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Effects of Couple Conflict on Alcohol Craving: Does Intimate Partner Violence Play a Role?

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Abstract

Objective: Social stress in the form of maladaptive relationship conflict is a common precipitant to alcohol misuse and problems. Research has also established a clear causal association between alcohol misuse and relationship conflict in the form of intimate partner violence (IPV). Despite the robust literature linking relationship conflict and problematic drinking using survey methodology, no laboratory studies have examined the proximal association between relationship conflict and alcohol craving among couples, or the influence of IPV perpetration and victimization on this association.

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Contributors

Dr. Flanagan was Principal Investigator on the project presented here, wrote the introduction and methods sections, and had primary responsibility for editing and finalizing all sections of the paper. Dr. Jarnecke had primary responsibility for conducting data analyses, drafted the data analytic approach and results sections, and drafted tables and figures. Dr. Leone contributed to conducting data analyses and drafting the results section, tables, and figures, and the discussion section. Mr. Oesterle had primary responsibility for drafting the discussion section and contributed to editing and formatting all sections of the manuscript. All authors approved the final version of the manuscript for submission.

Author Statement

Dr. Julianne Flanagan: Funding acquisition, Conceptualization, Methodology, Project administration, Investigation, Writing - Original Draft, Review & Editing

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Conflict of Interest

All authors declare that they have no conflicts of interest.

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Method: As part of a larger randomized controlled trial, 30 different-sex community couples with substance misuse completed a laboratory conflict resolution task. Participants reported subjective alcohol craving on a Likert-type scale immediately, before, and after the task. Conflict behaviors were coded by trained observers. Analyses were conducted using a multilevel modeling framework to account for the dyadic nature of the data.

Results: Findings indicate that psychological and physical IPV perpetration and victimization strengthened the associations between negative and positive conflict behaviors and alcohol craving among men only. Contrary to our hypotheses, no main or moderating effects of conflict behaviors, IPV perpetration, or IPV victimization were found for women.

Conclusions: Findings from this exploratory study suggest that in this sample, relationship conflict and IPV in one's current relationship played a more impactful role on acute alcohol craving among men compared to women. Future studies should examine the role of specific conflict behaviors on alcohol craving and relapse risk, and patterns of communication that might increase or reduce risk for exacerbated alcohol craving.

Keywords

alcohol; craving; intimate partner violence; couple conflict

1. Introduction

The negative reinforcement model (Donovan, 1980; Khantzian, 1997; Sher & Levenson, 1982) suggests that alcohol is commonly used to mitigate discomfort associated with stress. Social stress, in particular, is a well-known precipitant of alcohol craving, which subsequently leads to drinking in both real-world and laboratory settings. Indeed, social stress is a critical construct in the alcohol literature due to its influence on alcohol treatment seeking and engagement, and alcohol use trajectories over time (Flannery, Poole, Gallop, & Volpicelli, 2003; Heinz, Beck, Grüsser, Grace, & Wrase, 2009; Higley et al., 2011; Law et al., 2016; Marlatt, Kosturn, & Lang, 1975; McGrath, Jones, & Field, 2016; Owens, Ray, & MacKillop, 2015; Ramchandani et al., 2018; Stohs, Schneekloth, Geske, Biernacka, & Karpyak, 2019).

Maladaptive relationship conflict is a salient and pervasive form of social stress among couples who misuse alcohol and have alcohol problems present (Hammett, Karney, & Bradbury, 2018; Leonard & Eiden, 2007; Leonard & Homish, 2008). Social exchange theory has been applied to explain the mutually-causal link between problematic alcohol use and maladaptive relationship functioning (McCrady, 1982; McCrady, Epstein, & Sell, 1996). This theory suggests that problematic alcohol use is likely to precipitate instances of stressful and maladaptive relationship conflict interactions. Alcohol use then has the ability to become a salient negative reinforcer when it is subsequently and persistently used in order to reduce the stress of those negative relationship interactions and their problematic consequences. For example, one meta-analysis revealed that excessive alcohol use leads to negative consequences for couples (Marshall, 2003). Another recent study found that in different-sex couples, women's self- and partner-reports of alcohol use were both associated with greater relationship conflict (Farrelly, Sherry, Kehayes, & Stewart, 2019). Romantic

partners also acutely influence one another's heavy drinking behavior (Bartel et al., 2017; Mushquash et al., 2013). Relationship problems are a commonly cited motivator for seeking alcohol treatment (Grosso et al., 2013) and data suggests that maladaptive relationship functioning negatively impacts progress in alcohol treatment (Fairbairn & Cranford, 2016). Given this research, it stands that maladaptive relationship conflict may lead to alcohol cravings, and subsequent drinking, as a way to alleviate the distress associated with maladaptive relationship conflict.

