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Alcohol Use and Problems as a Potential Mediator of the Relationship between Emotion Dysregulation and IPV Perpetration

Hannah L. Grigorian, Meagan J. Brem, M.A., Alisa Garner, M.A., Autumn Rae Florimbio, M.A., Caitlin Wolford-Clevenger, M.S., Gregory L. Stuart, Ph.D.

University of Tennessee- Knoxville

Abstract

Objective: Alcohol use/problems and emotion dysregulation are associated with increased intimate partner violence (IPV) perpetration. Additionally, alcohol use is an overt coping mechanism for dysregulated emotion. While past research has examined alcohol use/problems as a mediator between emotion dysregulation and IPV, research is limited within clinical samples. The current study sought to fill this gap by examining a theoretical model by which emotion dysregulation and alcohol use/problems influence IPV perpetration in a sample of men arrested for domestic violence. Consistent with prior research, it was hypothesized that alcohol use/problems would mediate the relationship between emotion dysregulation and psychological aggression. Additionally, we hypothesized that emotion dysregulation would positively associate with increased alcohol use/problems, which would relate to increased physical assault perpetration through psychological aggression perpetration.

Method: Using a cross-sectional sample of 391 men arrested for domestic violence and court-referred to Batterer Intervention Programs (BIP), the present study used structural equation modeling to examine proposed pathways from emotion dysregulation to IPV perpetration directly and indirectly through alcohol use/problems.

Results: Alcohol use/problems explained the relation between emotion dysregulation and psychological aggression perpetration. In addition, emotion dysregulation related to psychological aggression which explained the relation between alcohol use/problems and physical assault perpetration.

Conclusions: These findings underline the importance of assessing and addressing emotion dysregulation and alcohol use/problems as risk factors for IPV in existing BIP as well as within theoretical models.

Keywords

Emotion dysregulation; alcohol use; intimate partner violence; psychological aggression; physical assault

Male perpetrated intimate partner violence (IPV) is a serious societal problem. While there is considerable evidence for gender symmetry and bidirectionality in IPV, men arrested for IPV are more likely to perpetrate unidirectional violence toward their partner relative to other populations (Langhinrichsen-Rohling, Selwyn, & Rohling, 2012). Such forms of

violence can include physical or psychological acts. Physical IPV, also referred to as physical assault, includes acts such as punching or choking, is defined as physical force against a partner that is deliberate and may or may not result in serious injury or death (Saltzman, Fanslow, McMahon, & Shelley, 2002). Psychological IPV, or psychological aggression, is defined as any behavioral act directed toward a partner intended to blame, humiliate, or dominate (Follingstad, Coyne, & Gambone, 2005). Such acts include verbal threats and social isolation (Lawrence, Yoon, Langer, & Ro, 2009). While these forms of violence encompass a wide range of severity, men often perpetrate more severe forms of violence, resulting in an increased rate of injuries (Tjaden & Thoennes, 2000). IPV perpetration related to many significant mental and physical health consequences for victims such as depression, anxiety, and overall functional impairment (Dillon, Hussain, Loxton, & Rahman, 2013). In addition, with the exception of injuries, these consequences are consistent across physical and psychological forms of IPV (Coker, Smith, Bethea, King, & McKeown, 2000). Clinicians called for increased screening for IPV and research is seeking to address these consequences through prevention and intervention efforts that address distal and proximal risk factors of IPV.

Considering the high prevalence and serious health effects of IPV, examining factors related to IPV perpetration is important for improving future prevention and intervention efforts. Two risk factors that gained increased attention in theoretical models for IPV include alcohol use/problems (Shorey, Brasfield, Febres, & Stuart, 2011a) and emotion dysregulation (Bliton et al., 2016). Although recent research suggested that alcohol use and emotion dysregulation may be associated (Berking et al., 2011), more work is needed examining models of IPV that include both alcohol use and emotion dysregulation among men arrested for domestic violence. To inform existing IPV conceptualizations, the current study examined a proposed model of the associations between alcohol use/problems, emotion dysregulation, and IPV among men arrested for domestic violence and court ordered to attend batterer intervention programs (BIP).

