%) who experienced at least one non-interpersonal trauma in their lifetime ( $p > .05$ ). The second hypothesis, that there would be a gender  $\times$  trauma interaction such that women who experienced interpersonal trauma would experience more PTSD symptoms than men who had experienced interpersonal trauma was tested with PTSD symptoms as the continuous dependent variable in a 2(gender)  $\times$  2 (yes vs. no interpersonal trauma) ANOVA using the full sample. There was a main effect for interpersonal trauma  $F(1, 579) = 39.58$ ,  $p < .001$ , partial  $\eta^2 = .06$ , no main effect for gender, and a significant interaction between gender and interpersonal trauma,  $F(1, 579) = 4.19$ ,  $p < .05$ , partial  $\eta^2 = .01$ . Means for the interaction are displayed in Fig. 1, and suggest that the experience of interpersonal trauma is associated with a relatively greater increase in PTSD symptom severity in



**Fig. 1** Mean PTSD scores for males and females with and without a history of interpersonal trauma

women than in men. The same analyses with non-interpersonal trauma (yes vs. no) yielded only a significant main effect for having trauma,  $F(1, 579) = 10.12$ ,  $p < .002$ , partial  $\eta^2 = .02$  and, as predicted, no significant trauma by gender interaction.

The third hypothesis tested for a “dose–response” of greater trauma exposure to more PTSD symptoms, and examined if these effects were similar across trauma “type” (interpersonal or non-interpersonal). Thus, rather than using mere presence or absence of trauma, we use the total number of PDS checklist items endorsed (we computed this exposure rate separately for interpersonal and non-interpersonal, and modeled the effects separately). As predicted, more PTSD symptoms were predicted both by greater interpersonal trauma ( $\beta = .25$ ,  $R^2 = .062$ ,  $F(1, 451) = 29.78$ ,  $p < .001$ ) and greater non-interpersonal trauma ( $\beta = .17$ ,  $R^2 = .03$ ,  $F(1, 451) = 13.41$ ,  $p < .001$ ).

The fourth hypothesis predicted that greater trauma exposure would relate to more negative cognitions about the self and the world (for both interpersonal and non-interpersonal trauma). This hypothesis was tested in the trauma-exposed portion of the sample, and used summed interpersonal and non-interpersonal trauma separately to predict each of the three subscales on the PTCI. Amount of interpersonal trauma significantly predicted PTCI-self,  $F(1, 450) = 6.31$ ,  $p < .05$ , PTCI-world,  $F(1, 457) = 39.13$ ,  $p < .001$ ; and PTCI-blame  $F(1, 457) = 14.69$ ,  $p < .001$ . Similarly, non-interpersonal trauma significantly predicted PTCI-self  $F(1, 457) = 2.2$ ,  $p < .05$  and PTCI-world,  $F(1, 457) = 5.09$ ,  $p < .05$ , but did not predict PTCI-blame. See Table 1.

The fifth hypothesis tested for a gender  $\times$  trauma interaction. Specifically, we expected that interpersonal trauma would have a greater impact on post-trauma cognitions for women than for men. First, however, we examined the simpler question of if there were gender differences in post-traumatic cognitions in those students who had experienced any trauma. There was a significant gender difference for

**Table 1** OLS regression coefficients predicting posttraumatic cognitions from amount of interpersonal and non-interpersonal trauma ( $N = 459$ )

	$R^2$	$B$	SE $B$	$\beta$	$t$
Predictor: interpersonal trauma					
PTCI-self	.014	.10	.04	.12	2.51*
PTCI-world	.079	.44	.07	.28	6.26***
PTCI-blame	.032	.28	.07	.18	3.83***
Predictor: non-interpersonal trauma					
PTCI-self	.011	.06	.03	.10	2.20*
PTCI-world	.011	.11	.05	.11	2.26*
PTCI-blame	.000	.01	.05	.01	.16

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

**Table 2** Coefficients from multiple regressions predicting PTCI subscales from gender, interpersonal trauma and their interaction ( $N = 581$ )

