



# College Students' Perceptions of Ambiguous Hook-ups Involving Alcohol Intoxication

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## Abstract

Alcohol intoxication is a prevalent feature of university life and campus sexual assault cases. While previous research has examined how students perceive obvious cases of assault, less is known about how students evaluate more ambiguous sexual scenarios—such as those including two intoxicated individuals. In three survey experiments with college students ( $N=990$ ), we examined how manipulating the intoxication (sober vs. drunk) of a man accused of assault (the respondent) influenced perceptions of a hook-up scenario involving an intoxicated woman. Although university policies indicate that respondent intoxication should not influence evaluations of these scenarios, we hypothesized that students would be influenced by cues of respondent intoxication when making judgments of the hook-up and the individuals involved. Students reported that the hook-up was a sexual assault more often when the respondent was sober compared to when he was drunk, and they found sober respondents more responsible for the encounter than drunk respondents. Although effect sizes fluctuated across studies, an internal meta-analysis found evidence of significant (but modest) aggregate effects. Furthermore, perceptions of the respondent's agency mediated the effects of intoxication on perceptions of respondent responsibility (Studies 2 & 3). We also manipulated whether the respondent should have reasonably known the complainant was drunk (Studies 1 & 2) and whether the complainant or the complainant's friend reported the incident (Study 3), but these manipulations had little effect on students' perceptions of the vignettes. We discuss how our findings can guide future research and consider implications of our results for university stakeholders.

**Keywords** Sexual assault · Alcohol · Intoxication · Agency · Responsibility · College students

In May of 2018, *The New York Times*' Gender Initiative published “45 Stories of Sex and Consent on Campus,” a series of personal accounts that capture the complexity students face when navigating sexual consent on college campuses. Many of these stories depict heightened confusion about consent in situations that included alcohol consumption, a defining feature of sexual life on campus. Students wondered whether lines were crossed in sexual encounters that included alcohol use. One wrote: “I didn't remember all of it, most importantly, asking for... consent,” (Bennet & Jones,

2018). The project highlights a cultural moment in which best practices for consent remain hotly debated, especially when alcohol is involved.

Approximately one in four American college women have been sexually assaulted, and alcohol is a factor in at least 50% of campus sexual assaults (Association of American Universities, 2017; Fisher et al., 2000; Sampson, 2003). Most campus sexual assault policies explicitly account for alcohol consumption, but vaguely worded policies can leave students unsure of how to interpret common hook-up scenarios. For example, the University of California's (UC) Title IX Office sexual violence policy states that consent cannot be given when a person is incapacitated due to alcohol, defining incapacitation as “a state beyond drunkenness or intoxication. A person is not necessarily incapacitated merely as a result of drinking[...].” (University of California, 2020). This definition, however, leaves students with important, unanswered questions: When does intoxication become incapacitation? How should intoxicated individuals

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determine whether someone they want to hook up with is capable of consenting? Who—if anyone—is culpable for a sexual encounter in which it is not clear how intoxicated both parties were? Such unresolved questions are of profound importance to students, for UC Title IX policy states that individuals accused of assault cannot use their own intoxication as a valid defense against such charges if a “reasonable person” should have known the accusing party was incapacitated.

Confusion over these terms and policies may make it more difficult for potential victims and bystanders to identify high-risk situations and intervene, which is the goal of many campus sexual assault prevention programs (DeGue et al., 2014; Zapp et al., 2021). The current research did not attempt to resolve the complicated policy questions about how to define intoxication and incapacitation. Rather, we examined how college students perceive consent scenarios where it is unclear how intoxicated the relevant parties were. Better understanding students’ perceptions of such ambiguous sexual scenarios can help universities identify holes in their policies and programming, ultimately improving students’ understanding of consent, responsibility, and sexual violence.