One factor that may moderate the association between relationship conflict and alcohol craving is intimate partner violence (IPV). Research clearly and consistently shows that couples who misuse alcohol and have alcohol use disorder incur increased risk for maladaptive relationship conflict in the form of IPV (Chermack et al., 2010; Chermack et al., 2008; Stuart et al., 2013), and that acute alcohol intoxication precipitates IPV in the laboratory and in vivo (Duke, Giancola, Morris, Holt, & Gunn, 2011; Kaufmann, O'Farrell, Murphy, Murphy, & Muchowski, 2014; Murphy, Winters, O'Farrell, Fals-Stewart, & Murphy, 2005; Parrott & Eckhardt, 2018; Testa & Derrick, 2013). The precipitous link between alcohol misuse and IPV is most commonly explained by Alcohol Myopia Theory (Steele & Josephs, 1990), which suggests that alcohol consumption has the ability to cause a reduction in the scope of one's attentional focus and simultaneously reduce one's capacity to engage adaptive cognitive abilities and information processing that might otherwise be accessible. As a result, one's attention is reduced to only the most salient cues in the environment. Thus, in the context of alcohol misuse, provocative cues such as relationship conflict are more likely to instigate aggressive behavior (Giancola & Corman, 2007; Giancola, Josephs, Parrott, & Duke, 2010; Massa, Subramani, Eckhardt, & Parrott, 2019; Parrott & Eckhardt, 2018). However, it is less clear how IPV that has occurred within a couple's current relationship may interact with other conflict behaviors to predict alcohol craving. It is possible that IPV might prime couples to potentiate a link between maladaptive verbal conflict and alcohol cognitions and behaviors.

Taken together, findings from the current literature indicate that it is important for research to disentangle the complex associations between relationship conflict behaviors and alcohol-related cognitions such as craving. Despite numerous advances in the study of alcohol and intimate relationships, research examining the proximal effects of relationship conflict on alcohol craving remains limited. Some studies have approximated this question by examining the role of IPV victimization in predicting substance misuse and substance use disorders, although these studies have been conducted primarily among women as individual participants, rather than also including men and/or couples (Cafferky, Mendez, Anderson, & Stith, 2018; Flanagan, Jaquier, Overstreet, Swan, & Sullivan, 2014; Shorey, Moore, McNulty, & Stuart, 2016; Sullivan, McPartland, Armeli, Jaquier, & Tennen, 2012). Other findings from treatment trials show that when relationship functioning improves, so does the likelihood of successful alcohol treatment outcomes. No studies to our knowledge have examined how couple conflict, with or without IPV present, might influence alcohol craving through direct or indirect associations.

1.1 Current Study

Despite pertinent theory and empirical evidence suggesting that alcohol is commonly used to alleviate social stress in the form of maladaptive relationship conflict (Marshall, 2003; McCrady, 1982; McCrady et al., 1996), no studies to our knowledge have examined the proximal association between relationship conflict behaviors and alcohol craving. Thus, the goal of the current study is to address this persistent gap in the literature in a controlled laboratory setting using an observationally coded conflict task. Because of the marked increased risk for IPV among couples with alcohol problems, and the deleterious effects of IPV for individual and couple functioning across health domains (Ellsberg, Jansen, Heise, Watts, & Garcia-Moreno, 2008; Hammett et al., 2018; Hines & Douglas, 2009), the current study also examined whether both psychological and physical IPV perpetration and victimization in the relationship moderated this association. While controlling for baseline alcohol craving, (i.e., craving immediately prior to the task) as well as positive conflict behaviors, we hypothesized that greater frequency of negative conflict behavior during the task will be associated with higher alcohol craving immediately following the task. We also hypothesized that greater psychological and physical IPV perpetration and victimization will strengthen the association between negative conflict behaviors and alcohol craving. Given current theory and the extant literature, no hypotheses about positive conflict behaviors on craving were generated, and this variable was included as a covariate in the current study.

