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RESEARCH REPORT

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Alcohol use as a predictor of intimate partner violence in emerging adulthood: A dyadic daily diary investigation

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Abstract

Background and Aims: Numerous studies have demonstrated that alcohol preceded and increased the odds of intimate partner violence (IPV). These prior studies were restricted to one dyad member despite theory suggesting that acute alcohol use by *both partners* should increase the risk for IPV to a greater degree than when only one partner drinks. We hypothesized that alcohol use by both dyad members, relative to one or no dyad members, would proximally precede and increase the odds of IPV perpetration and victimization.

Design: A 60-day daily diary design was used, where both dyad members of dating couples completed independent reports on IPV perpetration/victimization and alcohol use via a secure survey website.

Setting and Participants: Alcohol using college-student couples, aged 18–25 (n = 181 couples), from a Midwestern university in the United States participated. A convenience sample strategy was used.

Measurements: Daily surveys asked about alcohol use and IPV perpetration and victimization the prior day, including whether alcohol use preceded or followed IPV. The primary outcome was psychological IPV; secondary outcomes were physical and sexual IPV.

Findings: Longitudinal random effects models suggested statistically significant associations between drinking behavior and IPV outcomes. The odds of psychological IPV perpetration were higher when both partners were drinking relative to one partner drinking [adjusted odds ratio (aOR) = 1.13, 95% confidence interval (CI) = 1.06–1.99]. Exploratory analyses showed some indication that the odds of physical IPV victimization were higher when both partners were drinking relative to one partner drinking (aOR = 2.09, 95% CI = 1.71–4.21).

Conclusions: The risk for intimate partner violence appears to be greater when both partners drink, relative to one partner or neither partner.

KEYWORDS
actor-partner interdependence modeling, alcohol, college students, intimate partner violence, physical aggression, psychological aggression

INTRODUCTION

Intimate partner violence (IPV), including psychological, physical and sexual aggression, emerges during adolescence and peaks during the transition to emerging adulthood [1, 2]. This critical public health problem has received extensive empirical attention, although efforts to prevent IPV have been largely unsuccessful [3]. One potential reason for the lack of efficacy of IPV prevention programs has been an almost exclusive focus on targeting individual risk factors for IPV perpetration rather than dyadic-level risk factors and processes. Often, particularly among young adult couples, IPV is a dyadic process that cannot occur without both members of the couple [4, 5]. Therefore, fully accounting for the impact of risk factors on IPV requires the examination of both partners' risk factors and reports of IPV across time. This information would inform couples-level interventions for IPV, an area that has received minimal research focus despite preliminary evidence that couples-level interventions for IPV may result in reduced IPV [3]. In this manuscript, we focus on risk for alcohol-related IPV using a dyadic-based approach.

Alcohol use is one of the strongest predictors of IPV at the individual level [6, 7]. There is an abundant literature demonstrating that alcohol use precedes and increases the odds of IPV perpetration for men and women [5, 8–10], leading some to conclude that alcohol is a contributing cause of IPV [6, 11]. However, acute alcohol use by both partners is theorized to be an immediate proximal antecedent risk factor for IPV [4, 5]. Indeed, the odds of IPV are expected to be higher when both partners consume alcohol relative to only one partner. If research finds that the risk for IPV is increased when both dyad members drink alcohol, relative to only one dyad member, IPV prevention programs could then direct attention to reducing alcohol use among couples. This may be particularly important for young adult couples, the age group that consumes the greatest levels of alcohol [12] and have highest risk for IPV [2].

