Alcohol Expectancies and Evaluations of Aggression in Alcohol-Related Intimate-Partner Verbal and Physical Aggression

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ABSTRACT. Objective: Alcohol aggression expectancies have been found to be associated with increases in aggressive behavior. However, research has not consistently examined evaluations of such behavior. This is unfortunate as both expectancies and evaluations may play a role in whether such behavior will occur. Given this, the current study cross-sectionally examined the associations between alcohol aggression expectancies, evaluations of alcohol-related aggression, indicators of excessive drinking, and alcohol-related verbal and physical aggression. **Method:** The sample consisted of 280 married and cohabiting couples. These couples reported on excessive drinking indicators, alcohol expectancies and evaluations, and alcohol-related verbal and physical aggression during the past year. **Results:** Findings showed that verbal aggression was positively associated with indicators of excessive drinking among

females and with alcohol aggression expectancies for females who evaluated such aggression positively. For males, aggression expectancies and indicators of excessive drinking were positively associated with verbal aggression. For physical aggression, results showed that indicators of excessive drinking and aggression expectancies were associated with physical aggression for females. For males, aggression expectancies were positively associated and evaluations were negatively associated with physical aggression. **Conclusions:** These findings add to previous research on alcohol aggression expectancies in close relationships and emphasize the importance of considering evaluations of alcohol-related behavior and how they may play a role in intimate-partner violence and aggression. (*J. Stud. Alcohol Drugs*, 75, 744–752, 2014)

ALTHOUGH RESEARCH HAS SHOWN that excessive alcohol use is associated with intimate-partner aggression perpetration (e.g., Quigley and Leonard, 1999), not all who consume alcohol will become aggressive. There are a number of factors that may influence whether alcohol will result in aggression including the pharmacological effects of alcohol on cognitive processes that give rise to aggression (see Bushman and Cooper, 1990; Ito et al., 1996, for reviews) and differences among individuals in the social expectancies relating to how one will behave when intoxicated (Critchlow, 1986; Jones et al., 2001; Leigh, 1989). There is great variability in the expectations individuals hold about alcohol's effects (e.g., Brown et al., 1980, 1985, 1987), and some individuals hold the expectation that alcohol will make them more aggressive. Holding alcohol expectancies for aggression may, in some situations, actually increase the likelihood that individuals will behave aggressively when drinking (Quigley and Leonard, 2006). Indeed, studies have shown that alcohol aggression expectancies are positively associated

with engaging in alcohol-related aggressive behaviors (e.g., Barnwell et al., 2006).

In addition to an individual's simple beliefs that certain behaviors will occur when he or she is intoxicated, researchers have demonstrated the importance of considering one's evaluations of such behaviors (e.g., Fromme et al., 1986; Leigh, 1987, 1989). Theories on attitudes and behavior, such as the Theory of Reasoned Action (Fishbein and Ajzen, 1975), propose that the value individuals attach to the outcomes of certain behaviors act in combination with expectations to influence overall intentions of engaging in those behaviors. Furthermore, utility theories (Edwards, 1954) posit that behavior is a function of two characteristics: the probability of its occurrence and its desirability. The likelihood of a behavior occurring depends on whether the pleasant consequences outweigh the unpleasant consequences. Thus, in relation to certain drinking behaviors, the likelihood of consuming alcohol will be based on not only the extent to which one perceives a certain outcome will occur but also how desirable that outcome is (Fromme et al., 1993; Leigh, 1989). Although some outcomes of alcohol use may seem inherently negative (e.g., increased dizziness) or positive (e.g., decreased tension), research has shown that this is not necessarily the case. In developing the Comprehensive Effects of Alcohol (CEOA) questionnaire, Fromme et al. (1993) found that individuals evaluated risk-taking and aggressive behaviors when intoxicated both positively and negatively.

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The authors noted that this finding may be because of the ambivalence individuals may feel about engaging in such behaviors: Although some individuals may view risk taking and aggression as negative, they may also view these behaviors positively in some circumstances, especially if they can blame their behavior on being intoxicated (cf. Marlatt and Rohsenow, 1980).