2. Method

2.1 Participants

Participants were enrolled in a larger randomized controlled laboratory study examining the effects of oxytocin on cortisol reactivity and conflict behaviors among couples. The study procedures have been reported previously (Flanagan et al., 2018). This study and all study-related procedures were IRB approved, conducted in accordance with the Declaration of Helsinki, and all participants completed written informed consent prior to taking part in any study procedures. In the present analyses, only baseline data, taken before medication administration, was utilized. Participants were required to be 18–65 years of age, and one or both partners in each dyad must have engaged in at least one episode of hazardous drinking (i.e., 4 or more standard drinks for women, 6 or more for men on one occasion) or illicit drug use during the past 60 days. Exclusion criteria for the larger study included 1) pregnancy or breastfeeding; 2) history of or current physical (i.e., traumatic brain injury) or psychiatric diagnosis (i.e., psychotic; bipolar mood disorder) that might significantly limit generalizability, influence HPA axis responding in the larger laboratory study, or indicate a need for acute clinical care; 3) a BMI ≥ 39 ; 4) use of prescription medications that interfere with HPA axis activity; 5) active suicidal or homicidal ideation and intent; or 6) severe and unilateral IPV (assessed by both partners' reports on the Revised Conflict Tactics Scale [CTS-2]) in the current relationship during the past year. This was implemented in order to maximize participant safety and sample generalizability.

Complete demographic sample characteristics have been reported previously (Flanagan et al., 2018). On average, participants were aged 32.1 years ($SD=9.90$). Most participants identified as African American ($n=53.3\%$) and were cohabitating and not married

($n=83.3\%$). While two same-sex female couples enrolled in the study, the current analyses were limited to different-sex couples, given that the small number of same-sex couples and that the overall sample size was not sufficient to estimate effects for men and women simultaneously, while also accounting for sex constellations within couples in the multilevel models.

2.2 Measures

Alcohol Craving.—Participants were asked to rate the intensity of their alcohol craving prior to and following the conflict task on a single-item from a modified version of the Visual Analogue Scale (VAS). This item uses a 10-point Likert-type scale from 1 (*not strong at all*) to 10 (*extremely strong*): “How strong is your current craving for alcohol?”. Single-item assessments such as VAS have demonstrated good convergent validity and sensitivity to change in prior studies and are commonly employed in studies administering multiple repeated measurements in the laboratory (see Kavanagh et al., 2013, for review).

Conflict Resolution Behaviors.—Couples completed a 10-minute conflict resolution task which was video recorded. The task involved each partner identifying three relationship problems. In cases where partners’ most important topic was not the same, a coin flip determined which partner’s topic was discussed. The couple was asked to discuss the topic with one another and work toward its resolution. As detailed elsewhere (Flanagan et al., 2018), recorded behaviors were coded using the Rapid Marital Interaction Coding System (RMICS; Heyman, 2004; Heyman, Weiss, & Eddy, 1995) by its developers who were blind to treatment condition in the larger study. The current analyses examined the frequency of five maladaptive or “negative” and five adaptive or “positive” conflict domains. Negative conflict behaviors include: *psychological abuse* (e.g., verbal statements or nonverbal behaviors indicating disgust, contempt, mocking, domineering, or devaluation), *distress-maintaining attributions* (e.g., statements of blame or negative attributions, denying responsibility), *hostility* (e.g., angry or irritable negative affect, statements of negative content that do not constitute psychological abuse), *dysphoric affect* (e.g., sad or depressed emotional state, whiny tone, self-derogatory statements), and *withdrawal* (e.g., behaviors intended to pull back from interaction).

Positive conflict domains include: *acceptance* (i.e., active listening skills that help the partner feel understood and validated), *relationship enhancing attributions* (i.e., positive attributions regarding self or partner involvement in positive, neutral, or negative life events), *self-disclosure* (i.e., statements about one’s feelings, wishes or beliefs), *humor* (i.e., statements that are clearly intended to be humorous; genuine smiling and laughing), and *constructive problem discussion/solution* (i.e., all constructive approaches to discussing or solving problems). The frequency of each behavior on each of subscale was summed to obtain a total frequency score for negative or positive conflict behaviors.

Intimate Partner Violence.—Psychological and physical IPV perpetration and victimization were measured using the 78-item Revised Conflict Tactics Scale (CTS-2; Straus, Hamby, & Warren, 2003). Response categories that comprised a range of values were recoded (Straus et al., 2003) [i.e., *3-5 times* (recoded to 4), *6-10 times* (recoded to 8), *11-20*

times (recoded to 15), and *more than 20 times* (recoded to 25)]. Severity scores were calculated by summing the respective responses for the psychological and physical IPV perpetration and victimization subscales for each participant. The psychological IPV subscale consists of eight items (e.g., shouted or yelled at a partner, called partner fat or ugly). The physical IPV subscale consists of twelve items (e.g., pushing, slapping, kicking, choking, beating up). Internal reliabilities for the scales were good (α 's ranged from 0.78 to 0.86).

