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Cognitive and Emotional Contributors to Intimate Partner Violence Perpetration Following Trauma

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Abstract

Exposure to potentially traumatic events often leads to a wide range of interpersonal difficulties, including the perpetration of intimate partner violence. Maladaptive, threat-relevant thoughts and beliefs regarding the trauma or its sequelae can play an important role in a person's emotional and behavioral responses. Among 185 trauma-exposed study participants who were currently in an intimate relationship, levels of maladaptive posttraumatic cognitions were associated with the perpetration of psychological aggression and physical violence in their current relationships. These links were mediated by misappraisal of anger in auditory emotion stimuli and emotion-regulation deficits. Results support a cognitive model of posttraumatic pathology, with implications for clinical intervention and a broad conceptualization of the effects of trauma.

Exposure to potentially traumatic events is common, with lifetime exposure estimates ranging from 56% to 85% of men and women (Frazier et al., 2009; Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995). Although much research is focused on the development of posttraumatic stress disorder (PTSD), only approximately 3.6% of men and 9.7% of women (6.8% overall) develop PTSD (National Comorbidity Survey, 2005). Trauma reactions occur along a dimension of severity (Broman-Fulks et al., 2006) and, beyond PTSD symptoms, a host of negative consequences can occur, including interpersonal difficulties such as the perpetration of intimate partner violence (IPV; Schumacher, Feldbau-Kohn, Slep, & Heyman, 2001). Thus, a broader consideration of the effects of trauma is warranted.

Cognitions regarding trauma and its sequelae play an important role in emotional and behavioral responses. Maladaptive appraisals of the trauma and overgeneralization from the trauma to normal events are theorized to result in external threat (e.g., belief that the world is dangerous) and internal threat (e.g., self-view as incapable and unacceptable; Ehlers & Clark, 2000). Such maladaptive posttraumatic cognitions have not previously been associated with perpetration of IPV. Research among non-traumatized populations indicating that perpetration of IPV is associated with hostile attribution biases and low self-esteem (Schumacher et al., 2001) leads to the possibility that post-traumatic cognitions are implicated in the perpetration of IPV by those who have been exposed to and affected by traumatic stressors.

From the perspective of Ehlers and Clark (2000), two mechanisms may account for the relation between maladaptive post-traumatic cognitions and perpetration of IPV. First, posttraumatic cognitions are hypothesized to include selective misappraisal of threat. Because expressions of anger are conceptualized as signs of threat (Whalen et al., 2001),

mistakenly appraising the emotional expressions of others as anger may occur. Misappraisal of anger has not been examined in relation to posttraumatic cognitions or IPV, although generalized deficits in the recognition of emotion have been associated with PTSD (Freeman, Hart, Kimbrell, & Ross, 2009) and perpetration of IPV (Marshall & Holtzworth-Munroe, 2010). Second, posttraumatic cognitions are hypothesized to lead to strong emotional reactions and dysfunctional strategies for regulating such emotions. Although emotion dysregulation has not been examined in relation to posttraumatic cognitions, it has been linked to PTSD (Tull, Barrett, McMillan, & Roemer, 2007) and perpetration of IPV (McNulty & Hellmuth, 2008).

We hypothesized that misappraisal of anger as well as dysregulation of emotion would mediate the expected relation between maladaptive posttraumatic cognitions and perpetration of IPV. Because aggression occurs on a continuum of severity and IPV is often preceded by psychological aggression (Murphy & O'Leary, 1989), we examined whether our predictions extend to the perpetration of psychological aggression.

METHOD

Participants

A pool of 735 university students 18+ years of age who reported being in an intimate relationship during the past year completed a screening measure to determine if they engaged in physical or psychological relationship aggression. After oversampling men (given an unequal sex distribution of eligible participants) and participants with a history of IPV or severe psychological aggression perpetration, 525 individuals were invited to participate in the study and 248 accepted. Of the 196 participants currently in a relationship, 185 (113 female) reported having experienced a potentially traumatic event on the Traumatic Life Events Questionnaire (Kubany et al., 2000). These 185 participants comprised the current study sample.

Participants averaged 19.00 ($SD = 1.26$) years of age, were predominantly Caucasian (91%), and from rural communities (64%). Participants' current relationship length averaged 6.25 ($SD = 3.33$) months (range = 1–15 months). Participants most frequently (40.5% of the sample) reported experiencing the sudden death of a friend or loved one as their most distressing potentially traumatic event, as is typical of this population (Frazier et al., 2009). Other common most distressing events included a life-threatening or disabling event to a loved one (12.4%), unwanted sexual contact (9.8%), witnessed or experienced family violence (7.6%), and car or other accidents (7.0%).

