HHS Public Access

Author manuscript

Aggress Violent Behav. Author manuscript; available in PMC 2021 May 26.

Published in final edited form as:

Aggress Violent Behav. 2019 ; 40: 39–43. doi:10.1016/j.avb.2018.03.001.

Provocation and target gender as moderators of the relationship between acute alcohol use and female perpetrated aggression☆☆

Cory A. Crane[a,*], **Robert C. Schlauch**[b], **Maria Testa**[c], **Caroline J. Easton**[a]

[a]Rochester Institute of Technology, Department of Biomedical Sciences, 180 Lomb Memorial Dr, Rochester, NY 14623, United States

[b]University of South Florida, Department of Psychology, 4202 East Fowler Ave, Tampa, FL 33620, United States

[c]Research Institute on Addictions, University at Buffalo, 1021 Main St., Buffalo, NY 14203, United States

Abstract

Acute alcohol use appears to exert a small but significant effect on female perpetrated aggression in the laboratory but there has been no effort to evaluate comprehensively the situational moderators of this relationship. This preliminary review was intended to explore the moderating effects of provocation and target gender on alcohol-related aggression among females in this understudied area of research. Moderator analyses were conducted on 14 studies. Despite limitations imposed by the sparsity of laboratory based research on alcohol-related aggression among females, initial results suggest that alcohol may exert stronger effects over female aggression following high ($d = 0.25$, $k = 8$, $p < .01$, 95% CI = 0.10–0.40) rather than low ($d = -0.07$, $k = 6$, $p = .52$, 95% CI = −0.29–0.15) provocation and when targets of aggression are female ($d = 0.19$, $k = 9$, $p = .01$, 95% CI = 0.04–0.34) rather than male ($d = -0.06$, $k = 4$, $p = .61$, 95% CI = −0.30–0.18). Results offer initial insight into situational risk factors pertinent to research and treatment of alcohol-related aggression among females while serving as an impetus for future research in this critical, neglected area of study.

Keywords

Female; Alcohol; Aggression; Provocation; Target gender

☆☆The current review presents follow-up analyses to evaluate the moderators of the overall alcohol-aggression relationship presented in Crane, C., Licata, M., Schlauch, R., Testa, M., & Easton, C. (2017). The proximal effects of acute alcohol use on female aggression: A meta-analytic review of the experimental literature. *Psychology of Addictive Behaviors, 31, 21–26*. Findings of the review from which the current data were drawn have appeared in: Crane, C., Licata, M., & Schlauch, R. (2016, July). *The effects of alcohol on female responding during laboratory aggression paradigms*. The annual meeting of the Research Society on Alcoholism, New Orleans, LA.

*Corresponding author at: Department of Biomedical Sciences, 180 Lomb Memorial Dr, Rochester, NY 14623, United States. cacihst@rit.edu (C.A. Crane).

1. Introduction

Females perpetrate acts of peer aggression, stalking, sexual assault, robbery, intimate partner violence, and homicide with rates of female perpetration surpassing males within some domains (Campbell, Glass, Sharps, Laughon, & Bloom, 2007; Desmarais, Reeves, Nicholls, Telford, & Fiebert, 2012; Fisher & Pina, 2013; Harmon, Rosner, & Owens, 1998; Rennison & Melde, 2014). Female perpetrated aggression results in physical and psychological injuries similar to those observed among victims of male-perpetrated aggression (e.g., Archer, 2000). Females who perpetrate aggression are themselves at greater risk for more frequent and severe injury (e.g., Archer, 2000). Results of a recent meta-analytic review revealed a small but significant effect of experimentally manipulated alcohol use on female perpetrated aggression ($d = 0.17$, Crane, Licata, Schlauch, Testa, & Easton, 2017), suggesting that the proximal psychopharmacological properties of alcohol briefly disinhibit aggressive impulses among some female participants. While the composite effect of alcohol on aggression appears smaller among females than males using both self-report (Foran & O'Leary, 2008) and experimental (Crane, Godleski, Przybyla, Schlauch, & Testa, 2016) data, alcohol appears to represent a risk factor for aggressive behavioral responding across genders. Leonard (2005) stated that, "Alcohol is neither a necessary nor sufficient cause of violence." Exploration of moderating factors can help enhance our understanding of the individual and situational risk factors that contribute to instances of alcohol-related aggression. The effects of acute alcohol intoxication among males are partially contingent upon contextual factors that influence the frequency and severity of aggression (e.g., Ito, Miller, & Pollock, 1996). Due to limited research, however, our understanding of the individual and situational factors that may influence the relationship between acute alcohol use and female aggression is far less complete.