While a robust body of research has found that intoxicated sexual assault victims are more likely to be blamed for their own victimization than sober sexual assault victims (for a review, see Grubb & Turner, 2012), comparatively less research exists on the effects of alcohol use on perceptions of those who initiate a sexual encounter. From the 1980s to mid-2000s, research generally found that intoxicated individuals were perceived as less responsible for sexual assault than if they were sober (Cameron & Stritzke, 2003; Norris & Cubbins, 1992; Richardson & Campbell, 1982; Stormo et al., 1997). In contrast, studies since the mid-2000s have not revealed significant effects of perpetrator alcohol use on labeling of sexual assault and related blame attributions (Maurer, 2016; Maurer & Robinson, 2008; Untied et al., 2012). For example, Untied et al. (2012) presented vignettes in which a male perpetrator had non-consensual sex with a female victim after she physically resists and says “no.” They found that intoxication status (intoxicated vs. sober) did not influence participants’ judgments of the perpetrator’s responsibility for the assault. These results clearly differ from the earliest research conducted in this area, wherein a male offender was perceived as less responsible for a violent assault when he was intoxicated compared to sober (Richardson & Campbell, 1982). Evolving attitudes about sexual violence and consent in response to federal mandates on universities (Schroeder, 2014) and cultural movements like #MeToo (Henry et al., 2021; Szekeres et al., 2020) may be diminishing the influence that perceived intoxication has on judgments of responsibility in sexual encounters.

However, the use of unambiguous sexual assault scenarios, in which a victim makes clear attempts to verbally and/or physically resist an assault, may be obfuscating the role of perceived intoxication in judgments of sexual encounters. Support for this claim comes from a recent study that employed more ambiguous stimuli than those used in most prior research. Henry et al. (2021) presented participants with a vignette in which the victim rebuffs her assailant’s initial attempt to undress her, but she continues to kiss him. The assault occurs soon after, when the perpetrator undresses and has sex with the victim despite her explicit expression of discomfort. In this study, participants perceived moderately and highly intoxicated perpetrators to be less responsible than sober perpetrators. Furthermore, participants were less likely to label the incident as sexual assault or rape when the perpetrator was at least moderately intoxicated compared to sober. These results suggest the endurance of a double standard that has not been observed in recent research using unambiguous assault scenarios: women are seen as more responsible for their own victimization when they are intoxicated, yet men are seen as less culpable for committing assault when they are intoxicated (Grubb & Turner, 2012; Richardson & Campbell, 1982). Thus, gendered perceptions of sexual responsibility may still emerge in the context of more ambiguous sexual scenarios involving alcohol use.

Additionally, research in moral psychology has found that decreasing perceptions of agency can cause reductions in perceived responsibility (Clark et al., 2014; Shariff et al., 2014); if intoxicated initiators of sexual encounters are perceived to be less agentic than sober initiators, then intoxicated initiators may be deemed less responsible for their actions as well. Nevertheless, limited research has investigated how alcohol intoxication influences interpersonal judgments of agency and responsibility—particularly in the context of ambiguous hook-up scenarios that are prevalent throughout American universities (Bennet & Jones, 2018; Yoffe, 2017). Taken together, these findings suggest that—despite receiving training on policies which indicate an initiator’s level of intoxication is irrelevant to determining whether an assault occurred—students’ judgments of ambiguous hook-up scenarios may still be swayed by their perceptions of an initiator’s intoxication. If students perceive hook-up initiators as being less responsible for their actions when intoxicated, then they may subsequently underreport such incidents and unintentionally embolden potential perpetrators of sexual assault.

The current studies extend existing research by investigating college students’ perceptions of hook-up scenarios designed to be ambiguous. We used vignettes that involved two college students who met up at a house party and had sexual intercourse; however, one of the individuals does not remember giving consent the next day while the other believes the encounter was mutually consensual. We refer

to the individual accused of initiating the sexual encounter in our vignettes as the “respondent” and refer to the individual who could not remember if she consented to the sexual encounter as the “complainant.” In a series of three experiments, we manipulated the respondent’s level of alcohol intoxication (Studies 1–3), whether bystanders at the party could reasonably know the complainant was drunk (Studies 1–2), and whether the complainant or the complainant’s friend reported the incident to authorities (Study 3). Across studies, we measured perceptions of whether the incident being described was a sexual assault, whether students thought the incident would be considered an assault under university policy, and various judgments of the respondent and complainant (e.g., levels of consent and responsibility). We hypothesized that students’ perceptions of the hook-up vignettes would be influenced by a respondent’s level of intoxication.

## Study 1

Our investigation began with two pilot studies which examined students’ perceptions of an ambiguous hook-up scenario. These pilot studies manipulated the gender of the complainant and respondent across conditions, and the results provided initial evidence that perceived intoxication influenced students’ perceptions of the hook-up. The pilot studies are presented in the Supplementary Information (<https://osf.io/g9a52>). Throughout the rest of this paper, the respondent was always the male character (Chris), and the complainant was always the female character (Patricia or Alexis).