Measures

The Posttraumatic Cognitions Inventory (Foa, Ehlers, Clark, Tolin, & Orsillo, 1999) is a 36-item measure of maladaptive post-traumatic cognitions, including negative cognitions about the self, negative cognitions about the world, and self-blame. Responses (1–7) are anchored to the trauma participants reported as most distressing. The measure has good test-retest reliability, internal consistency, and convergent validity (Foa et al., 1999). Standard scoring (including 33 items) was used. In this sample $\alpha = .95$.

The Aprosodia Battery, Affective Comprehension Subsection (Ross, Thompson, & Yenkosky, 1997) measures emotion recognition skills by presenting the sentence "I am going to the other movies," a monosyllabic sentence (ba ba ba ba ba ba), or an asyllabic sentence (aaaahhhhhh) using neutral, happy, sad, angry, disinterested, or surprised affective tone, with stress placed early or late in the stimulus. The 36 sentence-affect-stress combinations were presented twice via audio playback in a quiet, private room. Participants indicated the emotional intonation of each stimulus by choosing from six line drawings of

faces expressing different emotions with written emotion labels next to each face. Anger misappraisal was calculated according to the number of times participants correctly identified anger stimuli as anger and incorrectly identified nonanger stimuli as anger. Possible scores could range from 0 to 72.

The Inventory of Altered Self Capacities, Affect Dysregulation Subscale (Briere & Runtz, 2000) contains nine items to measure affect dysregulation, including affect instability and affect control deficits. The measure demonstrates good reliability and convergent validity (Briere & Runtz, 2000). Possible scores could range from 45 to 100. In this sample $\alpha = .91$.

The Revised Conflict Tactics Scale (Straus, Hamby, Boney-McCoy, & Sugarman, 1996) Physical Assault (i.e., IPV) subscale includes 12 items ranging from “Threw something at my partner that could hurt” to “Used a knife or gun on my partner.” The eight-item Psychological Aggression subscale ranges from “Insulted or swore at my partner” to “Threatened to hit or throw something at my partner.” Participants indicated how many times they engaged in each behavior during their current relationship. Frequency scores were summed for each subscale. In this sample $\alpha = .53$ for IPV, $\alpha = .71$ for psychological aggression.

Analyses

We conducted separate multiple mediation analyses for each dependent variable. To maximize power while controlling Type I error, we conducted a bootstrap analysis of the sampling distribution of the indirect effect (Preacher & Hayes, 2008). This method also controls Type II error by not requiring that each direct relationship be statistically significant. We explored possible sex differences using moderated mediation analyses (Preacher, Rucker, & Hayes, 2007).

RESULTS

Nearly half (47%) of the sample reported on the Traumatic Life Experiences Survey (Kubany et al., 2000) currently experiencing at least moderate distress in response to the trauma they identified as most distressing. As indicated in Table 1, on average, participants engaged in at least one (range = 0–25) act of IPV and nearly 14 (range = 0–88) acts of psychological aggression in their current relationship. Of the acts of IPV reported, 92% were more severe than throwing something at one’s partner that could hurt. As expected, all primary variables were significantly correlated. Among the PTCI subscales, negative cognitions about the self and the world were somewhat more strongly correlated with the other study variables than was self-blame. As found in the development of the PTCI (Foa et al., 1999), the Self-Blame subscale correlated less strongly with the PTCI total score than did the other two subscales.

As displayed in Figure 1, trauma cognitions were directly associated with perpetration of IPV, and this link was mediated by anger misappraisal and emotion dysregulation. Mediation was present for the full model, and each mediator independently contributed to this effect. Sex did not significantly moderate the effect of trauma cognitions on anger misappraisal ($t = -1.10$, *ns*), trauma cognitions on emotion dysregulation ($t = 0.97$, *ns*), anger misappraisal on IPV ($t = -0.78$, *ns*), or emotion dysregulation on IPV ($t = -0.44$, *ns*).

As displayed in Figure 2, trauma cognitions were directly associated with psychological aggression perpetration, and this relationship was mediated by anger misappraisal and emotion dysregulation. Mediation was present for the full model, and each mediator variable independently contributed to this effect. Sex did not significantly moderate the effect of trauma cognitions on anger misappraisal ($t = -1.03$, *ns*), trauma cognitions on emotion

dysregulation ($t = 1.13$, *ns*), anger misappraisal on psychological aggression ($t = 0.49$, *ns*), or emotion dysregulation on psychological aggression ($t = 0.79$, *ns*).

Throughout, the pattern of results remained when accounting for participants' differing relationship lengths (by dividing relationship aggression scores by current relationship length) and positive skew of the relationship aggression variables (by using a log transformation).