To date, only two studies have examined whether alcohol use by both dyad members, relative to one dyad member or no dyad members, temporally preceded and increased the odds of IPV perpetration. In a 56-day daily diary study with married and cohabitating adult couples, Testa and Derrick [5] did not find that alcohol use by both dyad members interacted to predict psychological or physical IPV perpetration, although drinking by either relationship partner was associated with increased odds of IPV. Wang and colleagues [13], in a 30-day ecological momentary assessment (EMA) study found that both dyad members' drinking independently increased the risk for psychological IPV perpetration and victimization, although they did not examine whether drinking by both partners further increased risk. However, extrapolating these findings to college students is difficult. First, the samples had mean ages considerably older than the typical 18 to 25-year-old college students. Second, participants were married or cohabitating, and few dating college couples cohabitate. Finally, couples with the greatest levels of alcohol use were excluded by Testa and Derrick [5]. Because college students consume more alcohol than any other age group [12], it is possible findings would be different in a population at risk for heavy alcohol use.

The aim of the current study was to examine dyadic alcohol use as a proximal predictor of IPV (psychological, physical and sexual) perpetration and victimization in alcohol-using emerging adult couples. It was hypothesized that alcohol use by both dyad members would proximally increase the odds of psychological IPV perpetration and victimization (primary outcome), and physical and sexual IPV perpetration and victimization (secondary outcomes), to a greater degree than when only one dyad member (or no dyad member) drank alcohol.

METHOD

Design

We used a 60-day daily diary design to examine within-day associations between alcohol use and IPV in a convenience sample of alcohol-using, young adult couples. Each dyad member completed independent, once-daily, surveys for 60-consecutive days.

Participants

A sample of 181 dating couples was included in the study. To be eligible, (1) one member of the couple had to have consumed alcohol in the past 30 days and the other dyad member could not be an alcohol abstainer; (2) both dyad members had to be between the ages of 18 to 25; (3) neither partner could have children; (4) at least one member had to be an undergraduate student at the university where recruitment took place; (5) the couple had to be dating for at least 1 month; (6) the dyad members had to live within 250 miles of each other; (7) neither partner could be a current graduate student at the university where the study took place; and (8) the couple had to have contact (e.g. face-to-face, talk on the phone) at least two times per week (as psychological IPV can occur electronically, face-to-face contact was not mandatory).

Couples had been dating for an average of 19.07 months (SD = 16.91, range = 1–107.50). Of these couples, nine were same-gender couples, all of which were comprised of individuals who identified as female. Accordingly, the majority of the sample identified as female (52.5%). The mean age of participants was 19.76 (SD = 1.50), and most participants identified as heterosexual (88.4%). The majority of the sample was not cohabitating at the time of the study (88.7%) and identified as White (91.2%) and not Hispanic or Latino (95.6%). Most participants were college students (96.9%). Full demographic information is presented in Table 1. This sample has been reported on elsewhere [23].

Procedures

Couples were recruited through several methods. First, couples were recruited through an undergraduate psychology research pool website where students could participate in research studies to earn credit for a psychology course. Second, study flyers were posted throughout

TABLE 1 Baseline descriptive statistics of study sample, *n* = 181 dyadic couples.

Socio-demographics	*N* = 362 participants (181 couples)
Age, y	
18	79 (21.8%)
19	109 (20.7%)
20	76 (21.0%)
21	51 (14.1%)
22	30 (8.3%)
23	8 (2.2%)
24	6 (1.7%)
25	3 (0.8%)
Mean (SD)	19.76 (1.50)
Gender	
Male	172 (47.5%)
Female	190 (52.5%)
Racial identity	
Caucasian/White	330 (91.2%)
African American/Black	9 (2.5%)
Middle Eastern	2 (0.6%)
American Indian or Alaska Native	2 (0.6%)
Native Hawaiian or other Pacific Islander	1 (0.3%)
Multiracial	17 (4.7%)
Unknown	1 (0.3%)
Ethnicity	
Hispanic or Latino	14 (3.9%)
Not Hispanic or Latino	342 (94.5%)
Unknown	6 (1.7%)
Sexual orientation	
Heterosexual	320 (88.4%)
Gay	1 (0.3%)
Lesbian	10 (2.8%)
Bisexual	30 (8.3%)
Unknown	1 (0.3%)
Relationship variables	
Length of relationship, months	19.07 (16.92)
Cohabitation, % currently living together	41 (11.3%)
Relationship status	
Dating	356 (98.3%)
Engaged	6 (1.7%)
Times/week see partner	
At least once/day	222 (61.3%)
4–5 times/week	90 (24.9%)
2–3 times/week	34 (9.4%)
Once a week or less	15 (4.1%)
Unknown	1 (0.3%)
Alcohol behavior	
AUDIT (total score)	7.57 (4.43)