Analyses were conducted using the maximum perpetration and victimization for an individual as reported by either partner within the couple. This approach was chosen to minimize reporting discrepancies between partners.

2.3 Statistical Analysis

Descriptive statistics and correlations were examined using SPSS v. 25 (IBM Corp., 2017). Multilevel modeling (MLM) was chosen to examine the effects of maladaptive (i.e., negative) conflict behaviors, IPV severity, and the interaction of conflict behaviors by IPV severity on alcohol craving because MLM can account for individual responses nested within the dyad. That is, these models can account for variance in the outcome at both the individual-level and dyad-level. For the purposes of the current study, we focus on interpreting effects at the individual-level while acknowledging the model accounts for the dyadic nature of the data.

MLM was conducted in Mplus Version 8 (Muthen & Muthen, 1998-2017). Because the outcome variable (i.e., post-task alcohol craving) was positively skewed, Poisson regression was used with Maximum Likelihood Robust (MLR) estimation. Due to the modest sample size of the current study, we did not examine the effect that one partner's negative conflict behaviors could have on the other partner's craving (i.e., partner effects). Because couples in this study had mutual (vs unilateral) IPV, four separate models were specified to examine the effects of psychological IPV perpetration, psychological IPV victimization, physical IPV perpetration, and physical IPV victimization independently. All analyses controlled for baseline (i.e., pre-task) alcohol craving. Although the purpose of this study was to examine the associations of negative conflict behaviors on craving, we also controlled for the frequency of positive conflict behaviors and the interaction of positive conflict behaviors by IPV in order to rule out the possibility that findings could be explained by positive conflict behaviors. Finally, given that the sample consisted of different-sex couples, we tested whether effects were distinguishable (i.e., varied) by participant sex. Because we found partners within couples were distinguishable by sex, the effect of sex on each predictor and control variable was examined in each of the models.

3. Results

Descriptive statistics and correlations from all variables analyzed in the current study are presented in Table 1. Men and women did not significantly differ on any of the variables examined. For men and women, baseline levels of alcohol craving were significantly associated with post-conflict resolution task craving. Also, for both men and women,

physical and psychological IPV perpetration and victimization were all significantly associated with one another.

As shown in Table 2, results from the model examining psychological IPV perpetration indicate that baseline alcohol craving was significantly positively associated with post-task alcohol craving among both men and women. Results also suggest that men who displayed more negative conflict behaviors during the task reported higher alcohol craving post-task. Two significant interactions emerged in this model. First, an interaction between positive conflict behaviors by psychological IPV perpetration was significant among men. Such an interaction suggests that men who displayed more positive conflict behaviors and reported more severe psychological IPV perpetration in their relationship reported higher alcohol craving compared to men who reported less severe psychological IPV perpetration (see Figure 1a). Similarly, the interaction between negative conflict behaviors and psychological IPV perpetration was significant among men. That is, men who displayed more negative conflict behaviors and reported more severe psychological IPV perpetration in their relationship reported higher alcohol craving compared to men who reported less severe psychological IPV (see Figure 1b). In contrast to our hypotheses, no significant main or interaction effects of negative conflict behavior or psychological IPV perpetration were found among women in this sample.

Results from the model examining psychological IPV victimization were similar to the model examining psychological IPV perpetration (see Table 2). Baseline alcohol craving was significantly associated with post-task alcohol craving among both men and women. Men who displayed more negative conflict behaviors during the task reported higher alcohol craving following the task. Further, significant interactions for positive conflict behaviors by psychological IPV victimization and negative conflict behaviors by psychological IPV perpetration emerged among men in the sample. Men who displayed more positive conflict behaviors and reported more severe psychological IPV victimization had higher alcohol craving (Figure 1c). Likewise, men with more negative conflict behaviors and more severe psychological IPV victimization indicated greater alcohol craving (Figure 1d). No effects of negative conflict behaviors, psychological IPV victimization, or the interaction of the two emerged for women.

Results from the model examining physical IPV perpetration indicate baseline alcohol craving was significantly and positively associated with post-task alcohol craving among both men and women (see Table 3). Further, greater displays of negative conflict behaviors were predictive of higher alcohol craving among men. As depicted in Figure 2a, physical IPV perpetration moderated the association between negative conflict behaviors and alcohol craving among men in this sample, such that men who displayed more negative conflict behaviors and reported more severe physical IPV perpetration reported higher alcohol craving compared to men who reported less severe physical IPV perpetration in their relationship. Again, no main or moderating effects of negative conflict behaviors or physical IPV perpetration were found among women in this sample.