Research has shown that the subjective evaluations of drinking outcomes may add to the prediction of drinking behaviors (Leigh, 1987, 1989) and that such evaluations operate independently of alcohol expectancies. For example, Leigh (1987) found that evaluations were significantly associated with the amount of alcohol consumed per occasion, frequency of intoxication, and frequency of consuming eight or more drinks after controlling for the expectancies held by the individuals. In establishing the validity of the CEOA questionnaire, Fromme et al. (1993) found that evaluating positive outcomes of consuming alcohol (e.g., increased sociability and sexuality, and decreased tension) more favorably significantly predicted the quantity of alcohol typically consumed, the frequency of alcohol consumption, and overall weekly alcohol consumption more than simply endorsing such expectancies (i.e., believing that consuming alcohol would result in increased sociability and sexuality, and decreased tension). In a study examining self-generated expectancies and evaluations, Wood et al. (1996) found that both likelihood (i.e., expectancies) and positive value ratings were associated with heavy alcohol use. Overall, the research has supported the idea that evaluations of intoxicated behavior may be important in predicting different aspects of alcohol consumption and are important to consider in addition to expectancies.

Research on alcohol aggression expectancies and the occurrence of intoxicated aggression has not routinely considered the subjective evaluations individuals have of this behavior, particularly in the context of close relationships. This is unfortunate inasmuch as such evaluations may help to explain some of the inconsistencies that have been found linking alcohol expectancies to intoxicated aggression. For example, Rohsenow and Bachorowski (1984) examined expectancies and the occurrence of verbal aggression in three laboratory studies and found that in only one of three studies was the expectancy that alcohol increases aggression positively related to more aggressive responding among those expecting to receive alcohol. In addition, although Chermack and Taylor (1995) found that expectancies for aggression were associated with aggression while under the influence of alcohol, these findings were obtained only when examining the most aggressive response available and only under high provocation when the participants had consumed alcohol. Thus, it is not entirely clear under what conditions alcohol expectancies will be associated with alcohol-related aggression.

Non-experimental research that has examined the role of alcohol expectancies in intimate-partner aggression has

also found equivocal results. In a longitudinal examination of newlyweds over a 1-year period, Quigley and Leonard (1999) failed to find a relationship between husband alcohol aggression expectancies at the time of marriage and husband alcohol-related aggression in the first year. Alcohol aggression expectancies were predictive of severe husband-to-wife aggression, but this association was only significant in high-conflict marriages. In another sample of newlyweds, Kachadourian et al. (2012) did find male alcohol aggression expectancies in the first year of marriage to predict alcohol-related aggression in the next 3 years. However, these expectancies did not interact with drinking to predict aggression.

One key limitation across these studies is the absence of information regarding the positive versus negative value the participants may have held regarding aggressive behavior. In one of the only studies to focus on evaluations with respect to aggression, Fossos et al. (2007) examined the association between alcohol aggression expectancies, evaluations, problematic alcohol use, and intimate-partner violence (IPV) in a sample of college dating couples. Alcohol aggression expectancies interacted with problematic alcohol use and IPV; however, results were opposite to what was predicted: problematic alcohol use and IPV were positively associated with each other for those who were less likely to believe that consuming alcohol would lead them to become aggressive. For those who were more likely to endorse such expectancies, there was no association between alcohol use and IPV. They also examined the effects of expectancy evaluations separately from the expectancy itself and found an interaction between gender, alcohol problems, and alcohol expectancy evaluations. Among males, problematic alcohol use was positively associated with IPV for those who positively evaluated becoming aggressive when drinking, but it was not related to IPV among those who did not evaluate this potential effect of drinking in a positive manner. For women, IPV was positively associated with alcohol problems and with a positive evaluation of aggression; however, the relationship between IPV and alcohol problems did not differ based on expectancy evaluations.

The study conducted by Fossos et al. (2007) adds to the literature on alcohol aggression expectancies by underscoring the role played by evaluations. Furthermore, this study examines these variables in the context of college dating relationships, which is important given the positive association between problem drinking and IPV that is frequently observed among young adults (O'Leary and Woodin, 2005). However, the extent to which these findings would generalize to more long-term stable relationships is unknown.

