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A Preliminary Investigation of the Relationship between Emotion Dysregulation and Partner Violence Perpetration Among Individuals with PTSD and Alcohol Dependence

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Abstract

The current study examines the link between emotion dysregulation and intimate partner violence (IPV) among 77 individuals with posttraumatic stress disorder (PTSD) and alcohol dependence. Participants were recruited from a residential substance abuse treatment program as part of the eligibility screening for an IRB-approved clinical trial examining the efficacy of an exposure-based intervention in individuals dually diagnosed with alcohol dependence and PTSD. Participants reported on PTSD symptoms, alcohol use disorder symptoms, emotion dysregulation, and physical and verbal aggression in their intimate relationships during the past year. Findings demonstrated that difficulties with emotion regulation are associated with physical and verbal IPV perpetration in a clinical sample. Although facets of emotion regulation emerged as significant predictors of IPV in the models, alcohol and PTSD symptom severity did not emerge as predictors of IPV. These findings suggest targeted emotion regulation skills training may benefit substance abusers who engage in IPV and that emotion dysregulation may be an important target for future research aimed at understanding elevated rates of IPV perpetration in mental health samples.

Keywords

Intimate partner violence; emotion dysregulation; alcohol use disorder; posttraumatic stress disorder

Intimate partner violence (IPV), which includes both physical and verbal aggression, is a serious public health concern, causing victims both physical and mental health problems that costs the U.S. billions of dollars each year due to healthcare expenses and loss of productivity (National Center for Injury Prevention and Control, 2003). Greater emotion dysregulation is related to higher rates of IPV perpetration among both men and women in college (Gratz & Roemer, 2004; Shorey, Brasfield, Febres, & Stuart, 2011; Shorey, Cornelius, & Idema, 2011). Emotion dysregulation can be conceptualized as difficulties in several areas of emotion regulation. These areas include awareness and understanding of emotions, acceptance of emotions, ability to control impulsive behaviors and behave in

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accordance with desired goals when experiencing negative emotions, and the ability to use situationally appropriate emotion regulation strategies flexibly (Gratz & Roemer, 2004).

Although emotion dysregulation has been linked to IPV in college samples, little is known about the impact of these difficulties on IPV in clinical samples. Certain mental health diagnoses, such as PTSD and alcohol use disorders, have been linked to higher rates of IPV perpetration (see Foran & O'Leary, 2008; Taft, Watkins, Stafford, Street, & Monson, 2011 for meta-analyses). For example, men with lifetime PTSD are more than twice as likely to perpetrate IPV as men without PTSD (Hahn, Aldarondo, Silverman, McCormick, & Koenen, 2015) and men receiving treatment for alcohol use disorders report IPV perpetration rates approximately five to eight times higher than demographically similar men without alcohol use disorders (Chermack, Fuller, & Blow, 2000; O'Farrell & Murphy, 1995). In addition, individuals with PTSD or an alcohol use disorder have greater difficulties with emotion regulation than individuals without these diagnoses (Dvorak et al., 2014; Weiss, Tull, Anestis, & Gratz, 2013). Researchers have suggested that emotion dysregulation may be a key risk factor predicting IPV among individuals with these mental health diagnoses (Langer & Lawrence, 2010; Miles et al., 2015). Thus, emotion dysregulation could be an important treatment target for reducing IPV among individuals with PTSD and alcohol use disorders. However, we are unaware of studies that have examined the role of emotion dysregulation in predicting IPV among individuals diagnosed with PTSD and an alcohol use disorder.

Given the relationship between emotion dysregulation and IPV among college samples and the high rates of emotion dysregulation among samples with PTSD and alcohol use disorders, our goal was to explore the relationship between difficulties in emotion regulation and IPV among a sample of individuals who were in substance use treatment and diagnosed with PTSD and alcohol dependence. We examined both sexes as past research has shown that men and women perpetrate IPV at near similar rates (see Archer, 2000 for a meta-analysis) and that risk factors for IPV work similarly across sexes (O'Leary, Slep, & O'Leary, 2007; Watkins et al., 2014). We predicted that difficulties in emotion regulation would be positively correlated with physical and verbal IPV perpetration. Further, we expected a unique association between difficulties in emotion regulation and IPV to emerge after controlling for PTSD severity and alcohol dependence severity.