(Continues)

TABLE 1 (Continued)

Socio-demographics	*N* = 362 participants (181 couples)
AUDIT (categorical)	
Low-risk consumer	193 (54.2%)
Hazardous/harmful consumer	135 (37.9%)
Likely alcohol use disorder	28 (7.9%)

Mean (SD) presented for continuous variables; *n* (%) presented for categorical variables.
Abbreviation: AUDIT, Alcohol Use Disorders Identification Test

campus (e.g. classrooms, dorms). Third, flyers were posted at off-campus locations (e.g. bars, restaurants). Interested couples could screen for eligibility on the psychology research pool website or email/call the researchers to screen for eligibility, with one dyad member completing the screening for the couple. Eligible couples were then scheduled for an in-person baseline assessment that both dyad members had to attend. Dyad members were separated, rescreened for eligibility and completed an informed consent. Following completion of a battery of self-report measures, participants were trained in how to complete the daily diary portion of the study. Each dyad member received $20 or credit in their psychology course for this assessment.

The daily diary surveys began the day following the baseline assessment. The daily surveys could be completed in approximately 5 minutes and were administered via email through the online survey platform SurveyMonkey.com. Links to surveys were available at 6 AM and if participants did not complete the survey by 5 PM a reminder email was sent. If participants did not complete the daily surveys for two consecutive days a study staff member contacted them to confirm they still wanted to be in the study, that they were still receiving the links and troubleshoot issues affecting compliance. Participants were asked to complete daily surveys for 60 consecutive days and separately from their partner. All procedures were consistent with prior daily diary research on alcohol and IPV [8–10]. Participants received $1 for each completed daily survey and a $5 bonus every time they completed seven consecutive surveys. All procedures received Institutional Review Board approval.

Baseline measures

Demographics

A researcher generated demographic questionnaire asked participants to report their age (continuous measure in years), race (categorical variable collapsed as White, Black, multiracial, other), ethnicity (binary indicator of Hispanic or Latino), year in school (categorical indicator of first year, sophomore, junior, senior, graduate, other), relationship length (continuous variable measured in months), cohabitation status (binary indicator of whether or not participant currently lives with their partner), time spent with partner (continuous measures of hours/day spent with partner), sexual orientation (categorical variable indicating heterosexual, gay, lesbian, bisexual, other) and sex (indicator of biological sex).

Alcohol use and problems

The 10-item Alcohol Use Disorders Identification Test (AUDIT) [14] was used to characterize participants' alcohol use and problems in the year before the study. The AUDIT is a well-established measure of alcohol use and problems with scores ranging from 0 to 40. Established cut-off scores classify individuals into low-risk drinkers, hazardous drinkers or likely alcohol use disorder (categorical variable). Internal consistency in the current sample was 0.81.

Daily diary measures

Consistent with prior daily diary research on IPV [5, 8–10], all daily diary questions asked about the prior day, which was defined as the time participants awoke until they went to sleep.

Daily contact with partner

Participants were asked if they had face-to-face contact, as well as phone/electronic contact, with their dating partner the prior day. Binary indicators of face-to-face contact and phone contact were created for analysis.

Daily IPV perpetration

Psychological, physical and sexual IPV were assessed with items adapted from the Conflict Tactics Scales (CTS) [15] and the Psychological Maltreatment of Women Inventory (PMWI) [16], consistent with prior daily diary research [8–10]. Five questions asked about psychological IPV, two questions asked about physical IPV, and two questions asked about sexual IPV. Items were summed for each type of IPV to create a total score. For each type of IPV separately, participants indicated whether or not they perpetrated and/or were victimized each day and those who perpetrated (or victimized) were coded with a '1' and participants who reported no perpetration (or victimization) were coded with a '0', consistent with prior work [5, 8–10]. This was done for each type of IPV, and perpetration and victimization, separately.