The current study sought to examine the relationship between alcohol expectancies for aggression, evaluations of such behavior, and the perpetration of alcohol-related intimate-partner aggression using a sample of married and cohabiting couples. We examined the independent and interactive effects of alcohol aggression expectancies,

evaluations, and indicators of excessive drinking on verbal and physical aggression. We hypothesized that each of the predictors would be uniquely associated with alcohol-related verbal and physical aggression. We also hypothesized that both expectancy and evaluation would interact with indicators of excessive drinking such that aggression would be more likely to occur for those who endorse indicators of excessive drinking and who believe that they would engage in aggressive behavior if intoxicated, as well as for those who endorse indicators of excessive drinking and who evaluated aggressive behavior when intoxicated more favorably. The current study improves on previous research by focusing on intimate-partner aggression that occurs specifically when one is under the influence of alcohol. Furthermore, this study examines intimate-partner aggression more broadly by considering both verbal and physical aggression.

Method

Participants

The sample consisted of 280 married or cohabitating couples participating in a longitudinal study of heavy episodic drinking (HED) and couple violence. Because of the small amount of random missing data when testing the hypotheses using regression analyses, sample sizes varied from 271 to 277. A list of residents in Erie County, NY—which was likely to contain heads of household between the ages of 18 and 45 years—was developed by Survey Sampling International (Shelton, CT). From this purchased list, we mailed 21,000 screening questionnaires to households accompanied by a letter explaining the purpose of the study. A stamped envelope was provided to return the questionnaire. We received 5,463 responses for a 26% response rate (226, or about 1%, were returned because of an incorrect address). Of the 5,463 responses, 10.7% were minorities, with 7.6% being African American, similar to census data for married couples in Erie County (i.e., 90% White, 6% African American; U.S. Census Bureau, 2010).

Responses from the mailed questionnaire were used to assess study eligibility (between ages 18 and 45 years and married or living together for at least 1 year) and to determine husband and wife HED status. Because one aim of the study involved executive cognitive functioning, we excluded couples if either member had a current medical condition that would impair executive cognitive functioning or if either reported having had a seizure, epilepsy, or a 10-minute loss of consciousness as the result of an accident or a head injury. To ensure adequate numbers of heavy drinking husbands and wives, we used disproportionate sampling to recruit couples in which either member of the couple engaged in regular HED. HED was defined as engaging in at least weekly consumption of five or more drinks at one time (four drinks for women) or becoming intoxicated at least weekly.

Our goal was to recruit 75 couples in each of four groups: (a) husband and wife both engaged in HED (Both), (b) only the husband engaged in HED (Husband Only), (c) only the wife engaged in HED (Wife Only), and (d) neither engaged in HED (Control).

Of the 5,463 responses, 3,477 met eligibility criteria. Of those meeting eligibility criteria, three quarters (75%) of the couples were classified as Control. The rates for Husband Only, Wife Only, and Both were 12.3%, 4.1%, and 8.5%, respectively. We also asked whether the couple was interested in participating in one of our ongoing studies, was interested in hearing more about the study, or was not at all interested. Across the four groups, 68% ($n = 2,347$) were interested in participating or hearing more about the studies. The proportion of those who were interested was significantly higher for Husband Only (72%), Wife Only (74%), and Both (76%) than for Control (67%), $\chi^2(3) = 16.32, p < .01$. We sampled from the four groups at different rates to achieve the goal of 75 couples in each of the four groups. This disproportionate sampling was by design and has implications for our data analyses. We were able to recruit 80 Control, 80 Husband Only, 79 Both, and 41 Wife Only couples. This was a 43% success rate from those who we attempted to recruit, a rate that did not differ across the four groups, $\chi^2(3) = 2.78, p > .40$.