In Study 1, we adapted the materials from the pilot studies to examine whether perceptions of the hook-up scenario differed as a function of whether the respondent was intoxicated or not. We worked with investigators from UC Irvine’s Office for Equal Opportunity and Diversity, which investigates sexual assaults at the university, to develop the materials for this study. Based on university policy, an individual cannot claim (as a valid defense) to believe that another individual consented to a sexual encounter if a reasonable person should have known that the other individual was incapacitated at the time. Therefore, if the complainant was incapacitated due to alcohol, and a reasonable person should have known this, then the situation would likely be considered a sexual assault by investigators. Though the vignettes we created were intentionally ambiguous—not specifying whether the complainant was incapacitated or just intoxicated—we aimed to test whether perceived respondent intoxication influenced college students’ perceptions of the sexual encounter and the individuals involved.

We hypothesized that participants would be more likely to perceive a sexual assault when the respondent was sober

rather than drunk—despite respondent intoxication not factoring into determinations of culpability under university policy. In addition, we manipulated whether a reasonable person should have known that the complainant was intoxicated. We hypothesized that participants would be more likely to perceive that a sexual assault occurred when the respondent should have known the complainant was intoxicated.

## Method

### Participants and Procedure

Participants ( $N=265$ ) were undergraduate students recruited from a social sciences study pool (for extra credit in participating courses) at UC Irvine in Fall 2018. We did not exclude participants for failing an attention check but excluding these participants from the main analyses did not substantively influence the results (please see the Supplementary Information for these analyses: <https://osf.io/g9a52>). The sample of participants who reported their sex and ethnicity ( $n=226$ ) identified predominately as female ( $n=177$ , 79%) and were ethnically heterogeneous (Asian:  $n=81$ , 36%; Latino:  $n=82$ , 36%; White:  $n=31$ , 14%; Other:  $n=16$ , 7%; Multiracial:  $n=16$ , 7%).

After consenting to take the study, participants were told that they would be presented with a scenario adapted from an actual case at the university. They were reminded that they could withdraw from the study at any time. Participants were then randomly assigned to read one of four vignettes, and they were required to remain on the survey page containing the vignette for 60 s before proceeding.

### Vignettes

The vignettes differed in terms of how intoxicated the respondent was (sober vs. drunk) and whether a reasonable person should have known about the complainant’s level of intoxication (should have known vs. should not have known). All the vignettes stated that Chris (the respondent) and Patricia (the complainant) met in a class during Fall quarter, became romantically interested in one another, and met up at a house party hosted by a mutual friend on the night in question. In the sober/should know condition, the focal part of the manipulation read as follows:

According to witnesses, Patricia arrived at the party around 9 pm and began drinking. Chris, who had been at a pregame where he had 1 drink, got to the party around 10:30 pm. Witnesses saw Chris and Patricia talking and flirting soon after Chris arrived at the party. Patricia was drinking the entire night and

texted a friend around 11:30 pm saying that she was pretty drunk, and many witnesses at the party remember Patricia stumbling and slurring her speech. A little after midnight, a few people saw Chris and Patricia walking into one of the rooms in the house.

In the conditions where Chris was intoxicated, the second sentence read “Chris, who had been at a pregame where he became intoxicated, got to the party around 10:30 pm.” In the conditions where Chris should not have known that Patricia was intoxicated, the fourth sentence read, “Patricia was drinking the entire night and texted a friend around 11:30 pm saying that she was pretty drunk, but none of the witnesses at the party remember anything out of the ordinary about Patricia's level of intoxication.” All the vignettes concluded by stating that Chris and Patricia had sexual intercourse that night, Patricia could not remember the night very well and did not remember if she had consented to the sexual encounter, and Chris claimed that the entire sexual encounter had been consensual.

## Measures

### Manipulation Checks

Participants indicated how intoxicated they perceived Chris and Patricia to be during the hook-up, from 0 (*Completely sober*) to 10 (*Completely incapacitated*). To measure if participants picked up on what Chris' knowledge of Patricia's intoxication should have been during the party, we asked participants to indicate their agreement with the statement, “A reasonable person should have known that Patricia was too drunk to consent to a sexual encounter,” measured from 1 (*Strongly disagree*) to 7 (*Strongly agree*).