Method

Participants

Participants were 77 individuals (39 women and 38 men) enrolled in a residential substance abuse treatment program who reported that they currently had a romantic partner and met diagnostic criteria for PTSD and alcohol dependence. All participants were recruited as part of the eligibility screening for an IRB-approved clinical trial examining the efficacy of an exposure-based intervention in individuals dually diagnosed with alcohol dependence and PTSD (Coffey, Schumacher, & Stasiewicz, 2012). To be eligible for the screening, participants had to report experiencing at least one potentially traumatic life event and exceed screening cut-offs on the PTSD Checklist-Civilian version (PCL; total score ≥ 44) and the Alcohol Use Disorders Identification Test (AUDIT; total score ≥ 8 , Babor, de la

Fuente, Saunders, & Grant, 1992; Weathers, Litz, Herman, Huska, & Keane, 1993). The sample was predominately White/Caucasian (81.8%), had a mean age of 32.95 (SD = 9.69, range = 18 to 54) and a mean household income of \$37,005 (SD = 33703; range = 0 to 200,000). The majority of participants were dating their partner (59.7%), 36.4% were married, and 23.4% were engaged or living together. A more detailed description of the study and study participants can be found elsewhere (masked for review).

Diagnostic Measures

Clinician Administered PTSD Scale (CAPS; Blake et al., 1995)—The CAPS was used to assess diagnostic criteria for PTSD and symptom severity of posttraumatic stress disorder (PTSD) according to DSM-IV criteria. The CAPS is a semi-structured, diagnostic interview with strong reliability and high concurrent validity (Weathers, Keane, & Davidson, 2001). In the larger randomized controlled trial from which these data came from (masked for review), interrater reliability was high ($kappa = .94$).

Computerized Diagnostic Interview Schedule (C-DIS-IV; Robins et al. 2000)—The C-DIS-IV is a fully structured computerized diagnostic interview for DSM-IV Axis I psychiatric disorders. It was used to establish alcohol use disorder diagnostic status. The C-DIS-IV has fair to excellent reliability for substance abuse and dependence disorders (Dascalu, Compton, Horton, & Cottler, 2001).

National Women's Study PTSD Module (NWS-PTSD: Kilpatrick, Resnick, Saunders, & Best, 1989; Resnick, 1996)—The NWS-PTSD is a structured interview assessing DSM-IV criterion A for PTSD diagnosis (APA, 2000), including lifetime exposure to potentially traumatic events, such as childhood abuse, sexual violence, and natural disasters. In the current study, a modified version of the NWS-PTSD with additional items assessing intimate assaults was utilized (Dansky and colleagues, 1999). Research has provided support for the validity and reliability of the NWS-PTSD (Kilpatrick et al., 1998; Kilpatrick et al., 2003; Resnick, Kilpatrick, Dansky, Saunders, & Best, 1993).

Self-report Measures

Alcohol Dependence Scale (ADS; Skinner & Horn, 1984)—The ADS is a 25-item measure of severity of alcohol dependence, including withdrawal symptoms, impaired control over drinking, awareness of a compulsion to drink, increased tolerance to alcohol, and salience of drink-seeking behavior. The ADS is a reliable and valid measure of alcohol dependence (Doyle & Donovan, 2009). The alpha for the ADS in the current sample is .89.

Verbal and Physical Aggression Subscales of the Conflict Tactics Scale (CTS; Straus, 1979)—These subscales were used to assess IPV during the past year. Each item is on a 7-point scale ranging from never up to 20+ times a year. The number of endorsed items was summed as a measure of IPV perpetration for each subscale. The original CTS, rather than the revised CTS-2 (Straus, Hamby, Boney-McCoy, & Sugarman, 1992) was administered to reduce assessment burden. The CTS has excellent psychometric properties (Straus, 1979). Cronbach's alpha for the CTS was .86 for physical aggression and .87 for verbal aggression in the present sample.

Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004)—The

DERS is a reliable and valid 36-item measure of emotion regulation comprised of six subscales: nonacceptance of emotional responses, difficulty engaging in goal-directed behavior, impulse control difficulties, lack of emotional awareness, limited access to emotion regulation, and lack of emotional clarity. Researchers have demonstrated that the DERS and its subscales have good test-retest reliability as well as construct and predictive validity (see Gratz & Roemer, 2004; Gratz & Tull, 2011). Cronbach's alpha for the DERS was .93 in the present sample.

Results

Descriptive information for study variables is displayed in Table 1. On the CTS, 48.7% of women and 47.4% of men reported that they had experienced physical IPV in the past year and 64.1% of women and 39.5% of men reported that they had engaged in physical IPV in the past year. Almost all participants reported that they had experienced (92.1% of men and 89.7% of women) and perpetrated (92.3% of women and 97.4% of men) verbal IPV.

