Intoxicated bystanders' alcohol expectancies and valuations and the ability to detect risk in a potential sexual assault

Jacquelyn D. Wiersma-Mosley[a,*], **Lindsay S. Ham**[a], **Tiffany L. Marcantonio**[a], **Kristen N. Jozkowski**[b], **Ana J. Bridges**[a]

[a]University of Arkansas, United States

[b]Indiana University, United States

Abstract

Alcohol intoxication, alcohol expectancies, and alcohol valuations are associated with impaired risk detection for victims of sexual assault; these factors may also impair risk detection of bystanders in a potential sexual assault. However, the relationship between expectancies, valuations and alcohol intoxication on bystanders' risk detection abilities has not been examined; the goal of this study was to address this gap in the literature. The current study used an alcohol administration experimental design that assessed 123 young adults' (50% women) alcohol expectancies and valuations, as well as their risk appraisal using a sexual assault vignette. Participants in the alcohol condition (n = 61) reported diminished ability to detect risk when they reported higher positive valuations compared with participants in the control condition (n = 62), but there were no effects of expectancies on bystanders' ability to detect risk in either condition. Risk detection is a crucial step in bystander prevention; alcohol intoxication, in combination with positive alcohol valuations may impede those appraisals.

1. Introduction

Alcohol intoxication can impair sexual assault risk detection abilities of bystanders (Ham et al., 2019); however, *how* alcohol influences a bystander's risk detection abilities is unclear. Borrowing from the risk detection literature among potential victims of sexual assault (Melkonian & Ham, 2018), people's alcohol expectancies (a person's beliefs about the effects of drinking) or alcohol valuations (the extent that an expected outcome is perceived

as a "bad" or "good" effect; Fromme, Stroot, & Kaplan, 1993; Fromme & D'Amico, 2000) may influence risk detection when intoxicated (Melkonian & Ham, 2018). For instance, compared to women who do not, women who believe that alcohol enhances social situations are less likely to believe alcohol increases the likelihood of sexual aggression (Nurius, 2000). Because of these beliefs, potential victims who are intoxicated may focus on the social situation more than the presence of risk cues from potential perpetrators (Nurius, 2000). As people tend to perceive sexual assault risk to self differently than the risk to others (Norris, Nurius, & Graham, 1999), it is important to examine these associations in bystanders rather than assume that the same processes are at play for bystanders and victims.

1.1.   Alcohol expectancies, alcohol valuations, and bystanding

To date, two studies have assessed the role of alcohol expectancies and bystanding attitudes with mixed findings. Powers, Leili, Hagman, and Cohn (2015) found that expectancies (i.e., aggression, sexual affect, sexual drive) were unrelated to bystander intentions, but were related to bystander willingness.[2] More specifically, as people's expectancies regarding sexual affect (e.g., alcohol makes me affectionate) increased so did their willingness to proactively intervene (e.g., attend a "take back the night" event). People who thought alcohol made them more caring and affectionate indicated they would be more willing to help someone else (Powers et al., 2015). Similarly, Boyle (2017) found that for men, greater endorsement of researcher-labeled "positive" expectancies (e.g., liquid courage and sociability) was related to a greater likelihood of intervening in a potential sexual assault. As such, positive expectancies may increase people's willingness or likelihood to intervene as they feel more confident, caring, or socially tied to others when intoxicated. However, researcher-labeled "negative" expectancies may decrease people's ability to intervene. Boyle (2017) also found, for women, that endorsing greater self-perception expectancies (e.g., my problems would seem worse, I would feel guilty) was associated with less likelihood to intervene (Boyle, 2017). Taken together, specific types of expectancies may increase or inhibit bystander willingness and likelihood.

The role of alcohol expectancies or valuations in bystanders' ability to detect risk has not been examined. This is surprising given that risk detection is a crucial step in leading someone to intervene, because if bystanders do not perceive risk, they may not perceive a need to intervene (Latané & Darley, 1970). Contrary to the previous research examining expectancies and general bystander attitudes, theory would suggest that positive expectancies and valuations would *reduce*—not increase—risk detection abilities of bystanders (Nurius, 2000; Testa & Dermen, 1999). Expectancies and valuations may reduce risk detection abilities, because if people perceive the consequences of alcohol consumption as likely to occur (e.g., drinking results in an elevated mood) and evaluate these effects positively (e.g., elevated mood from drinking is good), then they may not perceive a high-risk situation that involves alcohol consumption as risky or concerning. Therefore, although positive expectancies may be related to bystander willingness to intervene, it may

---

[2]Bystander intentions are participants intentions to intervene. Bystander willingness is a participant's willingness to become involved in situations (Boyle, 2017; Powers et al., 2015).

contribute to a failure to attend to risk cues in sexual assault situations, because people are not viewing alcohol-facilitated sexual situations as risky.