A similar pattern of results emerged when examining physical IPV victimization in the model (Table 3). Greater baseline alcohol craving was associated with greater post-task

alcohol craving among men and women. Greater levels of negative conflict behaviors among men were associated with greater post-task alcohol craving. A significant interaction of negative conflict behaviors by physical IPV victimization emerged among men. That is, men who displayed more negative conflict behaviors and reported more severe physical IPV victimization reported greater alcohol craving than men who reported less severe physical IPV victimization (Figure 2b). No main or moderating effects of negative conflict behaviors or physical IPV victimization were found among women.

4. Discussion

The primary aim of this exploratory study was to examine the association between negative conflict behaviors during a laboratory task and subjective ratings of alcohol craving in a sample of community couples with substance misuse, and to examine whether psychological or physical IPV perpetration and victimization moderated this association. As hypothesized, results indicated that greater frequency of negative conflict behaviors were associated with greater craving among men in this sample. These results are consistent with the negative reinforcement model (Donovan & Marlatt, 1980; Khatzian, 1997; Sher & Levenson, 1982), wherein alcohol craving is expected to increase proportionally with negative conflict behaviors, thereby precipitating alcohol use which serves to negatively reinforce alcohol use by reducing the discomfort or distress. In addition, psychological and physical IPV perpetration and victimization strengthened this relationship with modest but statistically significant interactive effects among men. Notably, results also suggest that men with more severe psychological IPV perpetration and victimization also reported greater alcohol craving when they displayed a greater number of positive conflict behaviors.

It is possible that in relationships where IPV is more severe, men are more likely to experience alcohol craving regardless of what type of conflict strategies they employ or are attempting to employ. Conflict discussions may be stress-inducing among men who perpetrate and are victims of IPV, regardless of conflict strategies, and this may therefore amplify craving. These findings may be best understood using the theoretical framework explained by applications of Social Exchange Theory to couples (Longabaugh et al., 2005; McGrady, 1982; McGrady et al., 1996), suggesting that craving may be amplified as a result of trying to balance the the positive reinforcement of social stress from conflict with negative reinforcement of alcohol use. These findings are also in line with prior research, suggesting that men may use alcohol more to cope with negative emotions than do women (Nolen-Hoeksema, 2012; Nolen-Hoeksema & Hilt, 2006), although those associations are more complex and typically shaped by various individual and contextual factors (Dvorak, Pearson, Sargent, Stevenson, & Mfon, 2016; Muraven, Collins, Shiffman, & Paty, 2005; Simons, Carey, & Wills, 2009). These findings warrant replication and clarification, but it is possible that increased alcohol craving following engaging in conflict behaviors may signal a way in which men cope with stressful situations in the context of their relationship (i.e., alcohol use), which underscores the theoretical literature surrounding the negative reinforcement and social exchange models. These findings contribute to the existing literature because no prior studies have examined the direct and indirect associations between couple conflict, IPV, and alcohol craving, despite robust research indicating the

importance of dyadic processes in the development, maintenance, and recovery of alcohol use disorder.

Null findings among women in this sample were surprising and require further investigation. Overall, gender differences revealed in this study are not surprising given documented differences in alcohol use and couple interactions in different-sex couples (e.g., Cranford, Tennen, & Zucker, 2015). While the preliminary nature of this study limits our ability to interpret or make attributions regarding why conflict behaviors and IPV perpetration and victimization severity did not impact alcohol craving among women, one possibility is that women in this sample might have experienced less distress overall during the conflict task. For instance, they may have viewed the conflict task as an opportunity to discuss challenging or charged topics that are less often addressed or more difficult to address in daily life, particularly in the context of IPV. Examining the strong correlation between women's pre- to post-task craving may further support this hypothesis. Because women's reported craving did not change much following the conflict task this may reflect that women were less negatively impacted by the conflict task relative to men. Considering that IPV is a behavior with tremendous heterogeneity in its etiology and course, and couples with severe and unilateral IPV were excluded from this study, it is possible that couples with more severe or chronic IPV might have yielded different outcomes. It is important to reiterate that these findings are preliminary and replication studies are needed using laboratory or event-based designs to isolate these effects and underlying mechanisms. For example, ecological momentary assessment may be used to temporally examine the relationship between prior IPV perpetration or victimization, conflict behaviors, alcohol craving, and subsequent drinking behavior.