First, bivariate correlations were conducted between primary study variables to examine association between IPV, emotion regulation difficulties, PTSD severity, and alcohol dependence severity (see Table 2). There were significant positive relationships between verbal aggression and the DERS total, as well as four of the six DERS subscales. In regards to physical IPV, the DERS total was not significantly related, but impulse control difficulties and lack of emotional clarity were related to physical IPV. We also examined relationships between emotion regulation difficulties, IPV, PTSD symptom severity, and alcohol use symptoms severity. PTSD symptom severity and alcohol dependence were related to the DERS total and several of the DERS subscales.

Then we examined the unique association between difficulties in emotion regulation (using the DERS scales that were significantly correlated to IPV) and IPV after controlling for PTSD and alcohol dependence severity. Initial examination of the dependent variables revealed that physical IPV perpetration had a non-normal distribution and thus the use of standard analysis of variance models that assume normal distribution of the residuals was inappropriate. Therefore, we used a negative binomial model, which is a count model that allows the residual variance to exceed the mean (i.e., overdispersion) if necessary. Verbal IPV was normally distributed and thus a general linear model was used to examine this outcome. All models included PTSD symptom severity and alcohol dependence severity and also controlled for gender and age.

When examining the relative contributions of emotion regulation difficulties, PTSD symptom severity, and alcohol use disorder severity on physical IPV, we separately examined the two subscales (lack of emotional clarity and impulse control difficulties) that had significant correlations with physical IPV (see Table 3). Each full model was a significant improvement over the null model, $\chi^2(5) = 17.91, p < .01$ (lack of emotional clarity) and $\chi^2(5) = 18.82, p < .01$ (impulse control difficulties model). In both models, gender (women had higher levels of physical aggression) and the emotion regulation difficulties significantly predicted physical IPV, but no other predictors were significant.

Regarding verbal IPV, we separately examined the DERS total, difficulties in engaging in goal-directed behavior, impulse control difficulties, lack of emotional clarity, and lack of emotional awareness. Several models were not significant, including lack of emotional clarity, $F(5, 71) = 1.89, p = .11$, impulse control difficulties, $F(5, 71) = 1.86, p = .11$, and lack of emotional awareness, $F(5, 71) = 1.38, p = .24$. However, models examining the DERS total and difficulties in engaging in goal-directed behavior were significant, $F(5, 71) = 2.54, p < .05$ and $F(5, 71) = 3.85, p < .01$ (respectively). In these two models (see Table 4), the emotion regulation difficulties variables were significantly related to verbal aggression, and none of the other predictors were significant.

Discussion

The findings of this study suggest that as in college student samples (Shorey, Brasfield, et al., 2011), difficulties with emotion regulation are associated with physical and verbal IPV perpetration in a clinical sample. Two findings from the current study are particularly noteworthy. First, given that individuals diagnosed with PTSD and alcohol use disorders are consistently found to be at higher risk for IPV perpetration (Foran & O'Leary, 2008; Taft et al., 2011), it is interesting that facets of emotion regulation emerged as significant predictors of IPV in the models, whereas alcohol and PTSD symptom severity did not. This is consistent with the suggestion by Langer and Lawrence (2010) that emotion regulation may be a key factor in predicting IPV in individuals with mental health disorders. Second, it is interesting to note which aspects of emotion regulation in particular were significantly associated with each form of IPV in the regression equations. Both verbal and physical IPV were significantly correlated with lack of emotional clarity and impulse control difficulties. Although replication is necessary before firm conclusions can be drawn, the connection between these facets of emotion dysregulation and IPV found in the current study is consistent with prior research demonstrating that alexithymia plays a role in aggression among veterans with clinically significant PTSD symptoms (Teten, Miller, Bailey, Dunn, & Kent, 2008), and past findings suggesting that emotion-driven impulse control difficulties is an important contributor to both general aggression and IPV (Miller, Zeichner, & Wilson, 2012; Watkins, Maldonado, & DiLillo, 2014). In addition, these data underscore the importance of self-perceived impulsivity in understanding the relationship between alcohol use and IPV (Schumacher, Coffey, Leonard, O'Jile, & Landy; 2013).

Clinically, these data are important because, although there is growing evidence that facets of impulsivity can improve during substance abuse treatment (Littlefield et al., 2015), targeted emotion regulation skills training may benefit substance abusers who engage in IPV. Limitations of the current study include a small sample size, a predominantly European American sample, cross-sectional measurement, and reliance on self-report. Generalizability to other samples, such as different cultural or ethnic groups, may be limited. Nevertheless, results support and extend prior research in this area in incremental, but meaningful ways and suggest that emotion dysregulation may be a fruitful avenue for future research aimed at understanding elevated rates of IPV perpetration in mental health samples.