The average age of the final sample was similar between husbands and wives (36.9 years, $SD = 5.8$; 35.4 years, $SD = 5.9$, respectively). The majority of men and women in the sample were White (91% each), highly educated (58% of husbands and 67% of wives had completed college education compared with 39% for the county), and most were employed at least part time (91% of husbands and 80% of wives). The majority of couples were married (87%) as opposed to cohabiting, for an average of 9.84 years ($SD = 5.41$). Cohabitors had been living together for an average of 5.38 years ($SD = 6.13$). Approximately 79% had children; 15% had one child, 38% had two, 19% had three, and 7.5% had four or more. Median income for wives was in the U.S. \$20,000–\$29,999 range, and median income for husbands was in the \$40,000–\$54,999 range, making the median household income somewhat higher than that for the county (\$52,000).

Procedure

Participants completed a series of questionnaires sent and returned through the mail and subsequently attended a laboratory assessment. Both members of the couple provided written informed consent to participate in the research at the time of completing the mail assessment and again at the time of the laboratory assessment. Mailed questionnaires, sent separately to husband and wife, consisted of background information, attitudes and beliefs about alcohol, and personality measures. Participants were instructed to complete questionnaires independently and not to discuss them until

both questionnaires had been returned. After return of the questionnaires, couples were scheduled for an in-person assessment where they independently completed computerized questionnaires that addressed relationship issues and alcohol and drug use. Measures relevant to the present analyses are described below.

Measures

Excessive alcohol use indicators. The Alcohol Dependence Scale (ADS; Skinner and Allen, 1982; Skinner and Horn, 1984) was used to assess indicators of excessive alcohol use. The ADS is a 25-item measure that encompasses four key aspects of alcohol dependence syndrome: loss of behavioral control (e.g., blackouts, gulping drinks), psychoperceptual withdrawal symptoms (e.g., hallucinations), psychophysical withdrawal symptoms (e.g., hangovers, delirium tremens), and obsessive drinking style (e.g., sneaks drinks, always has a bottle at hand). According to Skinner and Allen (1982), a score of 1–13 represents a low level of alcohol dependence (first quartile), 14–21 an intermediate level (second quartile), 22–30 a substantial level (third quartile), and 31–47 a severe level (fourth quartile). In the current sample, 97% of male participants and 98% of female participants scored in the first quartile. In previous articles, we have suggested that higher scores within this range reflect a pattern of excessive drinking marked by blackouts, passing out, and psychophysiological indicants of hangovers (i.e., physically sick as a result of drinking, feeling overly hot and sweaty, fuzzy or unclear thinking, heart beating rapidly). For both husbands and wives, responses to each of the questions on the ADS were summed to provide an overall total score.

Alcohol expectancies and evaluations. Alcohol aggression expectancies and evaluations were assessed using the Risk and Aggression subscale of the CEOA (Fromme et al., 1993). This scale consists of five items that assess the extent to which individuals believe they would take risks and become aggressive if under the influence of alcohol (e.g., “I would take risks,” “I would act aggressively”). Individuals are asked to rate the extent to which they agree with each of the items using a 4-point scale ranging from 1 (*disagree*) to 4 (*agree*). Afterward, participants are asked to evaluate each effect that may result from drinking alcohol using a 5-point scale ranging from 1 (*bad*) to 5 (*good*). Cronbach’s α for this subscale in the current study was .85 and .80 for men and women, respectively.

Alcohol-related verbal and physical aggression. Husbands and wives reported on the past-year frequency of saying mean or critical things to their spouse while drinking; 14% of men and 12% of women engaged in alcohol-related verbal aggression in the past year. They were also asked about the frequency of hitting or starting a physical fight with a spouse while drinking. These items had response options of *never, once, two times, three times, and four or more times*.

Because the base rate for alcohol-related physical aggression was low over the past year (3% of men and women engaged in alcohol-related physical aggression in the past year), responses to this question were dichotomized to reflect either the presence or absence of physical aggression.