4.1 Limitations and Future Directions

Several limitations warrant discussion.—First, it is important to note that this was a preliminary investigation of the effects of the moderating role of IPV perpetration and victimization on the relationship between couples conflict and alcohol craving. Given the early stages of this work and the small sample size, partner effects were not examined. In addition, the present findings are modest, and replication is needed. Next, while the VAS has demonstrated acceptable psychometric properties such as convergent validity and sensitivity to change, and is commonly used to assess subjective alcohol and drug craving (Kavanagh et al., 2013; Richardson et al., 2008), some limitations are inherent to using a single subjective item. Specifically, some prior studies have noted that single item assessments are highly state-dependent and thus may not adequately predict drinking behavior over time (Connor, Feeney, & Young, 2005). Furthermore, alcohol craving was not primed in the current project. Future research should employ more multimodal and more comprehensive measures to assess alcohol craving. In addition, utility of this measure can be improved by future studies applying it to multiple samples with distinguishing characteristics (e.g., alcohol dependent participants, social drinkers, and heavy episodic drinkers). Further, because the larger randomized controlled laboratory study examining the effects of oxytocin on cortisol reactivity and conflict behaviors among couples (Flanagan et al., 2018), the study took place early in the morning to control for diurnal variations in cortisol reactivity, which may have impacted self-reported craving scores. Additionally, the duration of craving was not

assessed, which is an important correlate of recovery trajectories and may be more indicative of subsequent craving than the acute presence of craving (Heinz et al., 2003; Ray, Hutchison, & Bryan, 2006; Stohs et al., 2019; Subbaraman, Lendle, & Van Der Laan, 2013). Findings from this research may not generalize to other populations. Specifically, because alcohol craving manifests differently depending on alcohol use disorder presence and severity (Keyes, Krueger, Grant, & Hasin, 2011), these results may be exacerbated among individuals with an alcohol use disorder or within treatment-seeking populations as compared to the current community sample with recent substance misuse. With that, future research may also continue to build upon preliminary literature among couples seeking treatment for alcohol use disorder, considering that those seeking treatment are often motivated by alcohol's problematic manifestations within their romantic relationships (Grosso et al., 2016), and the role of maladaptive relationship behaviors on treatment-related progress for problematic alcohol use (Fairbairn & Cranford, 2016). Similarly, these results may vary among same-sex couples or gender minority populations. Future research might also consider the role integrating theoretical frameworks such as the Minority Stress Model (Hendricks et al., 2012; McCarthy et al., 2014), coupled with the negative reinforcement and social exchange models, to help further understand these complex associations among more diverse populations, including those who identify as sexual and gender minorities.

Further inquiry regarding the heterogeneity of IPV is a critical consideration for future research. It is possible that relationship partners' perspective, experience, and responses to IPV and conflict may drastically differ, particularly when compared with individuals presenting to treatment as a result of IPV. Therefore, an increased understanding of contextual experiences and responses to different forms of IPV is warranted. Future research is necessary to further explore the relationship between the role of communication patterns and alcohol use, and can improve on the current study by examining more specific negative conflict behaviors and relapse risk. In an effort to increase the interdisciplinary applications of this research, future studies can leverage advances in technology – such as neuroimaging techniques, ecological momentary assessment, and novel alcohol self-administration procedures- to model the association between IPV and craving in both naturalistic and controlled laboratory settings. Finally, future work is needed to understand the role of IPV and acute alcohol craving among couples from more diverse racial and ethnic backgrounds and cultures to inform tailored approaches to adaptive stress and conflict responses.

4.2 Conclusions

This preliminary and exploratory laboratory study found that relationship conflict behaviors in combination with either psychological or physical IPV perpetration and victimization might contribute to subsequent alcohol craving among men only. Future studies are warranted to learn more about the proximal associations between specific relationship conflict behaviors and the context of IPV independently and collectively influence alcohol craving among women. These findings indicate a need for tailored study designs to address this question in both community and treatment-relevant populations.

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Highlights

- We examined the association between couple conflict behavior and alcohol craving.
- We also examined whether IPV moderated the relation between conflict and craving
- These associations were measured among substance-misusing couples.
- IPV strengthened the association between conflict and alcohol craving among men.
- No effects of conflict behavior or IPV on alcohol craving were found for women.

Figure 1.