Emotion Dysregulation and IPV

Emotion regulation is defined as the management of emotions through controlled or automatic processes (Gross & Thompson, 2007). The type, intensity, and duration of emotions may increase the risk for harm in contexts in which emotion regulation is compromised, also referred to as emotion dysregulation (Gross & Thompson, 2007). This compromise of regulation can occur via under- or over- regulation of emotion in which an individual either has the inability to contain emotional experiences, such as negative affect, or overly suppresses or denies such experiences (Robertson, Daffern, & Bucks, 2012). Emotion dysregulation associated with externalizing behaviors, such as IPV perpetration (Shorey et al., 2011a), while regulatory skills training associated with decreased aggressive verbalization in laboratory paradigms (Maldonado, DiLillo, & Hoffman, 2015). Among college students, difficulties in regulating emotion associated with psychological (Shorey et al., 2011a) and physical (Bliton et al., 2016) IPV perpetration for men and women. Some researchers conceptualized violence perpetration as an attempt to ameliorate the experience of negative emotions (O'Neil & Harway, 1997). In fact, the expression of negative emotions was a cited motivation for IPV perpetration among a sample of men arrested for domestic

violence and court ordered to BIP (Elmquist et al., 2014). However, the relationship between emotion dysregulation and IPV perpetration may not be direct. Researchers have called for expansion of violence models that examine emotion dysregulation to include possible mediators, such as alcohol use (Ortiz, Shorey, & Cornelius, 2015).

Emotion Dysregulation and Alcohol Use/Problems

Distressing affective experiences serve a motivational role in alcohol use (Cooper, Frone, Russell, & Mudar, 1995), and emotion dysregulation facets mediated this relationship between negative affect intensity and drinking to cope (Veilleux, Skinner, Reese, & Shaver, 2014). As such, emotion dysregulation was indicated as an important construct in the relationship between distressing affect and alcohol use. Such findings led researchers to begin conceptualizing alcohol use as an overt strategy for emotion regulation (Aldao & Dixon-Gordon, 2014). Overt strategies refer to the external behaviors an individual may engage in to regulate emotions if they do not have the internal resources to do so. As such, those who cannot manage their negative emotions may be more likely to seek external methods of regulation such as alcohol use to cope with an overwhelming internal experience. These findings lend support to alcohol as a pervasive coping strategy for emotion dysregulation, in which drinking to ameliorate such emotional stress related to long-term alcohol use over the course of a ten-year study within a community sample of men and women (Holahan, Moos, Holahan, Cronkite, & Randall, 2001).

Alcohol Use/Problems and Intimate Partner Violence

Alcohol use broadly related to a variety of aggressive behaviors including IPV perpetration (Foran & O'Leary, 2008; Stuart, O'Farrell, & Temple, 2009). Extant research employing cross-sectional, daily diary, and experimental designs consistently supported an association between alcohol consumption and IPV perpetration among college-aged, community, and clinical populations (Crane, Godleski, Przybyla, Schlauch, & Testa, 2016; Moore, Elkins, McNulty, Kivisto, & Handsel, 2011; Shorey, Stuart, McNulty, & Moore, 2014a; Shorey, Stuart, Moore, & McNulty, 2014b; Stuart, Moore, Kahler, & Ramsey, 2003; Stuart et al., 2013). For example, psychological and physical IPV were more likely to occur on drinking days relative to non-drinking days, on days of heavy drinking, and as the number of drinks consumed increased on a given day among male and female college students (Moore et al., 2011; Shorey, et al., 2014a; Shorey et al., 2014b). This is consistent with experimental literature. A meta-analysis of 22 experimental studies revealed an effect of alcohol on male-to-female perpetrated aggression such that men administered alcohol evidenced increases in aggression in laboratory paradigms relative to men who were not under the influence of alcohol (Crane et al., 2016). Alcohol use also associated with IPV perpetration in clinical samples of men arrested for IPV in which men misusing alcohol were generally violent and perpetrated more severe forms of IPV (Stuart et al., 2003; Thomas, Bennett, & Stoops, 2013). Despite the robust associations between alcohol use and IPV, limited research investigated possible distal traits that could elicit both alcohol use and IPV. In fact, researchers suggested that while alcohol has a significant effect on perpetration, it is insufficient alone to encompass the complexity of IPV (Crane et al., 2016). It follows that individual and situational factors should be included within IPV models (Crane et al., 2016).