1.1. Provocation

As reviewed by Anderson and Bushman (2002), provocation is among the most significant proximal predictors of aggression. The effects of alcohol on male perpetrated aggression are strongest following high levels of provocation, particularly when assessed by a competitive reaction time paradigm (Exum, 2006). Only a small subset of the research devoted to studying alcohol-related aggression has focused on female samples. Females appear to perpetrate less general physical aggression than males, though provocation has been shown to diminish gender differences in aggressive responding (Berkowitz, 1993; Bettencourt, Talley, Benjamin, & Valentine, 2006). Complimentary evidence suggests that for females, provocation may be a stronger risk factor for aggression than alcohol (Giancola & Zeichner, 1995). The effect of provocation on alcohol-related aggression may be due, in part, to alcohol myopia, the tendency of alcohol to restrict attention to the most salient environmental stimuli such that intoxicated individuals are more likely to attribute hostile intent to ambiguously threatening stimuli as well as to rely upon a limited repertoire of behavioral responses to situations that involve high provocation (Giancola, 2004; Steele & Josephs, 1990).

Unlike survey methods, experimental research focusing on laboratory aggression typically employs provocation as a component of various aggression paradigms. High provocation

may elicit a stronger effect of acute alcohol use, the dose-dependent period of time during which alcohol remains in the bloodstream following consumption and prior to full metabolization into acetate and water (e.g., Giancola, 2004), on aggressive outcomes than low provocation. For both practical and ethical reasons, laboratory analogues of aggression are limited in ecological validity (e.g., Tedeschi & Quigley, 1996). Nevertheless, it has been argued that laboratory analogues of aggression possess strong construct validity in that aggressive participants in the lab tend to be more aggressive individuals in the real world (Giancola & Chermack, 1998).

1.2. Target gender

Prior research suggests that alcohol may have a stronger effect on female perpetrated aggression toward female than male targets. In an early review of the literature, Bushman and Cooper (1990) reported that intoxicated female participants responded with greater aggression toward female targets than male targets across studies, offering two possible explanations for this observation. First, they suggested that alcohol may serve to proximally disinhibit impulses that violate the societal norm by which aggression toward females is discouraged. With no comparable norms discouraging aggression toward male targets, smaller effects of alcohol may be expected. Bushman and Cooper (1990) invoked expectancy theory as a secondary explanation for the observed effects of alcohol on aggression, suggesting that intoxication may offer an excuse for aggression toward female targets whereas no such excuse would be required for aggression toward male targets. In a later review of the literature, Bettencourt and Miller (1996) offered an alternative explanation for the observed effects of alcohol on female aggression, speculating that females may be relatively less likely to aggress against male targets for fear of reciprocal aggression from a more physically imposing opponent.

These seminal reviews focused on the experimental literature and included only a small number of studies that investigated female perpetrated aggression. Further, despite the composite evidence offered by prior reviews, individual studies have reported contradictory findings (e.g., Giancola & Zeichner, 1995), with stronger alcohol effects on female perpetration toward male than female targets attributed to context-specific motivators like mate competition or jealousy among intimate partners (e.g., Graham et al., 2012). Thus, a contemporary review of the role of target gender on female aggression following acute alcohol use is needed.

1.3. The current review

Crane et al. (2017) reported the overall effect of alcohol use on female aggression, opting to focus upon the cumulative effect rather than exploring moderators of the relationship. The principle aim of the current study was to review and analyze the roles of provocation and target gender in the relationship between acute alcohol use and female aggression across the existing experimental literature. Consistent with prior research, we anticipated that the effect of alcohol on female aggression would be stronger among studies that a) provide high provocation prior to measuring aggressive responding (Bettencourt, Talley, Benjamin, & Valentine, 2006; Giancola & Zeichner, 1995) and b) assess aggression toward female, rather than male, targets (Bettencourt & Miller, 1996; Bushman & Cooper, 1990).