	$R^2$	$B$	SE $B$	$\beta$	$t$
DV: PTCI-self					
Interpersonal trauma	.025	.23	.14	.16	2.02*
Gender		-.08	.08	-.06	-.99
Trauma*gender		-.01	.14	-.01	-.10
DV: PTCI-world					
Interpersonal trauma	.101	.82	.19	.32	4.27***
Gender		.23	.14	.09	1.65
Trauma*gender		-.09	.24	-.03	-.38
DV: PTCI-blame					
Interpersonal trauma	.051	.40	.20	.16	2.01*
Gender		-.29	.14	-.12	-2.05*
Trauma*gender		.22	.25	.08	.91

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

PTCI-world, with women showing higher values ( $M = 4.21$ ) than men ( $M = 3.91$ ; unequal variances  $t(300) = -2.41$ ,  $p < .02$ ). There were no significant gender differences on PTCI-self (female  $M = 1.56$ ,  $SD = .68$ , male  $M = 1.63$ ,  $SD = .74$ ) or PTCI-blame (female  $M = 2.50$ ,  $SD = 1.22$ , male  $M = 2.66$ ,  $SD = 1.20$ ), amongst those students experiencing trauma. To test for the interaction, we conducted regression analyses with gender, interpersonal trauma (dummy coded any or none), and the gender by trauma interaction. Contrary to prediction, we found no evidence that women experienced different post-traumatic cognitions than men following interpersonal trauma (i.e., no gender  $\times$  trauma interaction; see Table 2).

Finally, we hypothesized that, when controlling for trauma exposure, post-trauma cognitions would predict PTSD symptoms. The PTCI subscales significantly predicted PTSD symptoms (full model  $F(3, 430) = 63.62$ ,  $p < .001$ ), with views of the self and the world driving this relationship (see Table 3). A stepwise regression with total level of trauma in the first step significantly predicted PTSD symptoms ( $F(1, 433) = 32.72$ ,  $p < .001$ ). PTCI subscales entered in the second step improved model fit ( $F\Delta(3, 429) = 56.67$ ,  $p < .001$ ), and indicated that post-trauma cognitions remained substantial ( $R^2\Delta = .26$ ) predictors of PTSD symptoms beyond the (significant) effects of trauma exposure. This effect was driven by views of the self and of the world. Each of these models is presented in Table 3.

## Discussion

The goal of this study was to examine the associations of gender, trauma (both type and amount), post-traumatic

**Table 3** Regression coefficients predicting PTSD symptoms from PTCI subscales and total trauma ( $N = 581$ )

	$R^2$	$B$	SE $B$	$\beta$	$t$
Model 1	.308				
PTCI-self		5.11	.74	.41	6.94***
PTCI-world		1.35	.34	.19	4.04***
PTCI-blame		.22	.37	.03	.58
Model 2					
Step 1	.07				
Total trauma		1.50	.26	.27	5.72***
Step 2	$R^2\Delta = .26$				
Total trauma		.95	.23	.17	4.16***
PTCI-self		5.05	.72	.40	6.99***
PTCI-world		1.33	.33	.16	3.40**
PTCI-blame		.18	.37	.03	.49

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

cognitions, and PTSD symptoms in a non-clinical college sample. Moreover, we examined mechanisms that might explain gender difference in PTSD prevalence rates. Consistent with research on college samples, we found that women are more likely than are men to experience interpersonal trauma. In contrast, we found no gender differences in non-interpersonal trauma. Extending prior findings, we demonstrated that women show greater PTSD symptom severity following interpersonal trauma than do men, but no such effect was present for non-interpersonal trauma. Moving beyond the type of trauma, we found that greater trauma exposure—either interpersonal or non-interpersonal—predicts more severe PTSD symptoms and more negative post-trauma cognitions. Contrary to expectations, the degree to which individuals showed negative post-trauma cognitions following interpersonal trauma was not moderated by gender. Finally, we show that negative post-traumatic cognitions are a risk factor for PTSD symptom severity above and beyond the risk posed by exposure to traumatic events.