Emotion Dysregulation, Alcohol Use/Problems, and IPV

Recent research examined the associations between emotion dysregulation, alcohol use, and IPV. For instance, emotion dysregulation related to alcohol use/problems, which related to psychological aggression, but not physical assault perpetration in a sample of undergraduate women (Ortiz et al., 2015). This study found a two-chain mediation in which emotion dysregulation related to alcohol use/problems, which related to psychological aggression perpetration, which, in turn, related to physical assault perpetration (Ortiz et al., 2015). Similarly, psychological aggression is frequently a precursor to physical assault (Murphy & O'Leary, 1989) and psychological aggression may mediate the relationship between alcohol use and physical assault perpetration (Baker & Stith, 2008; Salis, Salwen, & O'Leary, 2014; Stuart & Holtzworth-Munroe, 2005).

Purpose and Hypothesis

Although past research examined emotion dysregulation and alcohol use in relation to IPV perpetration, additional research is needed to delineate these relationships among high-risk samples. The current study extended prior research by examining the indirect effects of emotion dysregulation on IPV perpetration through alcohol use/problems in a sample of men arrested for domestic violence and court ordered to BIP.

1. We hypothesized that emotion dysregulation would positively associate with alcohol use/problems, which would, in turn, positively relate to psychological aggression perpetration.
2. We hypothesized that increased emotion dysregulation would positively associate with increased alcohol use/problems, which would relate to increased physical assault perpetration through psychological aggression perpetration. While not included in hypotheses, the indirect relationship between emotion dysregulation and physical assault perpetration through alcohol use/problems, excluding psychological aggression perpetration was also examined.

Method

Participants

A sample of 391 men who were court-ordered to attend BIP were recruited. The BIP in which recruitment took place were psychoeducational groups with an emphasis on victim safety. Groups addressed IPV in a variety of different ways, including finding patterns of abuse perpetration and methods of intervention to prevent future occurrences, identifying environmental influences, training on communication, providing psychoeducation on the nature of abuse, and discussing the related impact on victims. Research assistants conducted recruitment in person and requested voluntary participation on the surveys at regularly scheduled BIP group meetings. The mean age of participants was 33.37 ($SD = 11.43$) years. The majority of the sample self-identified as White/Non-Hispanic (60.4%), followed by Hispanic/Latino (12.5%), Black/Non-Hispanic (9.5%), "Other" (7.4%), American Indian or Alaskan Native (3.1%), and Asian or Pacific Islander (1.3%); 5.9% of the sample did not report race/ethnicity. Employment status was distributed as follows: employed (49.6%),

unemployed and looking for work (27.4%), unable to work (9.2%), unemployed but not currently looking for work (1.8%), homemaker (.8%), and student (1.5%); 7.5% of the sample did not report employment status. Participants reported having 12.15 ($SD = 14.40$) years of education and 2.09 children ($SD = 2.41$). Participants reported the following number of total arrests throughout their life: 0 (6.9%), 1 (11.5%), 2 (8.7%), 3 (7.2%), 4 (5.1%), 5 or more (35%). Arrests for offenses against romantic partners within the sample were: 0 (13.6%), 1 (32.7%), 2 (13.6%), 3 (7.7%), 4 (2.8%), 5 or more (4.6%). Alcohol-related offenses were reported by participants at the following rates: 0 (48.3%), 1 (8.4%), 2 (3.8%), 3 (4.1%), 4 (1.8%), 5 or more (8.5%). An additional 25.6% of the sample chose not to respond to questions regarding total arrests or arrests involving offenses against romantic partners while 25.1% chose not to respond to alcohol related arrest queries. Prior to data collection, participants had attended an average of 10.81 ($SD = 7.40$) BIP sessions.

Procedure

The Institutional Review Board approved all procedures for the current study. Before completing questionnaires, all participants provided informed consent. Participation in the current study was completely voluntary and without participant compensation. Small groups completed questionnaires during a regularly scheduled session of the BIP. All responses provided by participants were confidential and not revealed to BIP facilitators or any criminal justice personnel.

Measures

Physical and Psychological IPV Perpetration.—Self-reported physical and psychological IPV perpetration in the 12 months prior to BIP entry was assessed using the 20 perpetration items of the Psychological Aggression and Physical Assault subscales of the Revised Conflict Tactics Scales (CTS2; Straus, Hamby, Boney-McCoy, & Sugarman, 1996; Straus, Hamby, & Warren, 2003). Each item was rated by the participants on a 0 to 7 scale. Ratings 0–6 corresponded to the participant's perpetration frequency for each act (0 = not at all; 6 = more than 20 times). A score of 7 indicated that the behavior had occurred but not in the past 12 months. Therefore, all scores of 7 were recoded to 0 as we were solely interested in IPV in the prior 12 months. Total scores for both the Psychological Aggression and Physical Assault subscales were calculated by adding the midpoint for each item response (e.g., a 4 for the response 3–5 times). Higher total scores on each subscale represented more frequent IPV perpetration. The CTS2 is a commonly used measure of IPV perpetration that has been found to be reliable and valid (Straus et al., 1996; Straus et al., 2003). In the present study, there was good internal reliability for both the Psychological Aggression ($\alpha = .82$) and Physical Assault ($\alpha = .88$) subscales.