DISCUSSION

Our results showed that maladaptive posttraumatic cognitions were associated with IPV and psychological aggression perpetration, extending prior research demonstrating a link between PTSD and perpetration of IPV (Taft, Street, Marshall, Dowdall, & Riggs, 2007). Thus, intimate relationships may be impacted by post-traumatic sequelae less severe than PTSD. Furthermore, because premarital psychological aggression perpetration frequently leads to IPV during marriage (Murphy & O'Leary, 1989), the elevated risk of psychological aggression perpetration among individuals experiencing maladaptive posttraumatic cognitions could represent the beginning of a cascade of negative relationship behaviors, including perpetration of IPV, as young adults enter long-term relationships.

Consistent with cognitive models of posttraumatic pathology (Ehlers & Clark, 2000), anger misappraisal and emotion dysregulation independently mediated the link between maladaptive posttraumatic cognitions and perpetration of IPV. Maladaptive posttraumatic cognitions may cause social interactions to be interpreted as more threatening, leading to elevated negative emotions. These emotions, combined with poor emotion regulation skills, may contribute to aggressive behavior. Although such causal pathways are suggested by theory, numerous alternative directional pathways may exist.

We did not observe sex differences in the examined relationships, supporting literature failing to find sex differences in predictors of IPV (Carney, Buttell, & Dutton, 2007). Further, the same pattern of results emerged when predicting IPV and psychological aggression perpetration. Together, these results suggest generalized mechanisms responsible for the association between posttraumatic cognitions and relationship aggression. Moreover, the findings emerged when examining a nonclinical sample of undergraduate students with a relatively low level of trauma exposure, suggesting that these processes may occur on a continuum of severity. Although generalizability to PTSD and severely violent samples is not known and should be tested, we expect more severe processes among clinical populations.

Limitations of the current study bear note. First, we did not obtain partner reports of IPV, though individuals with more negative cognitions about the self may be especially likely to self-report relationship aggression. Although common for measures of potentially independent behaviors such as IPV, our assessment of IPV was also limited by low internal consistency. Second, we did not measure participants' experience of threat during the perception of anger. Third, given the lack of temporal sequencing of study variables, we cannot rule out alternative possibilities regarding causal directionality. For example, maladaptive cognitions may be reinforced by anger misappraisals, the experience of emotion dysregulation, and being in an aggressive relationship, particularly if aggression is reciprocal. Further, the current model explains a fairly small portion of the variance. Other variables such as PTSD symptoms of trauma recollections, hypervigilance, physiological reactivity, and irritability/anger may predict relationship aggression independently and/or in interaction with current study variables. This study serves as a basis for future longitudinal and experimental research to address these issues.

Although preliminary, study results have implications for a broad conceptualization of cognitive and interpersonal reactions to trauma. Negative cognitions about the self and the world appear to be particularly important to the processes examined in the current study as these subscales of the PTCI correlated more strongly with variables of interest than did self-blame, and self-blame did not correlate as strongly with the PTCI total score as did the other subscales. Results also suggest a need for clinicians to consider the role of trauma, as well as emotion recognition and regulation skills, in clients' interpersonal difficulties.

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Figure 1.

Mediating effect of anger misappraisal and emotion dysregulation on the relation between trauma cognitions and perpetration of intimate partner violence (IPV). Full model coefficients represent the effect of trauma cognitions on IPV when accounting for both mediators. $N = 185$; $R^2 = .18$. CI = confidence interval; IPV = intimate partner violence; b = unstandardized coefficient. ** $p < .01$. *** $p < .001$.

Figure 2.

Mediating effect of anger misappraisal and emotion dysregulation on the relation between trauma cognitions and perpetration of psychological aggression. Full model coefficients represent the effect of trauma cognitions on IPV when accounting for both mediators. $N = 185$; $R^2 = .16$. CI = confidence interval; b = unstandardized coefficient. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 1

Descriptive Statistics and Correlations Among Variables

Variable	M	SD	1	2	3	4	5	6	7
1. Posttraumatic cognitions (PTCI total)	73.31	30.44	–						
2. PTCI negative cognitions about self	35.53	16.70	.94	–					
3. PTCI negative cognitions about the world	20.66	10.03	.84	.65	–				
4. PTCI self-blame	9.08	5.74	.65	.50	.46	–			
5. Intimate partner violence	1.08	3.08	.36	.36	.28	.16	–		
6. Psychological aggression	13.92	19.32	.29	.26	.24	.06	.53	–	
7. Anger misappraisal	12.04	1.11	.19	.18	.19	.07	.27	.25	–
8. Emotion dysregulation	66.47	14.41	.62	.61	.55	.22	.33	.33	.15

Note. $N = 185$. PTCI = Posttraumatic Cognitions Inventory. $r = .15-.17, p < .05$; $r = .18-.22, p < .01$; $r > .23, p < .001$.