1.2. Alcohol myopia theory

Alcohol expectancies and valuations may influence bystanders' risk detection; however, the effect of these alcohol beliefs may be further exacerbated by alcohol intoxication. Indeed, Alcohol Myopia Theory posits that when individuals are intoxicated, they experience impairments in perceptual functioning such as a narrowed attentional focus to the most immediate and salient cues in the environment (Steele & Josephs, 1990). Thus, compared to a sober bystander, one who is intoxicated and has positive expectancies or valuations, may show increased impairment in their ability to detect risk, because they are focused on aspects of their environment which emphasize these attitudes and feelings (e.g., hanging with friends, enjoying the tension reduction feelings from alcohol).

The goal of the current study was to assess the role of alcohol intoxication, expectancies and valuations effects on risk detection abilities of bystanders in a potential sexual assault situation. We had the following hypotheses: (H1) Participants with higher valuations or positive expectancies would report lower risk detection than those who had lower endorsement of positive valuations or expectancies; and (H2)[3] Alcohol intoxication would reduce risk detection abilities in a potential sexual assault more so for participants who report higher valuations or positive expectancies compared to those with lower levels.

2. Method

2.1. Participants

Participants were 123 of the original study of 128 young adults with complete data (50% women; 80% white, 84% were enrolled in college), ages 21–29 years ($M_{age} = 23.24$, $SD = 2.41$) recruited from a mid-southern US area (Ham et al., 2019; for further study information). Participants were instructed to refrain from alcohol and drug use (24 h) and to fast (3 h) prior to their laboratory session. Inclusion and exclusion criteria were in line with the National Institute of Alcoholism and Alcohol Abuse's recommendations (2005; Ham et al., 2019). The session began with a breath alcohol concentration (BrAC) test to confirm sobriety (measured with the Intoximeter® AlcoSensor FST), followed by informed consent, eligibility interview, and urine pregnancy screening for women.

2.2. Procedures and measures

2.2.1. Alcohol expectancies and valuations—First, participants completed the Comprehensive Effects of Alcohol Questionnaire (CEOA; Fromme et al., 1993; Fromme & D'Amico, 2000) which includes Positive and Negative subscales for AE ($n = 38$ items total)[4] and AV ($n = 38$ items total).[5] Positive factors include Sociability (i.e., I would be

---

[3]We do not present the hypothesis of a main effect of alcohol intoxication on risk recognition for our participants as this finding is published elsewhere (Ham et al., 2019). The larger study did find that those who were intoxicated reported lower risk recognition than those who remained sober in the study.

[4]For alcohol expectancies, participants were provided the stem "Check the phrase which best represents the extent to which you agree with the item - depending on whether you expect the effect to happen to you if you were under the influence of alcohol. These effects will vary, depending on the amount of alcohol you typically consume".

outgoing), Tension Reduction (i.e., I would feel calm), Liquid Courage (i.e., I would feel powerful), and Sexuality (i.e., I would feel sexy). Negative Factors include Cognitive and Behavioral Impairment (i.e., I would feel dizzy), Risk and Aggression (i.e., I would take risks), and Self-Perception (i.e., I would feel moody). Responses ranged from 1 = *Disagree* to 4 = *Agree* for Alcohol Expectancies (Positive (20 items): α = 0.90; Negative (18 items) α = 0.84) and 1 = *Bad* to 5 = *Good* for Alcohol Valuations (Positive (20 items): α = 0.93; Negative (18 items): α = 0.86). Participants answered the same set of questions for expectancies and for valuations.