Emotion Dysregulation.—The Difficulties in Emotion Regulation Scale (DERS) assessed self-reported emotion dysregulation (Gratz & Roemer, 2004). Each of the 36 items (e.g., When I'm upset, I lose control over my behavior) was rated on a 0 (*almost never*) to 5 (*almost always*) scale. The DERS can be calculated as a total score or in the following subscales: nonacceptance of emotional responses, difficulties engaging in goal-directed behavior, impulse control difficulties, lack of emotional awareness, limited access to emotion regulation strategies, and lack of emotional clarity. While the DERS can be used to

calculate these six subscales, only the total score was used as a measure of overall emotion dysregulation within the current study, which is consistent with our *a priori* hypotheses. Items were summed to calculate a total score with higher scores representing greater levels of emotion dysregulation (Gratz & Roemer, 2004). The DERS is a frequently used measure of emotion dysregulation with good construct and predictive validity, and good test-retest reliability (Gratz & Roemer, 2004). The DERS demonstrated good internal consistency in the current study ($\alpha = .89$).

Alcohol use/problems.—The Alcohol Use Disorders Identification Test (AUDIT) is a 10-item self-report measure that screens for alcohol use/problems during the past year (Babor, Higgins-Biddle, Saunders, & Monteiro, 2001; Saunders, Aasland, Babor, De la Fuente, & Grant, 1993). The following aspects of alcohol use/problems are assessed: quantity and frequency of drinking, drinking intensity, symptoms of dependence and tolerance, and alcohol-related consequences. Scores on the AUDIT range from 0 to 40 (Saunders et al., 1993). Previous studies supported the reliability and validity of the AUDIT (Saunders et al., 1993). The internal consistency for the AUDIT in the current study was good ($\alpha = .93$).

Data Analytic Strategy

First, descriptive and correlational analyses were conducted using SPSS Version 24.0. The study hypotheses were tested using structural equation modeling in Mplus Version 6.12. Full information maximum likelihood (FIML) estimation was used as it is robust to non-normality and missing data. Prior to analysis, physical assault and psychological aggression perpetration totals were log transformed to account for skew. A simultaneous analysis of a series of structural regression equations was performed via path analysis. Physical assault was the primary outcome variable. Number of BIP sessions was included as a covariate within the model. As shown in Figure 1, physical assault was regressed onto psychological aggression, AUDIT total scores, DERS total scores, and the number of BIP sessions simultaneously. A model with 19 free parameters was used to test for indirect effects of the DERS total scores on physical assault perpetration through AUDIT total scores and psychological aggression while controlling for BIP sessions (see Figure 1). The indirect associations between DERS total scores and physical assault perpetration through AUDIT scores and psychological aggression were tested using the bias-corrected bootstrap method. Five thousand bootstrap samples and 95% bias-corrected confidence intervals were utilized. Statistical significance of indirect effects was determined by the absence of zero in the confidence intervals.

Fit indices were examined to determine goodness of fit for the model. The Chi Square, CFI, TLI, RMSEA, and SRMR aided in fit interpretation. Model fit is considered acceptable if chi-square is not significant, CFI is equal to or greater than .90, TLI is equal to or greater than .90, RMSEA is less than or equal to .05, and SRMR is less than or equal to .05. Within the current study, the chi square was nonsignificant, ($\chi^2 (1, 390) = 2.30, p = .13$), CFI was equal to .99, TLI was equal to .95, RMSEA was .06, and SRMR was equal to .02. All fit statistics are consistent with thresholds for good model fit with the exception of RMSEA, which is slightly higher. However, as RMSEA is subject to inflation as a result of a number

of model variables, more weight for examining fit was placed on indicators such as the SRMR which is less resistant to inflation relative to RMSEA (Iacobucci, 2010). It should be noted that reversing the variables in the model, or changing the order of the path analysis such that physical assault preceded psychological aggression, did not improve model fit based on the fit indices.