2. Method

The current meta-analytic review is an extension of an earlier review of experimental studies involving alcohol administration within an aggression paradigm (Crane et al., 2017). Studies eligible for inclusion in the current review were published in peer-reviewed journals, involved female samples, and contained references to variations of alcohol, experimental design, aggressive behavior, and female participant domains. Studies were identified in PsycINFO and PubMed (n = 455). Additional studies were identified through a review of resultant articles (n = 9). A review of abstracts and the full study (n = 45), when appropriate, resulted in a final sample of 13 articles and 14 studies. Studies were published between 1984 and 2014, though they could have been published any time before the March 2015 cutoff date. The current review contains all studies included in Crane et al. (2017) as well as two additional articles not identified for inclusion in the earlier review.

2.1. Coding

Studies were single (43%) or double (57%) coded for sample, alcohol, aggression, and moderator data by the first author and a research assistant. High *provocation* was coded for studies that utilized paradigms in which the participant was the direct recipient of physical or verbal stimuli designed to normatively elicit an urge to aggress, such as being administered electric shocks in the Taylor Aggression Paradigm (TAP; Taylor, 1967) or receiving negative evaluations (Rohsenow & Bachorowski, 1984). Paradigms in which the participant was not the direct recipient of provocation, such as those that require viewing video vignettes (Ogle & Miller, 2004) or being presented with ambiguous audio information about a partner's commitment to or fidelity within a relationship (ATSS; Davison, Robins, & Johnson, 1983), were coded as low provocation. Although participants interacted directly with one another, Testa, Crane, Quigley, Levitt, and Leonard (2014) provided evidence supporting their conclusion that participants in their sample were pleased with, rather than provoked by, the opportunity to peacefully discuss relationship issues under the conflict resolution paradigm. Thus, low provocation was also coded in the conflict resolution, art vandalism (Norlander, Nordmarker, & Archer, 1998), and teacher/learner (Gustafson, 1991) paradigms. The gender of the target of the participant's prospective aggression was dichotomously coded as male (n = 4) or female (n = 9). The data provided in one study was insufficient to distinguish between aggression directed toward male and female targets (Giancola & Zeichner, 1995).

2.2. Data analysis

Presented data were used to derive a Cohen's *d* effect size, depicting the increased aggression exhibited by participants who received alcohol relative to those who received a placebo or no alcohol, for each study that was then weighted by the inverse of their variance to account for sample size in subsequent analyses (Hedges & Olkin, 1985). Moderator analyses of the overall effect, based upon a priori hypotheses, were then conducted using mixed effects models provided by the SPSS Macro presented by Lipsey and Wilson (2001).

3. Results

Consistent with Crane et al. (2017), the overall effect of alcohol on female aggression in the current investigation was small but significant ($d = 0.15$, $p = .02$, 95% CI = 0.02–0.27). Despite the observed homogeneity across effect sizes [$Q(13) = 13.55$, $p = .41$], exploratory moderator analyses were conducted to address a priori hypotheses and to report early trends in this area of sparse research.

3.1. Provocation

As displayed in Table 1, half of the eight studies that utilized high provocation presented small-to-medium sized positive effects (Giancola et al., 2002; Giancola & Zeichner, 1995; Hoaken, Campbell, Stewart, & Pihl, 2003; Rohsenow & Bachorowski, 1984, Study 1), three presented small positive effects (Giancola et al., 2009; Giancola & Parrott, 2008; Hoaken & Pihl, 2000), and one presented a small negative effect (Rohsenow & Bachorowski, 1984, Study 2). Of the six studies that utilized low provocation, one presented a small positive effect (Eckhardt & Crane, 2008), three presented no effect (Gustafson, 1991; Nordmarker, Norlander, & Archer, 2000; Testa et al., 2014) and two presented small negative effects (Norlander et al., 1998; Ogle & Miller, 2004).

Analyses revealed a significant, small positive effect of alcohol on aggression under high provocation ($d = 0.25$, $k = 8$, $p < .01$, 95% CI = 0.10–0.40). Alcohol had no effect on aggression under low provocation ($d = -0.07$, $k = 6$, $p = .52$, 95% CI = −0.29–0.15). The effects of alcohol on aggression were significantly stronger among studies that employed high provocation relative to those that assessed aggression under low provocation [$Q_b(1) = 5.79$, $p = .02$]. No significant variability was detected among effect sizes for low [$Q_w(5) = 1.08$, $p = .96$] or high [$Q_w(7) = 6.68$, $p = .46$] provocation.