2.2.2.   Intoxication manipulation—Next, participants were randomly assigned to a beverage condition (alcohol vs. control) that was then served by a "bartender" in the simulated bar laboratory. Alcohol condition participants ($n = 61$) knowingly received a dose of 100-proof vodka (men: 0.82 g/kg; women: 0.68 g/kg) mixed with soda at a 1:4 ratio to achieve a peak blood alcohol concentration (BAC) of 0.08% (Davis, 2010; Norris et al., 2009). Control participants ($n = 62$) knowingly consumed a nonalcoholic soda mix in an amount equivalent to what participants consumed in the alcohol condition. Alcohol participants completed breath tests every four minutes until reaching the 0.06% criterion to maximize the likelihood that participants complete the vignette and interview portion while intoxicated and during the ascending limb of the BAC curve. We used a yoked-control absorption period with each control participant having an absorption period and number of breath tests matching that of an alcohol participant (Giancola & Zeichner, 1997).

2.2.3.   Sexual assault vignette and ability to detect risk—During the peak period of intoxication, participants read along and listened to a recording of a vignette in which mutual friends, a woman and man, are all attending a party together and appear to get along well. As shown in the Appendix, the female victim becomes visibly intoxicated, while the male perpetrator is described as "sticking to one beer." Later they engage in sexual activity that starts consensually but becomes nonconsensual; participants (i.e., bystanders) walk by the room and witness this encounter happen (Ham et al., 2019; See Appendix). Participants were asked to respond to three questions using a response scale of 1 (*not at all*) to 10 (*extremely*): "How dangerous is this situation?"; "How uncomfortable is this situation?"; and "To what extent does someone need to get involved in this situation?" Higher scores reflect that the situation was appraised as riskier (α = 0.80).

3.   Results

First, we found no significant differences in the alcohol and control condition on risk detection, expectancies, and valuations (see Table 1). Next, we tested two ANCOVA models that examined separately the effects of (a) positive and negative expectancies (refer to Model 1 in Table 1) and (b) positive and negative valuations (refer to Model 2 in Table 1), and their interactions with alcohol condition (alcohol vs. control) on risk appraisal. Expectancies and valuations were entered as continuous variables. Findings revealed a marginal effect

---

[5]For alcohol valuations, participants were provided with the stem "Check from *bad* to *good* - depending on whether you think the particular effect is bad, neutral, good, etc. We want to know if you think a particular effect is bad or good, regardless of whether or not you expect it to happen to you".

for condition × positive expectancies and positive valuations, and significant effects for condition and condition × positive valuations; but no effects for negative expectancies or valuations.

Follow-up analyses examined the mean differences in the control and alcohol conditions on risk detection, based on positive expectancies and valuations (+1 SD above and −1 SD below the mean). Follow-up analyses indicated no differences in positive expectancies and risk detection slopes between alcohol ($b = −0.75$, $p = .08$) or control ($b = 0.38$, $p = .23$) conditions. There was a significant difference for valuations. As shown in Fig. 1, results revealed that participants in the alcohol condition reported less ability to detect risk as positive valuations increased, while there was not an association between positive valuations and risk detection for participants in the control condition.

4. Discussion

Intoxicated participants' positive valuations, but not expectancies, were associated with decreased risk recognition abilities. Valuations reflect the degree that people perceive the effects of alcohol as being desirable; their perceptions of researcher-labeled "positive" valuations may be important for risk recognition. Risk recognition involves seeing a situation as uncomfortable or risky, which are emotions that could be diminished by positive valuations under conditions of alcohol intoxication (Sayette, Smith, Breiner, & Wilson, 1992). For example, in a situation between a victim and perpetrator, potential bystanders who hold higher positive valuations may be less concerned about the situation because they feel positively about the consequences of alcohol and focus on these effects, rather than the risk cues of the situation. Therefore, intoxicated individuals who hold positive valuations may have fewer risk recognition abilities than sober individuals or those with low valuations. A consequence of weak risk recognition abilities is that bystanders may not intervene in potential sexual assault situations—thus, increasing the risk of sexual assault occurring.

Contrary to previous findings, expectancies did not share a role in risk detection (Boyle, 2017; Powers et al., 2015). Our lack of findings for expectancies may occur because the vignette used in this study referenced that participants were informed they are friends with the victim. By establishing a friendship, participants' responsibility for this person may be increased and their ability to detect risk also increased (Bennett & Banyard, 2016). As such, the effects from expectancies and intoxication may be diminished.