Analytic strategy

Multiple regression was used to test the hypotheses for alcohol-related verbal aggression. Given that alcohol-related physical aggression was scored dichotomously, logistic regression was used to test the hypotheses for physical aggression perpetration. Regressions were computed separately for husbands and wives. We investigated the main effects of excessive drinking indicators, alcohol expectancies, and expectancy evaluations as well as all two-way interactions between these variables to determine if expectancy and evaluation differentially moderated the relationship between excessive drinking indicators and alcohol-related aggression. Because our analyses used a continuous measure of excessive drinking indicators rather than specific groups, we took into account the disproportionate sampling of the couple drinking groups by weighting the different groups to reflect their prevalence among the eligible respondents to our mailed survey. This use of weights is common when simple random sampling has not been used and minimizes the potential of bias (Korn and Graubard, 1995; Pfeffermann, 1993).

Results

Preliminary analyses were first conducted to determine if any demographic variables were associated with the outcome variables. Multiple regression and analyses of variance examined the extent to which participants’ age, ethnicity, education level, and income were associated with the occurrence of alcohol-related verbal aggression over the previous year. Logistic regression examined the extent to which the same demographic variables were associated with the occurrence/non-occurrence of alcohol-related physical aggression over the previous year. Ethnic minority women indicated higher levels of verbal aggression compared with nonminority women. No other demographic variables were found to be associated with the perpetration of alcohol-related verbal aggression. Income and education level were associated with the perpetration of alcohol-related physical aggression for both husbands and wives. As such, these variables were included in the analyses as covariates when analyzing both verbal and physical aggression.

Bivariate correlations, means, and standard deviations of all study variables are presented in Table 1. For husbands, endorsement of alcohol aggression expectancies was associated with more positive evaluations of intoxicated aggression, more indicators of excessive drinking, and alcohol-related verbal and physical aggression. Positive

TABLE 1. Zero-order correlations, means, and standard deviations of study variables for husbands (above the diagonal) and wives (below the diagonal)

Variable	1.	2.	3.	4.	5.	Husbands <i>M (SD)</i>	Wives <i>M (SD)</i>
1. Expectancies	—	.35**	.16**	.24**	.23**	2.31 (0.74)	2.11 (0.71)
2. Evaluations	.36**	—	.16**	.07	-.13*	1.87 (0.66)	1.79 (0.61)
3. Excessive alcohol use	.24**	.10	—	.53**	.17**	2.45 (3.63)	1.61 (2.98)
4. Verbal aggression	.23**	.13*	.49**	—	.46**	1.64 (1.15)	1.59 (1.10)
5. Physical aggression	.18**	.11	.37**	.56**	—	1.14 (0.60)	1.15 (0.48)

Note: Means and standard deviations are based on weighted scores.

* $p < .05$; ** $p < .01$.

evaluations of intoxicated aggression were also associated with more indicators of excessive drinking but were negatively associated with alcohol-related physical aggression. For wives, endorsement of alcohol aggression expectancies was associated with more positive evaluations of intoxicated aggression, more indicators of excessive drinking, and both alcohol-related verbal and physical aggression. Positive evaluations of intoxicated aggression were also associated with alcohol-related verbal aggression.

Verbal aggression

For wives, multiple regression analyses showed a significant main effect for excessive drinking indicators in predicting alcohol-related verbal aggression (Table 2). Specifically, wives who endorsed more indicators of excessive drinking were more likely to perpetrate alcohol-related verbal aggression ($B = 0.17, p < .01$). Results also showed a significant two-way interaction between evaluations and expectancies ($p < .05$). Post hoc probing showed a positive association between alcohol aggression expectancies and verbal aggression

perpetration for wives who held more favorable evaluations of engaging in aggressive behavior when under the influence of alcohol ($B = 0.30, p < .05$). However, there was no association between alcohol aggression expectancies and verbal aggression for those who held less favorable evaluations of engaging in aggressive behavior ($B = 0.07, p = \text{n.s.}$).

For husbands, multiple regression analyses showed significant main effects for alcohol aggression expectancies and excessive drinking indicators in predicting alcohol-related verbal aggression (Table 2). Specifically, husbands who endorsed alcohol aggression expectancies were more likely to perpetrate alcohol-related verbal aggression toward their partners ($B = 0.30, p < .01$). Husbands who endorsed more indicators of excessive drinking were also more likely to perpetrate verbal aggression ($B = 0.16, p < .01$). None of the hypothesized two-way interactions was significant for husbands.