3.2. Target gender

Among the nine investigations to specify a female target, three presented small-to-medium positive effects (Giancola et al., 2002; Hoaken et al., 2003; Rohsenow & Bachorowski, 1984, Study 1), three presented small positive effects (Giancola et al., 2009; Giancola & Parrott, 2008; Hoaken & Pihl, 2000), and three presented no effect (Nordmarker et al., 2000) or small negative effects (Norlander et al., 1998; Rohsenow & Bachorowski, 1984, Study 2). Among the four studies that specified male targets of aggression, one presented a small positive effect (Eckhardt & Crane, 2008) and three presented no effects (Gustafson, 1991; Testa et al., 2014) or a small negative effect (Ogle & Miller, 2004).

Analyses revealed a significant, positive mean effect of alcohol on female aggression among studies with female targets ($d = 0.19$, $k = 9$, $p = .01$, 95% CI = 0.04–0.34). Alcohol had no effect on female aggression among studies with male targets ($d = -0.06$, $k = 4$, $p = .61$, 95% CI = −0.30–0.18). A marginally significant trend emerged in which alcohol effects on female-directed aggression were larger than effects on male-directed aggression [$Q_b(1) = 3.10$, $p = .08$]. No significant variability was detected among effect sizes for studies with female [$Q_w(8) = 6.88$, $p = .55$] or male [$Q_w(3) = 0.89$, $p = .83$] targets.

4. Discussion

The small overall effect size of acute alcohol use on female aggression detected by Crane et al. (2017) indicates that alcohol alone is an insufficient causal factor for female aggression, highlighting the need to explore the influence of other potentially significant predictors. Despite a lack of heterogeneity in effects across investigations, we evaluated moderators consistent with our a priori hypotheses to provide initial insight into the influence of provocation and target gender on the proximal relationship between acute alcohol use and female aggression.

We found support for our hypotheses with results suggesting that acute alcohol use increased the likelihood of aggressive responding only following exposure to high provocation. In fact, the introduction of alcohol in the absence of significant provocation was associated with a non-significant reduction in aggressive responding. This pattern is not surprising given that alcohol has been shown to enhance positive affect under pleasant, relaxed social conditions (e.g., Levitt & Cooper, 2010) and to have the opposite effect under threatening or frustrating social conditions (e.g., Eckhardt & Crane, 2008). The current results are consistent with the literature on alcohol-related aggression among males. Principally, provocation is among the strongest instigators of male perpetrated aggressive behavior following alcohol use (e.g., Exum, 2006).

Although psychopathic traits have been implicated in acts of unprovoked aggression (Reidy, Zeichner, & Martinez, 2008), most alcohol administration studies explicitly exclude forensic and substance dependent participants, recruiting community samples of high functioning, social drinkers and functionally restricting the probable upper limits of psychopathy within samples (e.g., Crane et al., 2016). Thus, we would expect to see little unprovoked aggression, even within the context of acute alcohol use, among female participants recruited into studies that met inclusion criteria for the current review. It should be noted that laboratory methods of provocation may have been insufficient to accurately parallel in vivo exposure. There is contradictory evidence to suggest both that stronger alcohol-related differences may emerge at higher levels of provocation (Taylor, Schmutte, Leonard, & Cranston, 1979) and that the significant effects of alcohol on aggression observed among women at low levels of provocation may be negated at high levels of provocation (Bond & Lader, 1986). Although the current results offer support for the former, additional research will allow for a more precise analysis of the role of provocation beyond the two levels utilized in the this review.

Results further detected a trend with a significant, positive effect of alcohol on female aggression toward females and a negative effect of alcohol on female aggression toward males. With only four studies assessing aggression toward male participants, our analyses are under-powered and our ability to fully interpret the moderating effect of target gender is limited. Interestingly, alcohol resulted in less aggression in both studies assessing female-to-male direct aggression, in which the participant had the opportunity to physically or verbally aggress toward the target himself (Gustafson, 1991; Testa et al., 2014), offering support for the hypothesis that females may restrain alcohol-related aggressive impulses within the context of more physically imposing opponents (Bettencourt & Miller, 1996). It is possible

that significant differences between alcohol-related aggression across male and female targets may be detected with the addition of future research. It should be noted that intimate partner violence is a subset of aggressive behavior with higher rates of female-to-male aggression than female-to-female aggression (e.g., Desmarais et al., 2012). The current review offers no substantive comments on this issue as only two studies of intimate partner violence were identified. Further, the current results are inconsistent with research on alcohol-related aggression among males in which alcohol elicits greater aggression toward male than female targets (e.g., Bettencourt & Miller, 1996; Graham et al., 2012).