### Perceptions of a Sexual Assault

Participants were asked if a sexual assault occurred (*Yes/No*) and whether the situation would be considered a sexual assault under the university's campus policy (*Yes/No*). Participants also reported their level of agreement that Chris committed a sexual assault (from 1 = *Strongly disagree* to 7 = *Strongly agree*).

### Responsibility

Participants were asked, “Who is more responsible that intercourse happened?” on a 101-point sliding scale with anchors of *Christopher* (-50), *Both are equally responsible* (0), and *Patricia* (50).

## Consent

Participants were asked, “From the details provided in the scenario, how much consent did each person give to having intercourse?” using a 101-point sliding scale from 0 (*No consent*) to 100 (*Full consent*).

## Punishment

Participants' beliefs about punishment were measured with one item, “Chris should be punished for what occurred that night,” with response options ranging from 1 (*Strongly disagree*) to 7 (*Strongly agree*).

## Reporting

Participants responded to the question: “If you were at the party and witnessed the scenario that was described, how likely would you be to report the incident to someone at UCI (CARE, OEOD, etc.) and/or the police?” Response options ranged from 1 (*Extremely unlikely*) to 7 (*Extremely likely*).

## Demographic Information and Additional Items

Participants responded to a set of demographic items, including measures of participants' sex and ethnicity (the wording of these items can be viewed on our OSF page: <https://osf.io/dhke7>). We included additional items in Study 1, but we focus on the measures we used across studies in the main text. The additional measures used in Study 1 are described in the Supplementary Information (<https://osf.io/g9a52>).

## Analyses

To evaluate the influence of experimental condition on participants' perceptions of the situation, we conducted 2 (intoxication: sober vs. intoxicated) by 2 (knowledge: should know vs. shouldn't know) ANOVAs for the continuous dependent variables. These ANOVAs included the main effects of each factor and their interaction. For the dichotomous dependent variables, we conducted logistic regressions with a similar 2 (intoxication: sober vs. intoxicated) by 2 (knowledge: should know vs. shouldn't know) structure. Intoxication was contrast coded (sober = 0.5, intoxicated = -0.5), as was knowledge (should know = 0.5, shouldn't know = -0.5). The logistic models also included the interaction between the two factors. By contrast coding the factors of intoxication and knowledge (rather than dummy-coding), we can interpret their effects as main effects (rather than as simple effects). In other words, the contrast-coded effect of intoxication reflects the difference between average scores in the Chris sober and

Chris intoxicated conditions (collapsing across knowledge conditions), and vice versa. Throughout the results for all three studies and the internal meta-analysis, we used two-tailed tests with an alpha of .05.

## Results

### Manipulation Checks

Here and throughout the paper, we report Welch's *t*-tests (as recommended by Delacre et al., 2017), resulting in non-integer degrees of freedom.

Participants in the intoxicated conditions perceived Chris as significantly more drunk ( $M = 7.60$ ,  $SD = 2.02$ ) than those in the sober conditions ( $M = 4.37$ ,  $SD = 2.24$ ),  $t(232.56) = 11.62$ ,  $p < .001$ ,  $d = 1.52$ . However, compared to those in the shouldn't know conditions ( $M = 5.65$ ,  $SD = 1.38$ ), participants in the should know conditions ( $M = 5.71$ ,  $SD = 1.24$ ) did not have significantly higher ratings of whether a reasonable person should have known Patricia was too drunk to consent,  $t(230.30) = 0.32$ ,  $p = .75$ ,  $d = 0.04$ . Although we intended to manipulate whether participants would perceive that Chris should have known Patricia's level of intoxication, this manipulation was not successful. Since we manipulated whether Patricia's intoxication was noticeable by witnesses at the party, participants may have also perceived her as more intoxicated when it was noticeable. Therefore, we tested whether the knowledge manipulation affected how participants perceived Patricia's intoxication level. As intended, participants in both conditions perceived Patricia as drunk (both  $M$ s  $> 8.2$ ), and there was not a significant difference in Patricia's intoxication between the knowledge conditions,  $t(231.86) = 1.81$ ,  $p = .07$ ,  $d = 0.24$ .