It has been hypothesized (e.g., Gavranidou and Rosner 2003; Tolin and Foa 2002) that one reason women typically experience more PTSD is that they experience more interpersonal trauma. Our data were consistent with this viewpoint, demonstrating that—even at a relatively early age and among college students—women report significantly greater rates of interpersonal trauma (69%) than do men (31%; see also Bernat et al. 1998). In contrast, we did not find the hypothesized difference of men reporting more non-interpersonal trauma than did women. Speculating on this latter point, it may be that the early experience of interpersonal trauma in women increases the likelihood of subsequent experience of non-interpersonal trauma. Alternatively, given our use of a college student sample, greater

exposure to non-interpersonal trauma in men may be associated with factors that work to preclude academic success (e.g., poverty, violent households) and thus would be absent from our sample (see also Duncan 2000; Dyregov 2004). This explanation is consistent with previous studies, in that those using college samples have often failed to find this relationship (e.g., this study; Smyth et al. 2008), whereas those using broader/more diverse samples tend to find males with greater trauma exposure (e.g., Breslau et al. 1998).

An important contribution of this study is documenting that college women respond more negatively (i.e., greater PTSD symptom severity) than do college men following interpersonal, but not non-interpersonal, trauma. This provides a compelling supplemental pathway to explain higher rates of PTSD among women (see also Barlow and Cromer 2006; Kessler et al. 2005; Tolin and Foa 2002). Heightened PTSD risk for women may not solely rely upon greater exposure to interpersonal trauma. Rather, this may also reflect heightened sensitivity to the experience of interpersonal trauma and increased risk of negative sequelae. It bears repeating that this was observed for interpersonal but not non-interpersonal trauma (despite such traumas being reported at relatively high rates by both genders).

There is accumulating evidence that more overall trauma relates to worse outcomes across a number of physical and mental health domains (Felitti et al. 1998; Sledjeski et al. 2008). Consistent with this pattern, we found that greater reported trauma was a strong predictor of PTSD symptom severity in this non-clinical student sample. This finding is noteworthy in terms of clinical and research assessment. From an assessment perspective, particularly in randomized controlled trials, criteria for ruling participants in studies often (but not always) is based on a strict enforcement of criterion A for PTSD. Evidence suggests that restricting assessment to identifying a criterion A event may be contraindicated. As the trauma treatment field advances, more studies should screen not only for a single-incident trauma, but also for the number and extent of different types of trauma participants have experienced. These inclusions may illuminate aspects of treatment that could reduce the current high dropout rates for PTSD patients who are not seeing treatment gains (cf. Bradley et al. 2005). Such an approach may allow for a better understanding, study, and treatment of the full range of patients' cumulative traumatic experiences in understanding the basis for their negative cognitions about the self and the world.

We documented that greater trauma exposure was related to greater negative post-trauma cognitions. Amount of interpersonal trauma predicted significantly more negative views of the self, of the world, and greater self-blame.

Similarly, the extent of non-interpersonal trauma predicted significantly more negative views of the self and of the world, but did not predict self-blame. These data again support the utility and importance of being sensitive to the amount or extent of trauma. In this case, we need to recognize that negative thoughts about the world, the self, and—to a degree—self-blame may not only arise from solitary, overwhelming events, but rather also from the cumulative strain placed upon individuals by their experiences.

We also examined differential cognitions about trauma as a possible explanation for gender differences in PTSD. Past work suggests female trauma victims are more likely to exhibit self-blame, to hold negative views of themselves, and to view the world as dangerous than are male trauma victims (e.g., Tolin and Foa 2002). In our non-clinical sample of college students, among those who had experienced any trauma, we did find that women were more likely to hold negative views about the world than were men. In contrast, however, we found no evidence that men and women respond differently to traumatic experiences, suggesting that gender differences in PTSD rates may not arise from gender differences in how individuals think about and try to make sense of trauma. Given data that sub-threshold PTSD symptoms can be as distressing and cause psychosocial impairment similar to full PTSD (Zlotnick et al. 2002), clinicians arguably need to pay more attention to PTSD symptoms that do not meet threshold criteria. These symptoms may be difficult to treat if misperceived as dysphoria. Clinicians who query traumatic pasts and make connections with sub-threshold PTSD symptoms may more effectively be able to facilitate patients' meaning making of adversity (Bryant et al. 2008).