Note. Men's alcohol craving by level of conflict behaviors and psychological intimate partner violence (IPV) perpetration and victimization. Values are plotted at ± 1 SD above and below the mean.

Figure 2.

Note. Men's alcohol craving by conflict behaviors and physical intimate partner violence (IPV) perpetration and victimization. Values are plotted at ± 1 SD above and below the mean.

Table 1.

Descriptive statistics and correlations

Variable	1	2	3	4	5	6	7	8	Men M (SD)	Women M (SD)
1. Baseline Craving	0.39*	0.87**	-0.04	0.33	0.01	-0.02	0.13	0.07	1.33 (0.93)	1.60 (1.73)
2. Post-task Craving	0.67**	0.52**	-0.14	0.24	-0.13	-0.15	0.06	-0.02	1.87 (2.03)	1.63 (1.61)
3. Positive Conflict Behaviors	0.34	0.14	0.74**	0.09	0.11	0.04	0.02	-0.18	33.28 (14.10)	33.07 (11.10)
4. Negative Conflict Behaviors	-0.10	0.36	-0.29	0.94**	0.05	0.07	0.03	0.15	17.55 (26.93)	16.72 (22.04)
5. Psychological IPV Perpetration	-0.03	0.25	-0.25	0.20	0.92**	0.92**	0.55**	0.38*	43.10 (32.75)	41.84 (30.12)
6. Psychological IPV Victimization	-0.10	0.17	-0.22	0.21	0.92**	0.92**	0.48**	0.40*	41.84 (30.12)	43.10 (32.75)
7. Physical IPV Perpetration	-0.16	0.03	-0.19	0.17	0.40*	0.38*	0.48**	0.48**	9.15 (15.90)	13.64 (21.67)
8. Physical IPV Victimization	-0.12	-0.03	-0.29	0.13	0.48**	0.55**	0.48**	0.48**	13.64 (21.67)	9.15 (15.90)

Note. $N = 60$ (30 couples). For correlations, diagonal (italicized) is the within couples correlation. Men's correlations are below the diagonal and women's correlations are above the diagonal.

* $p < 0.05$

** $p < 0.01$.

IPV = Intimate partner violence.

Table 2.

Fixed effects from multilevel models examining associations between conflict behaviors, psychological IPV, and alcohol craving by sex

Model and Variables		β	<i>b</i>	SE	<i>p</i> -value	95% Confidence Interval	Unstandardized Parameters
Psychological IPV Perpetration Model							
Intercept		0.60	0.35	0.07	0.000		0.237 - 0.457
Baseline Craving - Men		0.56	0.49	0.05	0.000		0.404 - 0.582
Baseline Craving - Women		0.55	0.26	0.03	0.000		0.214 - 0.306
Positive Conflict Behaviors - Men		0.23	0.01	0.01	0.110		0.000 - 0.027
Positive Conflict Behaviors - Women		-0.09	-0.01	0.01	0.261		-0.017 - 0.003
Negative Conflict Behaviors - Men		0.32	0.01	0.00	0.000		0.008 - 0.012
Negative Conflict Behaviors - Women		0.07	0.00	0.00	0.478		-0.003 - 0.008
Psychological IPV Perpetration - Men		0.11	0.00	0.00	0.360		-0.002 - 0.008
Psychological IPV Perpetration - Women		-0.15	0.00	0.00	0.132		-0.009 - 0.000
Positive Conflict Behaviors x Psychological IPV Perpetration - Men		0.28	0.00	0.00	0.008		0.000 - 0.001
Positive Conflict Behaviors x Psychological IPV Perpetration - Women		0.13	0.00	0.00	0.300		0.000 - 0.001
Negative Conflict Behaviors x Psychological IPV Perpetration - Men		0.44	0.00	0.00	0.000		0.000 - 0.000
Negative Conflict Behaviors x Psychological IPV Perpetration - Women		-0.01	0.00	0.00	0.864		0.000 - 0.000
Psychological IPV Victimization Model							
Intercept		0.61	0.35	0.07	0.000		0.235 - 0.471
Baseline Craving - Men		0.55	0.49	0.06	0.000		0.387 - 0.598
Baseline Craving - Women		0.54	0.26	0.03	0.000		0.209 - 0.308
Positive Conflict Behaviors - Men		0.26	0.02	0.01	0.070		0.001 - 0.029
Positive Conflict Behaviors - Women		-0.12	-0.01	0.01	0.258		-0.023 - 0.004
Negative Conflict Behaviors - Men		0.35	0.01	0.00	0.000		0.008 - 0.013
Negative Conflict Behaviors - Women		0.07	0.00	0.00	0.490		-0.003 - 0.008
Psychological IPV Victimization - Men		0.02	0.00	0.00	0.883		-0.006 - 0.0107
Psychological IPV Victimization - Women		-0.12	0.00	0.00	0.127		-0.007 - 0.000
Positive Conflict Behaviors x Psychological IPV Victimization - Men		0.32	0.00	0.00	0.041		0.000 - 0.001
Positive Conflict Behaviors x Psychological IPV Victimization - Women		0.10	0.00	0.00	0.353		0.000 - 0.001
Negative Conflict Behaviors x Psychological IPV Victimization - Men		0.48	0.00	0.00	0.000		0.000 - 0.000
Negative Conflict Behaviors x Psychological IPV Victimization - Women		-0.02	0.00	0.00	0.736		0.000 - 0.000