Physical aggression

For wives, logistic regression analyses showed a significant main effect for excessive drinking indicators (Table 3).

TABLE 2. Hierarchical multiple regression analyses predicting alcohol-related verbal aggression from alcohol expectancies, evaluations, and excessive drinking for husbands and wives

Predictor	<i>B</i>	<i>R</i> ²	ΔR^2	ΔF	<i>df</i>
Wives					
Step 1		.02	.02	5.64*	1, 269
Ethnicity	2.39*				
Step 2		.25	.23	27.32**	3, 266
Expectancies	0.15				
Evaluations	0.09				
Excessive drinking	0.17**				
Step 3		.28	.03	3.43*	3, 263
Exp. $\times$ Eval.	0.27*				
Exp. $\times$ Excessive Drinking	-0.05				
Eval. $\times$ Excessive Drinking	-0.07				
Husbands					
Step 1		.31	.31	40.20**	3, 272
Expectancies	0.30**				
Evaluations	-0.14				
Excessive drinking	0.16**				
Step 2		.32	.02	2.22	3, 269
Exp. $\times$ Eval.	-0.19				
Exp. $\times$ Excessive Drinking	0.04				
Eval. $\times$ Excessive Drinking	0.02				

Notes: Exp. = alcohol aggression expectancies; eval. = alcohol evaluations.

* $p < .05$; ** $p < .01$.

TABLE 3. Logistic regression analyses predicting alcohol-related physical aggression from alcohol expectancies, evaluations, and excessive drinking for husbands and wives

Predictor	<i>B</i>	<i>SE B</i>	OR	[95% CI]
Wives				
Step 1				
Income	-0.10	0.14	0.91	[0.69, 1.19]
Education	-0.46	0.13	0.63**	[0.49, 0.80]
Step 2				
Expectancies	0.54	0.31	1.71	[0.94, 3.12]
Evaluations	0.33	0.31	1.39	[0.76, 2.54]
Excessive drinking	0.17	0.06	1.18*	[1.05, 1.32]
Step 3				
Exp. × Eval.	-0.58	0.43	0.56	[0.24, 1.31]
Exp. × Excessive Drinking	-0.06	0.08	0.94	[0.80, 1.11]
Eval. × Excessive Drinking	-0.18	0.12	0.84	[0.67, 1.05]
Husbands				
Step 1				
Income	-0.60	0.23	0.55**	[0.35, 0.85]
Education	-0.37	0.18	0.69*	[0.49, 0.99]
Step 2				
Expectancies	1.79	0.70	6.01**	[1.51, 23.83]
Evaluations	-2.25	0.99	0.11*	[0.02, 0.74]
Excessive drinking	0.11	0.08	1.12	[0.96, 1.31]
Step 3				
Exp. × Eval.	-1.17	1.42	0.31	[0.02, 5.05]
Exp. × Excessive Drinking	0.08	0.08	1.08	[0.92, 1.26]
Eval. × Excessive Drinking	0.09	0.22	1.09	[0.72, 1.67]

Notes: OR = odds ratio; CI = 95% confidence interval; exp. = alcohol aggression expectancies; eval. = alcohol evaluations.

* $p < .05$; ** $p < .01$.

Specifically, wives who endorsed more excessive drinking indicators were more likely to perpetrate physical aggression toward their partners when under the influence of alcohol (odds ratio [OR] = 1.18, 95% CI [1.05, 1.32]). Results also showed a positive association between alcohol aggression expectancies and physical aggression (OR = 1.71, 95% CI [0.94, 3.12]), although this effect was only marginally significant ($p = .08$). None of the hypothesized two-way interactions was significant.

For husbands, logistic regression analyses showed significant main effects for alcohol aggression evaluations and alcohol aggression expectancies in predicting alcohol-related physical aggression (OR = 0.11, 95% CI [0.02, 0.74], for alcohol aggression evaluations; OR = 6.01, 95% CI [1.51, 23.83], for alcohol aggression expectancies; Table 3). Men who did not positively evaluate the relationship between alcohol and aggression were more likely to be aggressive when drinking, and those who expected a relationship between alcohol and aggression were also more likely to be aggressive when drinking. None of the hypothesized two-way interactions was significant.