The meanings people associate with their traumatic experiences are quite consequential. Negative cognitions about the self and world relate to the development of PTSD (Foa and Rothbaum 1998; Moser et al. 2007). We sought to extend our understanding of this issue by examining the relation of negative cognitions about the self and world to PTSD symptom severity in this sub-clinical sample. We also examined if post-traumatic cognitions predicted PTSD above and beyond the experience of trauma or, rather, if dysfunctional cognitions are merely a proxy for a more extensive trauma history. As predicted, we found that negative cognitions about the self and the world predicted PTSD symptom severity in a non-clinical sample, whereas self-blame did not. Importantly, negative beliefs about the self and the world remained strong predictors, explaining ~26% of the variance of PTSD symptoms, even when exposure to trauma was statistically controlled.

Foa and colleagues (e.g., Foa and Rothbaum 1998; Foa and Cahill 2001) have drawn on emotion processing theory to explain the pathological development of PTSD. They

suggest that the activated fear structure of trauma survivors results in excessive stimulus–response feedback and pathological meanings. According to emotional processing theory, the dysfunctional cognitions as measured by the PTCI result in problematic meanings. Consistent with this view, Foa and Rauch (2004) found that a reduction in PTSD symptoms was associated with a reduction in negative thoughts about the world. When considering evidence that supports negative core beliefs, it is important to consider the cumulative (and possibly non-linear) effect of multiple traumas that form the basis for negative cognitions that may continue to activate fear structures. Indeed, from a theoretical perspective, it also suggests that addressing the meaning of cumulative traumatic stressors, even when they are sub-clinical threshold, may be helpful for treating PTSD symptoms that arise from a series of adverse life events, none of which are solely responsible for the current symptoms.

### Limitations

The primary limitations of this study are that it is cross-sectional in nature and that we relied upon self-reported data. We therefore cannot confidently infer that cognitions changed as a direct result of trauma. We are also limited in as to the clinical relevance of findings in this sample given that  $R^2$  in some of the regression models was small. Also, although PTSD symptoms are a dimensional construct, it may be the case that individuals who suffer extreme, chronic PTSD could have fundamentally different cognitive mechanisms that continue to activate the fear structures. Given that this is a non-clinical sample, it is of course not surprising that the PTSD symptom level of the participants is lower than that of clinical samples. Nonetheless, there was a moderate level of symptoms, and our sample had significantly more symptomatology than other non-clinical samples (e.g., Moser et al. 2007).

### Additional Clinical Implications

The present study points to the importance of recognizing non-clinical individuals' sensitivity to the cumulative effects of trauma and the relationship of these effects to sub-threshold PTSD symptoms. Subthreshold PTSD symptoms have relatively recently garnered attention in the clinical literature (e.g., Zlotnick et al. 2002), and this highlights the potential for assessment and intervention. Given that sub-threshold PTSD is frequently comorbid with depressive or anxious symptoms, clinical screening for potentially traumatic events could help identify the presence of sometimes related meanings of these events, such as more negativity toward self and world evidenced in the current study. Notably, these self-world meanings translated into more

PTSD symptoms, over and above the effects of being exposed to/experiencing trauma. Consideration of these sub-clinical threshold relationships should be incorporated into treatment conceptualization as this broader incorporation of cumulative trauma may more effectively facilitate treatment to reduce symptoms and the related distress.

## Conclusions

This study extends our understanding of gender differences, meaning-making processes, and the cumulative impact of trauma exposure. Although prior work has documented gender differences in exposure to interpersonal trauma, we demonstrate that college women appear to show greater negative reactions (greater PTSD symptom severity) following interpersonal trauma than do college men. Beyond this, both men and women are at higher risk for both negative cognitions and greater PTSD symptom severity when exposed to more traumatic experiences (of any type). Negative views about the self and about the world following trauma are important predictors of PTSD symptoms above and beyond trauma exposure. Thus, it is not merely the exposure to negative events that matters, but also how we construe and make sense of these experiences. This work suggests the need for continued research and clinical attention to issues of gender, the unique contributions of trauma of different types (e.g., interpersonal vs. non-interpersonal), the importance of post-traumatic cognitions, and the vital role cumulative exposure to adverse experiences has in determining risk or resilience.

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