Note. $N = 60$ (30 couples). Standardized (β) and unstandardized (b) estimates are provided. Effects significant at $p < 0.05$ are bolded. IPV = Intimate Partner Violence.

Table 3.

Fixed effects from multilevel models examining associations between conflict behaviors, physical IPV, and alcohol craving by sex

Model and Variables	β	<i>b</i>	SE	<i>p</i> -value	95% Confidence Interval of Unstandardized Parameters
Physical IPV Perpetration Model					
Intercept	0.57	0.33	0.10	0.001	0.168 - 0.481
Baseline Craving - Men	0.57	0.50	0.07	0.000	0.386 - 0.607
Baseline Craving - Women	0.64	0.30	0.01	0.000	0.277 - 0.318
Positive Conflict Behaviors - Men	-0.01	0.00	0.01	0.949	-0.020 - 0.019
Positive Conflict Behaviors - Women	-0.14	-0.01	0.01	0.310	-0.026 - 0.006
Negative Conflict Behaviors - Men	0.19	0.01	0.00	0.023	0.002 - 0.010
Negative Conflict Behaviors - Women	0.07	0.00	0.00	0.455	-0.003 - 0.009
Physical IPV Perpetration - Men	0.05	0.00	0.01	0.787	-0.014 - 0.019
Physical IPV Perpetration - Women	-0.20	-0.01	0.00	0.052	-0.014 - -0.001
Positive Conflict Behaviors x Physical IPV Perpetration - Men	0.08	0.00	0.00	0.653	-0.002 - 0.001
Positive Conflict Behaviors x Physical IPV Perpetration - Women	0.11	0.00	0.00	0.135	0.000 - 0.001
Negative Conflict Behaviors x Physical IPV Perpetration - Men	0.44	0.00	0.00	0.000	0.001 - 0.001
Negative Conflict Behaviors x Physical IPV Perpetration - Women	-0.13	0.00	0.00	0.112	-0.001 - 0.000
Physical IPV Victimization Model					
Intercept	0.51	0.30	0.09	0.000	0.163 - 0.444
Baseline Craving - Men	0.59	0.54	0.05	0.000	0.455 - 0.616
Baseline Craving - Women	0.57	0.28	0.03	0.000	0.234 - 0.319
Positive Conflict Behaviors - Men	-0.10	-0.01	0.01	0.535	-0.022 - 0.010
Positive Conflict Behaviors - Women	-0.15	-0.01	0.01	0.322	-0.030 - 0.007
Negative Conflict Behaviors - Men	0.24	0.01	0.00	0.001	0.004 - 0.012
Negative Conflict Behaviors - Women	0.08	0.00	0.00	0.426	-0.003 - 0.010
Physical IPV Victimization - Men	-0.25	-0.01	0.01	0.103	-0.019 - 0.000
Physical IPV Victimization - Women	-0.12	-0.01	0.01	0.235	-0.015 - 0.002
Positive Conflict Behaviors x Physical IPV Victimization - Men	-0.20	0.00	0.00	0.108	-0.002 - 0.000
Positive Conflict Behaviors x Physical IPV Victimization - Women	0.08	0.00	0.00	0.176	0.001 - 0.001
Negative Conflict Behaviors x Physical IPV Victimization - Men	0.38	0.00	0.00	0.000	0.001 - 0.001
Negative Conflict Behaviors x Physical IPV Victimization - Women	-0.10	0.00	0.00	0.126	-0.001 - 0.000

Note. $N = 60$ (30 couples). Standardized (β) and unstandardized (b) estimates are provided. Effects significant at $p < 0.05$ are bolded. IPV = Intimate Partner Violence.