Exploratory analyses

We were not able to investigate the three-way interaction between expectancies, evaluations, and excessive drinking indicators in predicting verbal and physical aggression because of small sample sizes within cells when adjusting

for the weighted data. However, because theoretically one could predict a three-way interaction in which endorsement of more excessive drinking indicators, high expectancy, and high evaluation should be related to more aggression than other combinations of those variables, we ran a series of planned comparisons with the unweighted data to determine if we should investigate this potential three-way interaction. When creating groups based on the top and lower thirds of each of the three independent variables in order to test for the strongest effects, no wives fell into the category where all three variables (drinking, expectancy, and evaluation) were high. Among men in the conditions in which all were high, all were low, ADS was high and the other two were low, and ADS was low and the other two were high, sample sizes were large enough to examine mean differences. Results showed that when husbands were in the top third on all three variables, they reported more alcohol-related verbal and physical aggression than husbands low on all the variables. In addition, those husbands high on all three variables reported more verbal aggression than those who were low on drinking but high on the other two variables.

Discussion

The relationship between alcohol use and IPV has been observed consistently (Foran and O'Leary, 2008; Kaufman Kantor and Straus, 1990); however, how alcohol aggression expectancies may influence that relationship is still an open

question. Although previous research has found expectancies to be related both cross-sectionally (Leonard and Senchak, 1993) and longitudinally (Kachadourian et al., 2012) to husband to wife IPV, other studies have not demonstrated any relationship (Quigley and Leonard, 1999). Possible explanations for the lack of consistent findings relating alcohol aggression expectancies to IPV include the simplistic way in which expectancies have been examined in the past (see Quigley and Leonard, 2006). Early research examined expectancies as simple attitudes or beliefs (Rohsenow, 1983), whereas current research views them as more complex and multifaceted constructs involving both implicit cognitions as well as value-related components (Bartholow and Heinz, 2006; Friedman et al., 2007). Fromme and colleagues (1993) have distinguished between the expectancy and evaluative aspects of beliefs about alcohol; however, most research using their measure has tended to create a composite score composed of both aspects rather than examining them separately.

The only study to examine expectancy and evaluative aspects as separate predictors of IPV (Fossos et al., 2007) before this study found each to interact with alcohol use differently to predict violence. In that study, the sample consisted of younger dating couples. Furthermore, the aggression examined did not distinguish between verbal and physical aggression and did not involve alcohol. Similarly, in our analysis, both evaluations and expectancies proved to be important predictors of alcohol-related IPV, but their independent and interactive effects varied across husbands and wives and the type of violence perpetrated. These results, although somewhat inconsistent with Fossos et al. (2007), add more specificity to our understanding of the mechanisms involved in alcohol-related IPV.

The present analysis examined alcohol expectancies and the evaluations of those expectancies as separate predictors of verbal and physical alcohol-related aggression among a generally older sample of couples than that used by Fossos et al. (2007). Alcohol-related verbal aggression was predicted by husband's drinking and by his expectancies: the more a husband expected alcohol to lead to aggression and the more indicators of excessive alcohol use he endorsed, the more alcohol-related verbal aggression he engaged in. Alcohol-related verbal aggression by the female member of the couple was predicted by drinking and by the interaction between expectancies and evaluations: alcohol expectancies were related to women's alcohol-related verbal aggression when it was positively evaluated but not when it was negatively evaluated. These findings are consistent with expectancy value theories, such as the Theory of Reasoned Action (Fishbein and Ajzen, 1975), and with how Fromme and colleagues have conceptualized alcohol expectancy theory.