Alcohol myopia theory posits that intoxicated participants will disproportionately attend to the most salient elements in their environment and will choose from a more restricted repertoire of behavioral response options than participants who did not consume alcohol (Giancola, 2004; Steele & Josephs, 1990). To the extent that conflict with male targets may be more severe than conflict with female targets, alcohol myopia may suggest stronger alcohol effects on female aggression within the context of male targets. The results of the current and prior reviews suggest the opposite (Bettencourt & Miller, 1996; Bushman & Cooper, 1990). Earlier reviews suggested that alcohol may facilitate aggression toward female targets more so than male targets because alcohol serves to negate stronger normative inhibitions against aggressing toward females, provides an excuse for violating social norms against aggressing toward females, and may be insufficient to override inhibitions against engaging in physical aggression against a larger opponent (Bettencourt & Miller, 1996; Bushman & Cooper, 1990). Future investigation is necessary to identify the mechanisms by which alcohol may disproportionately increase aggression toward female than male targets.

4.1. Limitations

The primary limitation of the current review is the sparsity of research focusing on the topic of acute alcohol-related female aggression. By extension, moderator analyses were confounded and based upon groups with restricted cell sizes. Future research is necessary to confirm the unique roles of provocation and target gender in the relationship between acute alcohol use and female-perpetrated aggression. Eligibility criteria employed for alcohol administration studies restrict the sample, eliminating the most aggressive individuals, potentially diminishing the effects of alcohol on aggression among individuals interacting under real world conditions. Further, debate continues as to the ecological validity of laboratory aggression paradigms (McCarthy & Elson, 2018; Tedeschi & Quigley, 1996). Despite potential limitations to internal validity, replication of the current results using methods with greater ecological validity, such as daily diary or ecological momentary assessment, would provide further insight into moderators of alcohol-related aggression among females.

5. Conclusions

Data suggest that the effects of alcohol on female aggression were stronger following high, compared to low, provocation. Initial evidence offers partial support for greater alcohol effects on aggression toward female than male targets. Although the current results are consistent with prior theory and research, we echo the reservations expressed by Crane et al.

(2017) regarding the limitations imposed upon moderator analyses of the relationship between acute alcohol use and female aggression by the sparsity of prior study. We strongly recommend that the current, exploratory results be interpreted with caution and that they serve as a call for future investigations in this area.

Acknowledgments

Support for this research was provided, in part, by a grant from the National Institute on Alcohol Abuse and Alcoholism (K23 AA021786; PI: Schlauch).

References

Anderson CA, & Bushman BJ (2002). Human aggression. Psychology, 53, 27–51.

Archer J (2000). Sex differences in aggression between heterosexual partners: a meta-analytic review. Psychological Bulletin, 126, 651–680. [PubMed: 10989615]

Berkowitz L (1993). Pain and aggression: Some findings and implications. Motivation and Emotion, 17, 277–293.

Bettencourt B, & Miller N (1996). Gender differences in aggression as a function of provocation: A meta-analysis. Psychological Bulletin, 119, 422–447. [PubMed: 8668747]

Bettencourt B, Talley A, Benjamin AJ, & Valentine J (2006). Personality and aggressive behavior under provoking and neutral conditions: A meta-analytic review. Psychological Bulletin, 132, 751–777. [PubMed: 16910753]

Bond A, & Lader M (1986). The relationship between induced behavioural aggression and mood after the consumption of two doses of alcohol. British Journal of Addiction, 81, 65–75. [PubMed: 3457599]

Bushman BJ, & Cooper HM (1990). Effects of alcohol on human aggression: An integrative research review. Psychological Bulletin, 107, 341–354. [PubMed: 2140902]

Campbell JC, Glass N, Sharps PW, Laughon K, & Bloom T (2007). Intimate partner homicide review and implications of research and policy. Trauma, Violence & Abuse, 8, 246–269.