Kline (2015) proposed the N:q method as a guideline to determine recommended sample size for statistical models in which 20 observations are suggested for each estimated parameter. While 10 observations per parameter can be used, 20 observations per parameter is preferred, since it is more conservative. As the current study estimated 19 free parameters, 380 observations would be recommended. The sample of 391 participants recruited for the present study was therefore considered to be appropriate for analyses.

Results

Descriptive Statistics

Bivariate correlations between the transformed study variables and means and standard deviations of the raw variables are shown in Table 1. Results indicated positive correlations between emotion dysregulation, alcohol use/problems, psychological aggression, and physical assault perpetration. In addition, alcohol use/problems positively correlated with psychological and physical assault perpetration.

Path Models

Psychological Aggression Perpetration.—Men's emotion dysregulation positively associated with psychological aggression perpetration through alcohol use/problems ($B = .004$, 95% CI [.002, .007]). Therefore, emotion dysregulation associated with alcohol use/problems, which positively associated with more frequent psychological aggression perpetration among men in the current study. A direct path remained significant within the model such that emotion dysregulation was associated with psychological aggression perpetration ($B = .014$, 95% CI [.006, .02]).

Physical Assault Perpetration.—Emotion dysregulation was not associated with physical assault perpetration through alcohol use/problems ($B = .001$, 95% CI [−.001, .002]). A two-chain mediation demonstrated that emotion dysregulation positively associated with physical assault perpetration through alcohol use/problems and psychological aggression perpetration ($B = .002$, 95% CI [.001, .003]). That is, emotion dysregulation positively associated with alcohol use/problems, which associated with increased psychological aggression perpetration, which related to physical assault perpetration. A direct path remained significant within the model such that emotion dysregulation was associated with physical assault perpetration ($B = .001$, 95% CI [.005, .016]).

Discussion

The current study sought to expand prior research by examining emotion dysregulation, alcohol use/problems, and IPV perpetration in a cross-sectional sample of men arrested for

domestic violence. It was hypothesized that emotion dysregulation would positively associate with alcohol use/problems, which would, in turn, positively relate to psychological aggression perpetration. Additionally, we hypothesized that increased emotion dysregulation would positively associate with increased alcohol use/problems, which would relate to increased physical assault perpetration through psychological aggression perpetration. Path analyses revealed direct and indirect relationships that partially supported our hypotheses. Results were consistent with partial mediation such that emotion dysregulation positively related to alcohol use/problems, which positively related to psychological aggression perpetration. A direct path from emotion dysregulation to psychological aggression perpetration remained significant within the proposed model. Emotion dysregulation positively related to alcohol use/problems, which positively related to psychological aggression perpetration, which positively related to physical assault perpetration. Once again, a direct path remained between emotion dysregulation and physical assault perpetration such that results were consistent with partial mediation.

While no hypotheses were provided regarding descriptive statistics, general comparisons can be made. Descriptive statistics revealed a sample in which half of the participants (49.6%) met the hazardous drinking cut-off criterion for men with a mean AUDIT score of 8.81. This is consistent with past studies on men in BIP examining hazardous drinking based on the AUDIT (Stuart et al., 2003). However, reported drinking rates may be higher than indicated as some of these men court ordered to attend BIPs may also have had probations that stipulated regular toxicology screens. As such, it is possible that the AUDIT scores may have underestimated participant drinking. The current sample had emotion dysregulation levels slightly higher than a population of men abusing alcohol (Fox, Hong, & Sinha, 2008). Although a mean score of emotion dysregulation could not be found within a community sample, the current sample's mean emotion dysregulation score (81.10) was comparable to a large undergraduate sample (80.66; Gratz & Roemer, 2004) and higher than a smaller sample of men arrested for violent offenses (73.67; Gardner, Moore, & Dettore, 2014).

Research Implications

The finding that alcohol use/problems mediated the relation between emotion dysregulation and psychological aggression is consistent with prior research which highlights the associations between these factors. For instance, emotion dysregulation was associated with psychological aggression among college students (Shorey et al., 2011a) and cited as a reason for perpetration among batterers (Elmquist et al., 2014). As such, researchers have conceptualized alcohol use to be an overt strategy for regulating emotion, which would be consistent with the proposed model. Additionally, the current findings are consistent with similar models conducted within a cross-sectional sample of undergraduate women (Ortiz et al., 2015). In this undergraduate sample, emotion dysregulation was associated with psychological aggression through alcohol use/problems.