However, the relationships between alcohol expectancies, evaluations, and alcohol-related physical aggression showed slightly different patterns. For wives, indicators of excessive drinking and expectancies showed the expected

relationships with alcohol-related IPV. However, husband alcohol-related physical aggression was predicted by a more complex pattern. Alcohol-related aggression was most likely among those who negatively evaluated the relationship between alcohol and aggression, and it was also more likely among those who believed that alcohol made them aggressive. Although Quigley and Leonard (1999) found no longitudinal relationship between alcohol expectancies and alcohol-related aggression in a sample of newlyweds, they did find a negative relationship between alcohol expectancies and severe violence when examining beliefs about the effect of alcohol on other people's aggression. As described earlier, the study by Fossos et al. (2007) that explicitly examined both the expectancy and the evaluative aspects of alcohol expectancy in a sample of dating college students found that there was a positive relationship between IPV and alcohol use for those who positively evaluated alcohol-related aggression and that IPV and alcohol use were only related among those who did not believe they became aggressive when drinking.

Understanding these findings necessitates a better understanding of how alcohol expectancies may motivate behavior that is engaged in while drinking, particularly anti-normative behavior. It is possible that the more one expects an anti-normative behavior while intoxicated, the more on guard one is against it (see Testa et al., 2006). Those who believe that alcohol causes aggression are more likely to be in favor of external controls on alcohol consumption (Room et al., 1995), hence to evaluate it negatively. This may be particularly true for men who have engaged in alcohol-related physical aggression, given the increased severity of the consequences of engaging in such aggression. It may also be that men with a history of perpetrating alcohol-related violence (however infrequent) may develop an illusory correlation that there is a strong relationship between alcohol use and violence but may still evaluate it as a negative event. This suggests an important motivational aspect to expectancies that may better help explain how alcohol-related expectancies can influence non-consumption-related behavior when drinking.

Placebos have been found to have stronger effects when there is a motivation to achieve the expected outcome (Geers et al., 2005), and certain situations may cue alcohol-related expectancies regarding aggression (Bartholow and Heinz, 2006; Subra et al., 2010), leading to the activation of either conscious or nonconscious motivations to engage in aggressive behavior. Motivations have been shown to be more proximal predictors of alcohol-related behavior than expectancies (Kuntsche et al., 2010). Thus, although some individuals may not believe that they generally become aggressive when drinking, they may learn to value drinking as a way to help them to become aggressive when necessary and subsequently help them achieve some valued outcome (such as an ending to conflict with or a capitulation by a romantic partner).

There are a few limitations to the present analysis. First, the analysis is cross-sectional in nature; therefore, causality cannot be inferred. Second, the dependent measures were only single items assessing the number of alcohol-related fights with the partner. This may have in part accounted for the low base rates of physical aggression in the current study, prompting our use of logistic aggression as a result of dichotomizing this variable, and the findings observed in relation to this particular type of alcohol-related aggression. A more detailed measure, such as the Conflict Tactics Scale (Straus et al., 1996), would allow for a more thorough assessment of the different acts of verbal and physical aggression engaged in and whether alcohol was used for any item endorsed. However, the findings from the current study are similar to those of other research on alcohol and intimate-partner aggression that is longitudinal in nature (Kachadourian et al., 2012; Quigley and Leonard, 1999) and with the findings from years of experimental and non-experimental research on alcohol and aggression (Foran and O'Leary, 2008; Giancola and Corman, 2007). The findings are also consistent with studies that have used more detailed measures to assess for intimate-partner verbal and physical aggression (i.e., the Conflict Tactics Scale: Fossos et al., 2007; Quigley and Leonard, 1999). Third, individuals who had any current medical conditions that would impair executive cognitive functioning were ineligible to participate. As such, the findings from the current study may not generalize to individuals who have any such medical conditions, as well as those who are unwilling to complete a mail survey and attend a follow-up in-person session.

Taken together, the present findings, along with other recent findings (Fossos et al., 2007; Kachadourian et al., 2012), suggest that alcohol expectancies play an important role in the relationship between excessive drinking and IPV. It is important, however, to also understand how individuals value alcohol's effects in order to understand how expectancies may promote aggressive behavior when drinking. Future research should focus on this dimension. Future research also should use longitudinal and experimental research designs involving alcohol challenge procedures to better understand causal relationships among expectancies, evaluations, excessive drinking, and intimate-partner aggression. Doing so will provide a better understanding of how cognitions affect the occurrence of different behaviors engaged in when intoxicated.

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