Crane CA, Godleski SA, Przybyla SM, Schlauch RC, & Testa M (2016). The proximal effects of acute alcohol consumption on male-to-female aggression: A meta-analytic review of the experimental literature. Trauma, Violence & Abuse, 17, 520–531.

Crane Licata, Schlauch Testa, & Easton (2017). The proximal effects of acute alcohol consumption on female aggression: A meta-analytic review of the experimental literature. Psychology of Addictive Behaviors, 31, 21–26. [PubMed: 28080095]

Davison GC, Robins C, & Johnson MK (1983). Articulated thoughts during simulated situations: A paradigm for studying cognition in emotion and behavior. Cognitive Therapy and Research, 7, 17–39.

Desmarais SL, Reeves KA, Nicholls TL, Telford RP, & Fiebert MS (2012). Prevalence of physical violence in intimate relationships, part 2: Rates of male and female perpetration. Partner Abuse, 3, 170–198.

*. Eckhardt CI, & Crane C. (2008). Effects of alcohol intoxication and aggressivity on aggressive verbalizations during anger arousal. Aggressive Behavior, 34, 428–436. [PubMed: 18307248]

Exum ML (2006). Alcohol and aggression: An integration of findings from experimental studies. Journal of Criminal Justice, 34, 131–145.

Fisher NL, & Pina A (2013). An overview of the literature on female-perpetrated adult male sexual victimization. Aggression and Violent Behavior, 18, 54–61.

Foran HM, & O'Leary KD (2008). Alcohol and intimate partner violence: A meta-analytic review. Clinical Psychology Review, 28, 1222–1234. [PubMed: 18550239]

Giancola PR (2004). Executive functioning and alcohol-related aggression. Journal of Abnormal Psychology, 113, 541–555. [PubMed: 15535787]

Giancola PR, & Chermack ST (1998). Construct validity of laboratory aggression paradigms: A response to Tedeschi and Quigley (1996). Aggression and Violent Behavior, 3, 237–253.

*. Giancola PR, Helton EL, Osborne AB, Terry MK, Fuss AM, & Westerfield JA. (2002). The effects of alcohol and provocation on aggressive behavior in men and women. Journal of Studies on Alcohol, 63, 64–73. [PubMed: 11925061]

*. Giancola PR, Levinson CA, Corman MD, Godlaski AJ, Morris DH, Phillips JP, & Holt JCD. (2009). Men and women, alcohol and aggression. Experimental and Clinical Psychopharmacology, 17, 154–164. [PubMed: 19586230]

*. Giancola PR, & Parrott DJ. (2008). Further evidence for the validity of the Taylor Aggression Paradigm. Aggressive Behavior, 34, 214–229. [PubMed: 17894385]

*. Giancola PR, & Zeichner A. (1995). Construct validity of a competitive reaction-time aggression paradigm. Aggressive Behavior, 21, 199–204.

Graham K, Bernards S, Osgood DW, Parks M, Abbey A, Felson RB, … Wells S. (2012). Apparent motives for aggression in the social context of the bar. Psychology of Violence, 3, 218–232.

*. Gustafson R. (1991). Aggressive and nonaggressive behavior as a function of alcohol intoxication and frustration in women. Alcoholism: Clinical and Experimental Research, 15, 886–892.

Harmon RB, Rosner R, & Owens H (1998). Sex and violence in a forensic population of obsessional harassers. Psychology, Public Policy, and Law, 4, 236–249.

Hedges L, & Olkin I (1985). Statistical methods for meta-analysis. Orlando, FL: Academic Press.

*. Hoaken PN, & Pihl RO. (2000). The effects of alcohol intoxication on aggressive responses in men and women. Alcohol and Alcoholism, 35, 471–477. [PubMed: 11022022]

*. Hoaken PNS, Campbell T, Stewart SH, & Pihl RO. (2003). Effects of alcohol on cardiovascular reactivity and the mediation of aggressive beahviour in adult men and women. Alcohol and Alcoholism, 38, 84–92. [PubMed: 12554614]

Ito TA, Miller N, & Pollock VE (1996). Alcohol and aggression: A meta-analysis on the moderating effects of inhibitory cues, triggering events, and self-focused attention. Psychological Bulletin, 120, 60–82. [PubMed: 8711017]

Leonard K (2005). Alcohol and intimate partner violence: When can we say that heavy drinking is a contributing cause of violence? Addiction, 100, 422–425. [PubMed: 15784050]

Levitt A, & Cooper ML (2010). Daily alcohol use and romantic relationship functioning. Personality and Social Psychology Bulletin, 36, 1706–1722. [PubMed: 21098471]

Lipsey M, & Wilson D (2001). Practical meta-analysis. Vol. 49. Thousand Oaks, CA: Sage publications.