Additionally, partial mediation supported in current and past research (Ortiz et al., 2015) indicates other risk factors may play a significant role. As such, while alcohol use/problems is a risk factor for IPV, it does not explain the entirety of this relationship. This is consistent with past evidence that alcohol use is not necessary for the perpetration of violence, but

remains a salient risk factor (Giancola, Josephs, DeWall, & Gunn, 2009; Stuart et al., 2003). In such studies, alcohol has been presented as both a predictor and a mediating variable. For instance, alcohol was found to positively associate with physical violence through psychological aggression among men and women arrested for IPV (Stuart et al., 2006). Another study found alcohol use to mediate the relationship between antisocial traits and IPV perpetration in a sample of arrested men (Brem, Florimbio, Elmquist, Shorey, & Stuart, 2017). Other models do not include alcohol use but instead focus on internal factors such as the mediating role of trait anger between emotion dysregulation or impulsivity and IPV perpetration (Shorey, Brasfield, Febres, & Stuart, 2011b; Shorey & Idema, 2011). Still others examine how the impact of upbringing such as attachment and family of origin violence may lead to IPV perpetration through borderline/antisocial personality traits (Mauricio, Tein, & Lopez, 2007) or hostility (Elmquist et al., 2016). The number of models present within the extant literature points to the complexity of IPV perpetration and the need for research on a variety of potentially valuable constructs.

Future studies should consider incorporating variables relevant to emotion dysregulation, alcohol use/problems, and IPV, such as sleep and anger/hostility, into their models. Impaired sleep quality lowers one's capacity to regulate emotions (Mauss, Troy, & LeBourgeois, 2013) and was associated with violence perpetration theoretically and empirically (Krizan & Herlache, 2016; Maldonado, DiLillo, & Hoffman, 2015; Shorey et al., 2011a). Long-term emotion dysregulation may also impact factors such as trait anger. Trait anger mediated the relationship between emotion dysregulation and IPV in an arrested sample (Shorey & Idema, 2011). While studied in previous research (e.g., Eckhardt, Barbour, & Stuart, 1997; Elmquist et al., 2016; Stuart & Holtzworth-Munroe, 2005), examining the proximal effects of anger would help to inform programs incorporating anger management without full scale emotion regulation training.

Future research should further expand such findings and collect data from different time points to determine directionality. Prior research has supported long-term, problematic alcohol use as a risk factor for subsequent emotional processing deficits (Heinz, Beck, Meyer-Lindenberg, Sterzer, & Heinz, 2011) that may precede IPV perpetration (Derrick & Testa, 2017; Testa & Derrick, 2014). It is plausible that results of longitudinal data would differ from the present findings. Data from the present study assessed trait emotion dysregulation, and past year alcohol problems and IPV; as such, the present data cannot determine temporal associations among study variables. Future research in this domain would benefit from event-level methods (e.g., ecological momentary assessment, daily diary study design). This would allow for the opportunity to better assess how day-to-day alcohol use or emotion dysregulation may proximally impact IPV perpetration.

Clinical and Policy Implications

Considering evidence that BIPs have little impact on IPV recidivism, researchers have called for the development of BIP that address prevalent risk factors for IPV perpetration (Feder & Wilson, 2005; Shorey, Cornelius, & Bell, 2008). Findings from prior research within arrested populations of IPV perpetrators as well as the current study indicated that IPV perpetration may be closely linked to an individual's attempt to cope with negative emotions

(Elmquist et al., 2014; Shorey et al., 2011a). The present findings support the relationship among emotion dysregulation, alcohol use/problems, and other research-supported predictors of IPV perpetration (Holahan et al., 2001; Stuart et al., 2009). Taken together, some preliminary clinical implications can be drawn from these data.