Daily alcohol use

Participants were asked daily if they (1) consumed alcohol the prior day and (2) whether they consumed alcohol before the IPV on days in which IPV occurred. The number of standard drinks consumed was also assessed. Days in which people drank alcohol before IPV, or drank alcohol but did not report IPV, were coded with a '1'; days on which people drank alcohol after, but not before, IPV, or did not drink alcohol, were coded with a '0'. This binary indicator of alcohol use was used in subsequent analyses. On IPV days, this variable was limited to the number of drinks consumed before IPV. When alcohol was consumed both before and after IPV, only the number of drinks before IPV was included. This method is consistent with our daily diary research on alcohol and IPV [5, 8–10].

Daily drug use

Participants were asked daily if they consumed any of the following non-prescribed drugs the prior day: cannabis, cocaine, hallucinogens, stimulants, opiates, sedatives/hypnotics, anxiolytics or other drugs not listed. Drug use was summed into a dummy-coded variable (drug use vs. no drug use) because of the low endorsement of drug use across the 60-days.

Data analytic plan

As a preliminary step, socio-demographics and baseline drinking behavior were summarized across participants and presented using descriptive statistics (means/SD, n/% as appropriate). Correlation analysis (with Spearman Rank Order correlations) was used to identify potential confounders from a candidate list identified from the literature a priori. A variable was considered a confounder if it met the statistical definition of confounding (significantly associated with the exposure and outcome of interest at a modest $P < 0.10$ level) and were adjusted for in corresponding longitudinal models. Candidate confounders included socio-demographic variables hypothesized to be related to both alcohol use and perpetration/victimization (e.g. sex, average relationship length, cohabitation status and a time-varying binary indicator of any co-occurring daily drug use).

Using a series of longitudinal random effects models with a logit link function (for IPV outcomes) and binomial outcome distribution (IPV outcomes), normal outcome (continuous count outcomes), we examined the associations between any drinking and IPV outcomes. Models followed a dyadic approach to analysis (data was clustered by pair and was specified to allow for indistinguishable dyads). Specifically, both victimization and perpetration outcomes for psychological violence, physical violence and sexual violence were examined in separate models. It should be noted that because of smaller cell sizes, we present models of sexual and physical IPV as exploratory. We modeled all IPV data as reported by each individual participant, consistent with prior research [13] and all enrolled participants were included in analyses.

Subsequently, we examined any victimization and any perpetration as outcomes in our model. Covariates included average relationship length, cohabitation status and co-occurring daily drug use. Models adjusted for time and standard errors were adjusted for clustering of partners within couples. Drinking status was a time-varying predictor and coded as both partners drinking, one partner drinking, and neither partner drinking (the latter considered the reference category). As a subsequent step, we considered total number of drinks consumed as an exposure variable to assess whether the pattern of findings was the same or different from the dichotomous drinking variable. Finally, psychological aggression was modeled as a continuous count using a similar analytic approach. Analysis of physical and sexual violence outcomes were restricted to only days when couples reported seeing each other; models of psychological perpetration/victimization were restricted to days when partners had contact (not necessarily in-person), consistent with prior research [9, 10].

As it has been well documented in the literature that IPV is under-reported (via self-report) [17–19], we ran a sensitivity analysis as follows. First, we created within-dyad scores for all IPV outcomes, which represent the maximum response within couple. Using these newly operationalized outcome variables, we then ran the models as described above.

All analyses were run in R (version 4.2.3) and significance level was set at 0.05 a priori. Packages used in the analysis included dyplr, tidyverse, ggplot2, lme4 and nlme. Predictor variables were not centered. Although missing data was limited, we used a likelihood-based approach to estimation allowing for consistent estimation of regression parameters without directly imputing missing outcomes. Analyses were not preregistered and, therefore, should be considered exploratory.