*. Nordmarker A, Norlander T, & Archer T. (2000). The effects of alcohol intake and induced frustration upon art vandalism. Social Behavior and Personality, 28, 15–28.

McCarthy RJ., & Elson M. (2018). Conceptual Review of Lab-Based Aggression Paradigms. Collabra: Psychology, 4. 10.1525/collabra.104.

*. Norlander T, Nordmarker A, & Archer T. (1998). Effects of alcohol and frustration on experimental graffiti. Scandinavian Journal of Psychology, 39, 201–207. [PubMed: 9883098]

*. Ogle RL, & Miller WR. (2004). The effects of alcohol intoxication and gender on the social information processing of hostile provocations involving male and female provocateurs. Journal of Studies on Alcohol, 65, 54–62. [PubMed: 15000504]

Reidy DE, Zeichner A, & Martinez MA (2008). Effects of psychopathy traits on unprovoked aggression. Aggressive Behavior, 34, 319–328. [PubMed: 18085525]

Rennison CM, & Melde C (2014). Gender and robbery: A national test. Deviant Behavior, 35, 275–296.

*. Rohsenow DJ, & Bachorowski JA. (1984). Effects of alcohol and expectancies on verbal aggression in men and women. Journal of Abnormal Psychology, 93, 418–432. [PubMed: 6512088]

Steele CM, & Josephs RA (1990). Alcohol myopia: Its prized and dangerous effects.American Psychologist, 45, 921–933.

Taylor SP (1967). Aggressive behavior and physiological arousal as a function of provocation and the tendency to inhibit aggression. Journal of Personality, 35, 297–310. [PubMed: 6059850]

Taylor SP, Schmutte GT, Leonard KE, & Cranston JW (1979). The effects of alcohol and extreme provocation on the use of a highly noxious electric shock. Motivation and Emotion, 3, 73–81.

Tedeschi JT, & Quigley BM (1996). Limitations of laboratory paradigms for studying aggression. Aggression and Violent Behavior, 1, 163–177.

*. Testa M, Crane CA, Quigley BM, Levitt A, & Leonard KE. (2014). Effects of administered alcohol on intimate partner interactions in a conflict resolution paradigm. Journal of Studies on Alcohol and Drugs, 75, 249–258. [PubMed: 24650819]

Table 1

Description of studies (N = 14) included in the current review.

Authors, publication year	Sample size	Provocation	Target gender (relationship)	Cohen's *d*
Eckhardt & Crane, 2008	33	Low	Male (partner)	0.234
Giancola et al., 2002	46	High	Female (confederate)	0.413
Giancola et al., 2009	265	High	Female (confederate)	0.249
Giancola & Parrott, 2008	165	High	Female (confederate	0.109
Giancola & Zeichner, 1995	64	High	- (confederate)	0.553
Gustafson, 1991	45	Low	Male (confederate)	−0.088
Hoaken et al., 2003	32	High	Female (confederate)	0.400
Hoaken & Pihl, 2000	60	High	Female (confederate	0.178
Nordmarker et al., 2000	50	Low	Female (vignette)	−0.039
Norlander et al., 1998	21	Low	Female (vignette)	−0.269
Ogle & Miller, 2004	41	Low	Male (vignette)	−0.177
Rohsenow & Bachorowski, 1984 (Study 1)	48	High	Female (confederate)	0.620
Rohsenow & Bachorowski, 1984 (Study 2)	45	High	Female (confederate)	−0.206
Testa et al., 2014	150	Low	Male (partner)	−0.090
Total	1065	d = 0.15, p = .02, 95% CI = 0.02–0.27		

Note. Confederates were unknown to the participant and refer to laboratory personnel or simulations, vignettes refer to characters depicted in pictures, written, audio or video stories.