First, clinicians working with individuals or couples should consider high levels of emotional dysregulation and alcohol use/problems as indicators of potential physical and/or psychological aggression perpetration. Very few BIP assess for and/or treat co-existing substance use disorders, which has implications for the effectiveness of these programs (Stuart, Moore, & Temple, 2007; Timko et al., 2012). Women arrested for domestic violence who received a motivational alcohol intervention perpetrated less physical assault and had better substance use outcomes than women receiving only batterer intervention at 12-month follow-up (Stuart et al., 2016). Additionally, despite the association with IPV perpetration, traditional BIP do not assess or directly address emotion dysregulation in their curriculum. Experimental data indicated that participation in adaptive emotion regulation (e.g., cognitive reappraisal) reduced college students' lab-based IPV perpetration (Maldonado, DiLillo, & Hoffman, 2015). However, we are unaware of any such interventions broadly addressing emotion dysregulation among batterers conducted in non-laboratory settings. While not actively incorporated into BIP, many interventions exist which incorporate aspects of emotion regulation training such as Dialectical behavioral therapy (DBT) and mindfulness-based cognitive therapy (Coffey, Hartman, and Fredrickson, 2010; Linehan, 1993). Such interventions have the potential to address emotion dysregulation as a prevalent risk factor for IPV perpetration. However, past and present findings highlight the importance of randomized controlled trials (RCT) examining the effectiveness of such interventions within a clinical sample.

The presence of emotion dysregulation, alcohol use/problems, or IPV perpetration may warrant inquiry about the presence and relations between these other variables, which can then be incorporated in the conceptualization of the individual and the following treatment plan. For instance, in addition to separately evaluating overall substance use and emotion dysregulation as risk factors for IPV perpetration, it is necessary to assess motivations for drinking within this population, which might include efforts to regulate negative emotions as cited by Elmquist et al (2014) in a study of men court-ordered to BIPs. Helping perpetrators of IPV to address potentially underlying emotion regulation difficulties may have the effect of reducing both alcohol use and IPV. This supposition which follows from the present findings should be evaluated using more robust research methodologies, such as RCTs or experimental designs.

In short, the present study supports prior findings of a relation between emotion dysregulation, alcohol use/problems and IPV perpetration within a within a sample of men arrested for domestic violence. Review of the literature shows that these constructs have been examined separately in relation to IPV treatment and indicates a variety of intervention options to include emotion regulation approaches and address alcohol use/problems in such programs. With additional evidence of the efficacy of these treatments, examining the related interventions in a combined model within BIP should be a priority for IPV intervention research.

Limitations

Several study limitations should be considered. First, data were limited in their generalizability as the sample was mainly Caucasian. Findings are also limited to men arrested for domestic violence, limiting generalizability to non-forensic samples and women. Additionally, data were collected via self-report; reports of violence were not corroborated with romantic partners or police records. Such self-reports may also be limited. For instance, as the AUDIT does not assess drinking motives, there was no way to disentangle which participants may have been drinking to cope with emotional dysregulation, which participants were drinking to avoid alcohol withdrawal, and which participants were drinking for both or other reasons. This further tempers the conclusions that can be drawn from the data. Further, the study is limited by the timeframe of measures used. The measures of the current study require recollection of the past 12 months of behavior which may be difficult for participants to accurately recall. Shorter time frames should be utilized. Further, participants had attended an average of 11 BIP sessions when completing the study assessment, which may have made it more difficult to recall drinking and IPV behaviors during the 12 months prior to starting the BIP.

Conclusion

The current study sought to extend prior research by examining the pathways by which emotion dysregulation, alcohol use, and IPV perpetration interact within a sample of men arrested for domestic violence. One pathway indicated that alcohol use/problems explained the relation between emotion dysregulation and psychological aggression. An additional path emerged by which alcohol use/problems and psychological aggression explained the relation between emotion dysregulation and physical assault perpetration. Existing IPV and alcohol theories support findings. These results indicate the need for future research to explore the mechanisms by which emotion dysregulation and alcohol use interact in the context of IPV.

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Figure 1.

The direct and indirect effects of emotion dysregulation on psychological IPV and Physical IPV perpetration through alcohol use and problems, controlling for the number of BIP sessions attended and the relation between psychological aggression and physical assault. Standardized betas are presented. Solid paths were found to be significant within the current study.

Table 1.

Bivariate Correlations and Descriptive Statistics for Study Measures

	1	2	3	4	5
1. DERS Total	-				
2. BIP Sessions	.00	-			
3. AUDIT Total	.24**	.08	-		
4. Psychological IPV	.27**	.05	.33**	-	
5. Physical IPV	.34**	.10	.27**	.61**	-
<i>Mean</i>	81.10	10.81	8.81	2.92	1.32
<i>(SD)</i>	21.63	7.40	8.41	1.43	1.33

Note:

SD = Standard Deviation*
 $p < .05$ **
 $p < .01$ (two-tailed).