RESULTS

Descriptive statistics

Our sample was comprised of 181 couples. Compliance across the 60-days of daily surveys was 86.19%. The average time of survey completion was 7:04 AM. From the daily diary data, most surveys included face-to-face contact between dyad members (66.6%), and 95.8% of participants reporting seeing their partner face-to-face on the previous day at least once across the 60 days. On days couples did not have face-to-face contact, 71% of those days had phone contact between dyad members. Regarding alcohol use, 94.8% of the sample reported alcohol use across the 60-days, with 17.7% of surveys including alcohol use and a mean of 5.84 (SD = 3.71) number of drinks on a drinking day. The most commonly used drug was Marijuana (12.8% of days). A complete description of the sample is presented in Table 1.

Across the 60 days of daily diary surveys, 47.2% of participants reported at least one act of IPV victimization. This includes 42.5% who reported psychological victimization (537 events), 13% physical victimization (73 events) and 7.1% sexual victimization (52 events). Regarding perpetration, 51.7% reported at least one act of IPV

perpetration across the 60 days. This includes 45.3% who reported psychological perpetration (523 events), 13.6% physical perpetration (81 events) and 6.2% sexual perpetration (59 events).

Daily alcohol consumption and psychological perpetration and victimization

A full description of individual forms of IPV is presented in Table 2. Models indicated a significant association between any drinking and psychological perpetration. Specifically, across the study period, the odds of psychological perpetration were significantly higher if one partner was drinking on a given day (adjusted OR [aOR] = 1.74, 95% CI =1.12–2.71) compared to neither drinking. Further, the odds were significantly higher if both partners were drinking (aOR = 1.96, 95% CI = 1.30–2.96) compared to neither drinking. When comparing the effects on psychological perpetration of both partners drinking versus only one partner drinking, the effect suggested a significantly higher odds of IPV, aOR = 1.13, 95% CI =1.06–1.99. When considering other forms of perpetration, there were no further significant associations between drinking and physical or sexual perpetration, $P > 0.10$.

TABLE 2 Alcohol use and IPV outcomes, $N = 181$ couples.

	b	SE	*P*-value	aOR	95% CI
Perpetration outcomes					
Psychological					
Both drinking	0.67	0.21	0.001	1.96	1.20–2.96
One drinking	0.55	0.22	0.02	1.74	1.12–2.71
Physical					
Both drinking	0.63	0.41	0.13	1.87	0.84–4.17
One drinking	0.38	0.50	0.45	1.45	0.55–3.84
Sexual					
Both drinking	1.57	1.58	0.10	4.82	0.54–15.09
One drinking	−0.03	0.02	0.10	0.97	0.93–1.01
Victimization outcomes					
Psychological					
Both drinking	0.62	0.21	0.001	1.85	1.22–2.80
One drinking	0.22	0.06	0.01	1.25	1.05–1.61
Physical					
Both drinking	1.18	0.36	0.001	3.24	1.61–4.55
One drinking	0.44	0.04	0.02	1.55	1.05–4.11
Sexual					
Both drinking	1.29	1.40	0.10	3.64	0.67–7.94
One drinking	−0.92	1.03	0.37	0.40	0.05–3.00

Models also adjusted for study day, *t*, relationship length, cohabitation status, and concurrent drug use. Rows correspond to separate model outcomes. Reference category was neither partner drinking before IPV. Abbreviations: aOR, adjusted OR; b, unstandardized regression parameter; IPV, intimate partner violence.

Compared to neither partner drinking, those who reported one partner drinking had significantly higher odds of psychological victimization (aOR = 1.25, 95% CI = 1.05–1.61). The effect was more pronounced when both partners were drinking compared to neither (aOR = 1.85, 95% CI =1.22–2.80). Further, when compared to only one partner drinking, the odds of psychological victimization were also higher on days when both partners were drinking (aOR = 1.80, 95% CI = 1.01–3.22).