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Table 1

Descriptives of study variables.

Variable	Mean	SD	Range
Traumatic life events	9.57	4.90	2 – 22
CAPS PTSD severity	79.03	19.12	42 – 114
DERS	112.23	24.41	58 – 167
ADS	24.78	9.42	6 – 45
Women's CTS physical IPV subscale	2.28	2.20	0 – 7
Men's CTS physical IPV subscale	0.79	1.34	0 – 5
Women's CTS verbal IPV subscale	3.95	1.95	0 – 6
Men's CTS verbal IPV subscale	4.32	1.58	0 – 6

Note. CAPS = Clinician Administered PTSD Scale; PTSD = Posttraumatic stress disorder; DERS = Difficulties in Emotion Regulation Scale; ADS = Alcohol Dependence Scale; CTS = Conflict Tactics Scale; IPV = Intimate partner violence.

Table 2

Bivariate correlations among study variables.

	1	2	3	4	5	6	7	8	9	10
1. CAPS PTSD severity	-									
2. ADS	.04	-								
3. Lack of emotional acceptance	.19	.22	-							
4. Inability to engage in goal-directed behavior	.21	.33 ^{**}	.44 ^{**}	-						
5. Impulse control difficulties	.24 [*]	.33 ^{**}	.28 [*]	.54 ^{**}	-					
6. Lack of emotional awareness	.07	.30 ^{**}	.19	.28 [*]	.32 ^{**}	-				
7. Lack of effective emotion regulation strategies	.36 ^{**}	.43 ^{**}	.52 ^{**}	.57 ^{**}	.68 ^{**}	.36 ^{**}	-			
8. Lack of emotional clarity	.10	.42 ^{**}	.15	.39 ^{**}	.42 ^{**}	.51 ^{**}	.45 ^{**}	-		
9. DERS total score	.29 ^{**}	.47 ^{**}	.61 ^{**}	.70 ^{**}	.78 ^{**}	.61 ^{**}	.88 ^{**}	.64 ^{**}	-	
10. CTS verbal IPV subscale	.05	.19	.18	.45 ^{**}	.34 ^{**}	.26 [*]	.21	.34 ^{**}	.38 ^{**}	-
11. CTS physical IPV subscale	-.05	.06	.06	.11	.27 [*]	.17	-.02	.23 [*]	.17	.57 ^{**}

Note.

^{**} $p < .01$;^{*} $p < .05$.

CAPS = Clinician Administered PTSD Scale; PTSD = Posttraumatic stress disorder; DERS = Difficulties in Emotion Regulation Scale; ADS = Alcohol Dependence Scale; DERS = Difficulties in Emotion Regulation Scale; CTS = Conflict Tactics Scale; IPV = Intimate partner violence.

Table 3

Models predicting physical aggression.

Model with impulse control difficulties	<i>b</i>	S.E.	<i>p</i> value
Sex	1.08	0.28	< 0.001
Age	< 0.001	0.02	0.99
CAPS PTSD severity	−0.01	0.01	0.11
ADS	0.01	0.01	0.61
Impulse control difficulties	0.06	0.02	0.004
Model with lack of emotional clarity	<i>b</i>	S.E.	<i>p</i> value
Sex	1.13	0.29	< 0.001
Age	−0.003	0.02	0.90
CAPS PTSD severity	−0.01	0.01	0.23
ADS	0.001	0.04	0.97
Lack of emotional clarity	0.08	0.04	0.03

Note. CAPS = Clinician Administered PTSD Scale; PTSD = posttraumatic stress disorder; ADS = Alcohol Dependence Scale.

Table 4

Models predicting verbal aggression.

Model with DERS total	<i>b</i>	S.E.	<i>p</i> value
Sex	0.05	0.36	0.88
Age	−0.01	0.02	0.63
CAPS PTSD severity	−0.01	0.01	0.49
ADS	0.002	0.02	0.93
DERS total	0.03	0.01	0.01
<hr/>			
Model with inability to engage in goal-directed behavior	<i>b</i>	S.E.	<i>p</i> value
Sex	0.01	0.35	0.99
Age	−0.01	0.02	0.58
CAPS PTSD severity	−0.005	0.01	0.61
ADS	0.01	0.02	0.67
Inability to engage in goal-directed behavior	0.25	0.08	0.003

Note. CAPS PTSD = Posttraumatic stress disorder; ADS = Alcohol Dependence Scale; DERS = Difficulties in Emotion Regulation Scale.