5. Limitations

Our first limitation is the vignette was hypothetical. Future research may want to use more subtle and complex sexual assault situations to assess how expectancies, valuations, and acute intoxication influence bystander perceptions and behaviors. Second, our sample is from one university. More research is needed to generalize these findings to the larger community. Third, including a placebo group may help to further assess the role alcohol intoxication has in bystander risk detection, particularly with expectancies and valuations as we are unsure if these effects happened because of alcohol intoxication or the expectation of consuming alcohol. Finally, researchers should continue to expand measurements of risk

detection by assessing the degree to which a victim is perceived as worthy of help as this could be important for bystander intervention.

6. Conclusion

Given that alcohol valuations appear to share a relationship with risk recognition, and alcohol expectancies share one with bystander willingness and likelihood (Boyle, 2017; Powers et al., 2015), bystander programs may want to expand their discussion of factors related to bystanding behaviors. Indeed, there has been a shift in the field to examine alcohol intoxication with bystander intervention (Leone, Haikalis, Parrott, & DiLillo, 2017). Researchers may also want to expand their work to examine the role of expectancies and valuations in bystander behavior. This may be particularly important as young adults typically have positive expectancies and valuations which are related to an increase in their alcohol consumption (Ham & Hope, 2003); alcohol use is also related to being in drinking environments where sexual assaults are likely to occur (Testa & Cleveland, 2017). As such, targeting and challenging expectancies and valuations may be helpful in increasing risk recognition, positive bystander attitudes, and, potentially, intervention behaviors.

Acknowledgement

Role of funding

Appendix

You are at a house party with your friend, Vicki. Music is playing and people are having a good time. From across the room, you spot your friend, Pete, and decide to introduce Vicki to Pete. You think the two of them might get along well, since both are into similar sports, both have similar views on politics, and both are from similar family backgrounds. After introductions, it is clear Vicki and Pete are getting along well, so you leave the two of them to mingle with other people at the party. You begin talking with a group of people who are discussing your favorite band. An hour later, you notice Vicki drinking several shots of liquor as part of a drinking contest while Pete cheers her on. You ask Pete if he plans to join in the contest, but Pete replies he is just going to stick to his one beer tonight. Later in the evening, you see Pete and Vicki heading to a separate room away from the party. You notice that Vicki is stumbling and having a very hard time walking. As you and a group of people walk by the open door on your way to the back porch, you see Pete and Vicki kissing and making out on the bed. Next, you notice that Pete is unzipping his pants and getting on top

of Vicki. Vicki pushes him away, but Pete continues to climb on top of her. You hear Pete say to Vicki, "Come on, stop being such a tease."

References

Bennett S, & Banyard VL (2016). Do friends really help friends? The effect of relational factors and perceived severity on bystander perception. Psychology of Violence, 6, 64–72. 10.1037/a0037708.

Boyle JR (2017). College students' alcohol expectancies and sexual assault bystander behavior. American Journal of Health Studies, 32(2), 70–77.

Davis KC (2010). The influence of alcohol expectancies and intoxication on men's aggressive unprotected sexual intentions. Experimental and Clinical Psychopharmacology, 18, 418–428. 10.1037/a0020510. [PubMed: 20939645]

Fromme K, & D'Amico E (2000). Measuring adolescent alcohol outcome expectancies. Psychology of Addictive Behaviors, 2, 206–212. 10.1037/0893-164X.14.2.206.

Fromme K, Stroot E, & Kaplan D (1993). Comprehensive effects of alcohol: Development and psychometric assessment of a new expectancy questionnaire. Psychological Assessment, 5, 19–26. 10.1037/1040-3590.5.1.19.

Giancola PR, & Zeichner A (1997). The biphasic effects of alcohol on human physical aggression. Journal of Abnormal Psychology, 106(4), 598–607. 10.1037/0021-843X.106.4.598. [PubMed: 9358690]

Ham LS, & Hope DA (2003). College students and problematic drinking: A review of the literature. Clinical Psychology Review, 23(5), 719–759. [PubMed: 12971907]

Ham LS, Wiersma-Mosley JD, Wolkowicz NR, Jozkowski KN, Bridges AJ, & Melkonian AJ (2019). Effect of alcohol intoxication on bystander intervention in a vignette depiction of sexual assault. Journal of Studies on Alcohol and Drugs, 80, 252–260. 10.15288/jsad.2019.80.252. [PubMed: 31014471]

Latané B, & Darley JM (1970). The unresponsive bystander: Why doesn't he help? New York: Appleton-Century-Crofts.