When modeling psychological IPV as a count outcome, results indicated significant associations between one partner drinking and increased risk for perpetration ($b = 0.24$, SE = 0.11, $p = 0.03$) relative to neither partner drinking. A similar pattern was detected for modeling psychological victimization ($b = 0.31$, SE = 0.18, $P = 0.05$).

Exploration of daily alcohol consumption and physical and sexual perpetration and victimization

Although analyses of physical and sexual IPV were exploratory, there is some indication that there was a higher odds of physical victimization if one partner was drinking (aOR = 1.55, 95% CI = 1.05–4.11) compared to neither partner drinking. In addition, there was a significant effect of both partners drinking (vs. neither) on physical victimization (aOR = 3.24, 95% CI =1.61–4.55) and significant differences in both partners drinking vs. only one (aOR = 2.09, 95% CI = 1.71–4.21). However, the data did not indicate any significant association between any alcohol consumption and sexual victimization, $P > 0.10$.

Daily alcohol consumption and any IPV

When considering any IPV perpetration/victimization as an outcome, adjusted models indicated significant associations between alcohol use and IPV outcomes. Specifically, the odds of any IPV perpetration were higher if one partner was drinking (aOR = 1.73, 95% CI = 1.10–2.72) compared to neither drinking. Similarly, if both partners were drinking, the odds of any IPV perpetration were significantly higher compared to neither drinking (aOR = 2.12, 95% CI = 1.40–3.21). There was a significant difference in the odds of any IPV perpetration when comparing days when both partners drank versus only one (aOR = 1.22, 95% CI = 1.08–2.18). The odds of any IPV victimization were significantly higher if one partner was drinking (aOR = 2.34, 95% CI = 1.79–4.37) and if both were drinking (aOR = 1.33, 95% CI = 1.04–1.63) compared to neither partner drinking. A full report of the model results is presented in Table 3.

Finally, with the exception of psychological aggression (count outcome), the pattern of findings was similar across models when considering total number of drinks consumed (rather than any drinking) as the exposure of interest. In a model of psychological aggression, there was no longer a significant effect of drinking when drinking was entered as a count variable (instead of a binary variable, $P > 0.51$).

TABLE 3 Alcohol use and any IPV outcomes, n = 181 couples.

	b	SE	*P*-value	aOR	95% CI
Perpetration outcomes					
Any					
Both drinking	0.75	0.21	<0.001	2.12	1.40–3.21
One drinking	0.55	0.23	0.02	1.73	1.10–2.72
Victimization outcomes					
Any					
Both drinking	0.29	0.02	0.01	1.33	1.04–1.63
One drinking	0.85	0.03	<0.001	2.34	1.79–4.37

Models also adjusted for study day, *t*, relationship length, cohabitation status, and concurrent drug use. Rows correspond to separate model outcomes. Reference category was neither partner drinking before IPV. Abbreviations: aOR = adjusted OR; b = unstandardized regression parameter; IPV, intimate partner violence.

Within-dyad IPV outcomes

Results indicated that when IPV outcomes were coded as the maximum score within-couple, associations between alcohol use and IPV perpetration and victimization remained consistent with models where individuals' own IPV scores were modeled. In all cases, significance and direction of effects remained the same as those presented above. The magnitude of effects did not significantly change ($P > 0.48$).

DISCUSSION

Findings from our 60-day daily diary study provided partial support for our hypotheses. Alcohol use by both partners increased risk for psychological IPV perpetration and victimization to a greater degree than when only one dyad member was drinking, or when neither dyad member was drinking. Prior daily diary research with only one young adult dyad member showed that alcohol proximally increased the risk for psychological perpetration [9, 10] and psychological and physical victimization [20], although Testa and Derrick [5] did not find alcohol use by both dyad members to increase risk for psychological or physical IPV. Given the differences between our sample and those of Testa and Derrick [5], it is possible that alcohol use by both dyad members plays a more prominent role in IPV episodes for young adult couples, the group where drinking rates are highest. Because this is one of the first studies to demonstrate support for dyadic-based theoretical models of alcohol-related IPV [4] among young adults, additional research is needed to replicate and extend this work.