Leone RM, Haikalis M, Parrott DJ, & DiLillo D (2017). Bystander intervention to prevent sexual violence: The overlooked role of bystander alcohol intoxication. Psychology of Violence, 8, 1–9. 10.1037/vio0000155.

Melkonian AJ, & Ham LS (2018). The effects of alcohol intoxication on young adult women's identification of risk for sexual assault: A systematic review. Psychology of Addictive Behaviors, 32, 162–172. 10.1037/adb0000349. [PubMed: 29431464]

Norris J, Nurius PA, & Graham TL (1999). When a date changes from fun to dangerous: Factors affecting women's ability to distinguish. Violence Against Women, 5, 230–250. [PubMed: 26023278]

Norris J, Stoner SA, Hessler DM, Zawacki TM, George WH, Morrison DM, & Davis KC (2009). Cognitive mediation of alcohol's effects on women's in-the-moment sexual decision making. Health Psychology: Official Journal of the Division of Health Psychology, American Psychological Association, 28, 20–28. 10.1037/a0012649.

Nurius PS (2000). Risk perception for acquaintance sexual aggression: A social-cognitive perspective. Aggression and Violent Behavior, 5, 63–78. 10.1016/S1359-1789(98)00003-2. [PubMed: 25705115]

Powers RA, Leili J, Hagman B, & Cohn A (2015). The impact of college education on rape myth acceptance, alcohol expectancies, and bystander attitudes. Deviant Behavior, 36(12), 956–973.

Sayette MA, Smith DW, Breiner MJ, & Wilson GT (1992). The effect of alcohol on emotional response. Journal of Studies on Alcohol and Drugs, 53, 541–545. 10.15288/jsa.1992.53.541.

Steele CM, & Josephs RA (1990). Alcohol myopia: Its prized and dangerous effects. American Psychologist, 45, 921–933. 10.1037/0003-066X.45.8.921.

Testa M, & Cleveland MJ (2017). Does alcohol contribute to college men's sexual perpetration? Between- and within-person effects over five semesters. Journal of Studies on Alcohol and Drugs, 78, 5–13. 10.15288/jsad.2017.78.5. [PubMed: 27936357]

Testa M, & Dermen KH (1999). The differential correlates of sexual coercion and rape. Journal of Interpersonal Violence, 14, 548–561. 10.1177/088626099014005006.

HIGHLIGHTS

- Alcohol expectancies or valuations may influence risk detection when intoxicated.

- The influence of expectancies or valuations in bystander risk detection is unclear.

- 123 young adults were randomly assigned to a beverage condition (alcohol vs. control).

- Participants read along and listened to a hypothetical sexual assault vignette.

- Those in the alcohol condition reported less ability to detect risk.