Our study provides key findings to inform future research. For instance, although some have argued that alcohol is a contributing cause of IPV [6, 11], alcohol alone is not necessary or sufficient for IPV to occur [4]. That is, alcohol is theorized to interact with both distal (e.g. personality) and proximal (e.g. state negative affect) factors to increase risk for IPV [21], which has been supported empirically in prior daily diary studies with one dyad member [10, 22]. Extant cross-sectional studies with young adult dyads support interactions between dyad members' alcohol use and individual difference factors (e.g. depression, trait anger) in predicting IPV [23], although proximal data on these dyad-based associations is lacking. Knowledge of how individual difference factors proximally interact with alcohol use to predict IPV among couples will provide critical information to enhance IPV prevention and intervention efforts. Indeed, interventions for alcohol-related IPV among young adults are non-existent, despite preliminary evidence that couples-based interventions may be effective for reducing IPV [24] and evidence that couples-based approaches help to reduce alcohol use [25]. Because most IPV is conceptualized as a dyadic process that requires both partners [5], intervention approaches that include both partners are needed. Development of alcohol-related IPV interventions is sorely needed with our data providing evidence that reducing the drinking of both dyad members carries the potential to reduce IPV.

The current study has several limitations that should be considered. First, our sample was relatively homogenous with respect to race and ethnicity, limiting the generalizability to more diverse populations. Future research should attempt to recruit more diverse samples of young adults. Second, although daily diary studies help reduce retrospective recall bias, EMA studies further reduce recall bias and can further pinpoint the within-moment processes and within-day processes, which increase the risk for alcohol-related IPV. EMA would also allow for examination of IPV across individual days (e.g. does IPV victimization in the morning increase risk for IPV perpetration in the evening?) and has recently been used for alcohol-related IPV research in couples [13]. Third, findings related to physical and sexual IPV should be interpreted with caution because of the low number of physically and sexually aggressive acts reported during the 60-day diary period, which may have resulted in us being underpowered for these analyses. Recruitment of previously violent populations in future research may aid in the detection of physical and sexual IPV in future studies. Fourth, although recruitment was open to all couples, only nine same-gender couples participated, and most participants identified as heterosexual. Research demonstrates that sexual and gender minority young adults consume alcohol at similar rates [26] and have elevated levels of IPV [27] relative to cisgender, heterosexual populations. As such, additional research is needed that focuses on sexual and gender minority couples. Fifth, future research should examine proximal and distal moderators of the alcohol-related IPV associations (e.g. relationship harmony, negative affect), consistent with theoretical models of alcohol-related IPV [21].

In summary, findings provide the first empirical evidence of risk for IPV perpetration and victimization when one or both dyad members of young adult couples consume alcohol. In our heavy drinking sample, findings provide support for theoretical models of alcohol-related IPV [4] that hypothesize that risk for IPV is greatest when both partners are drinking (relative to one partner or neither partner), particularly for psychological IPV perpetration and victimization and physical IPV victimization. Although replication and extension of findings are needed, findings point toward couples-based alcohol interventions as a potentially promising avenue for reducing IPV.

AUTHOR CONTRIBUTIONS

Ryan C. Shorey: Conceptualization (lead); data curation (equal); funding acquisition (lead); investigation (lead); methodology (lead); project administration (lead); writing—original draft (lead). **Shira I. Dunsiger:** Conceptualization; data curation; formal analysis. **Gregory L. Stuart:** Conceptualization; data curation; funding acquisition; investigation; methodology; project administration; writing—original draft.

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DECLARATION OF INTERESTS

G.S. conducts psychoeducational treatment groups for patients at Cornerstone of Recovery for a maximum of 3.5 hours per week. G.S. does not do any study recruitment, is not informed which patients do or do not participate in research, and does not mention anything about research to the patients attending groups. Participants for the current study were not recruited from Cornerstone of Recovery.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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