- An increase in positive alcohol valuations when intoxicated decreased risk detection.
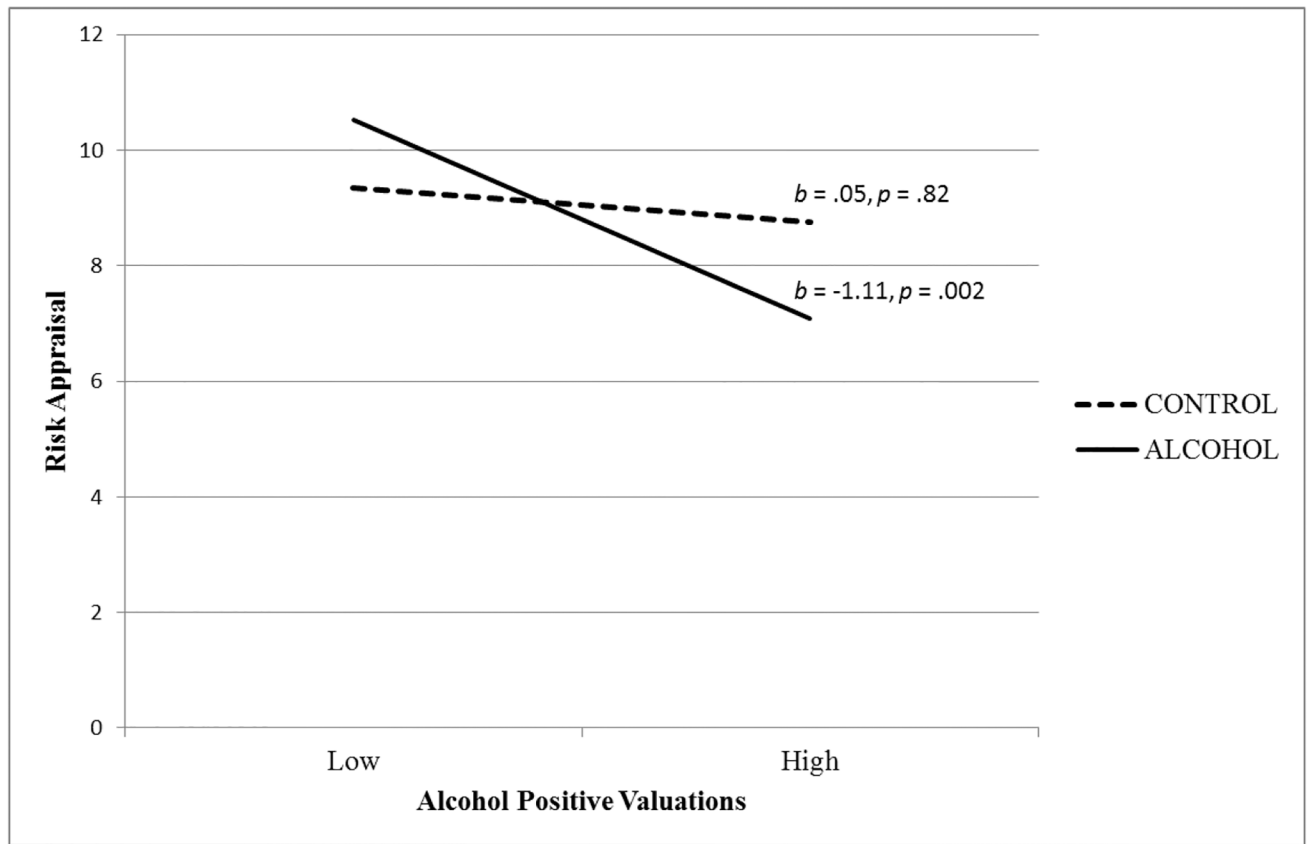
Fig. 1.
Risk appraisal as a function of condition × participants' alcohol positive valuations.

Table 1

Descriptive statistics and regression models examining risk appraisal as a function of alcohol condition with alcohol expectancies and alcohol valuations ($N = 123$).

	Alcohol *M* (SD)	Control *M* (SD)
Alcohol Expectancies Positive	2.53 (0.54)	2.53 (0.47)
Alcohol Expectancies Negative	1.97 (0.47)	1.94 (0.41)
Alcohol Valuations Positive	3.80 (0.64)	3.64 (0.70)
Alcohol Valuations Negative	1.64 (0.32)	1.69 (0.52)
Risk Recognition	8.20 (1.76)	8.94 (1.19)
Model 1	$F(\acute{\eta}^2)$	
Condition	1.27 (0.01)	
Gender	1.39 (0.01)	
Positive Alcohol Expectancies	0.44 (0.004)	
Negative Alcohol Expectancies	0.18 (0.002)	
Condition * Positive Alcohol Expectancies	3.74 [t] (0.03)	
Condition * Negative Alcohol Expectancies	0.14 (0.001)	
Model 2	$F(\acute{\eta}^2)$	
Condition (Control vs. Alcohol)	4.20 [**] (0.04)	
Gender	1.23 (0.01)	
Positive Alcohol Valuations	5.21 [t] (0.04)	
Negative Alcohol Valuations	0.01 (0.000)	
Condition * Positive Alcohol Valuations	8.14 [**] (0.07)	
Condition * Negative Alcohol Valuations	0.32 (0.003)	

Note.

[t] $p < .06$,

[**] $p < .01$.

Five participants did not complete the measure of Alcohol Expectancies and Alcohol Valuations.