### Perceptions of a Sexual Assault

Approximately 57% of participants labeled the situation as a sexual assault, which a binomial proportion test indicated was not a statistically significant difference from 50%, 95% CI [0.50, 0.63],  $p = .051$ . Moreover, there was a significant main effect of Chris' intoxication in predicting this outcome, such that participants were more likely to label the hookup as a sexual assault when Chris was sober than when he was intoxicated,  $b = 0.85$ ,  $SE = 0.27$ ,  $p = .002$ , Odds Ratio ( $OR$ ) = 2.35, 95% CI [1.38, 3.99]. There was not a significant main effect of knowledge ( $b = 0.42$ ,  $SE = 0.27$ ,  $p = .12$ ,  $OR = 1.52$ , 95% CI [0.89, 2.58]) or a significant interaction ( $b = 0.50$ ,  $SE = 0.54$ ,  $p = .35$ ,  $OR = 1.65$ , 95% CI [0.57, 4.77]) for perceiving a sexual assault.

Alternatively, 79% of participants believed the scenario would be considered an assault under university policy, which was significantly greater than 50%, 95% CI [0.73, 0.84],  $p < .001$ . That is, while 122 of the 130 students who labeled the encounter as a sexual assault thought it would also be considered an assault under university policy, 59 of the 99 students who thought the encounter was *not* an assault thought it *would* be deemed an assault under university policy. There was a significant main effect of Chris' intoxication in predicting participants' determination of whether the encounter would be considered a sexual assault under campus policy. Participants were more likely to label the encounter as a sexual assault under campus policy in conditions where Chris was sober compared to conditions where Chris was drunk,  $b = 1.32$ ,  $SE = 0.36$ ,  $p < .001$ ,  $OR = 3.73$ , 95% CI [1.85, 7.53]. There was not a significant main effect of knowledge ( $b = 0.09$ ,  $SE = 0.36$ ,  $p = .80$ ,  $OR = 1.09$ , 95% CI [0.54, 2.21]) or a significant interaction ( $b = 0.17$ ,  $SE = 0.72$ ,  $p = .81$ ,  $OR = 1.18$ , 95% CI [0.29, 4.83]) in predicting participants' determinations of whether the encounter would be considered a sexual assault under campus policy.

Turning to the continuous dependent variables, Table 1 shows the results for the ANOVAs, displaying the main effects for each factor and their interaction. Additionally, the table presents the effect sizes for the main effect of intoxication and knowledge (i.e.,  $d$  comparing the average of the intoxication condition to the average of the sober condition, collapsing across knowledge and vice versa). These results provide evidence of a similar pattern as the dichotomous outcomes: participants who read that Chris was intoxicated generally judged him less harshly than those who read he was sober. Figure 1 visualizes this pattern for perceptions of responsibility, highlighting that participants perceived Chris as more responsible when he was sober. Although there was not a significant main effect of intoxication on perceptions of Patricia's consent, the mean differences between intoxication conditions for the other dependent variables ranged from small to large effects (Cohen's  $d$ s = 0.32 – 0.89). There were no significant main effects of knowledge and no significant interactions between the two manipulations.

### Exploratory Analyses of Gender Differences

To explore whether the influence of the intoxication manipulation on the main outcome variables differed for men and women participants, we ran a series of 2 (intoxication: sober vs. intoxicated) by 2 (sex: male vs. female) ANOVAs. Critically, there were no significant interaction effects, indicating that the intoxication manipulation influenced men and women to the same degree. Please see the Supplementary Information (<https://osf.io/g9a52>) for additional statistics for these analyses.

**Table 1** Main Effects and Interaction of the Experimental Manipulations on the Dependent Variables

Dependent variable	Main effect of intoxication				Main effect of knowledge				Interaction	
	$M_{drunk}$ (SD)	$F$	$\eta_p^2$	$d$	$M_{should\ know}$ (SD)	$F$	$\eta_p^2$	$d$	$F$	$\eta_p^2$
	$M_{sober}$ (SD)			95% CI	$M_{shouldn't}$ (SD)			95% CI		
Chris committed a SA	4.03 (1.74)	6.00*	.02	0.32	4.31 (1.74)	<0.001	<.01	-0.01	0.22	<.01
	4.56 (1.54)			[0.06, 0.58]	4.30 (1.58)			[-0.26, 0.25]		
Responsibility	-7.29 (14.79)	27.14***	.11	-0.70	-13.29 (17.58)	0.05	<.01	-0.02	0.32	<.01
	-19.22 (18.91)			[-0.97, -0.43]	-13.68 (18.53)			[-0.29, 0.24]		
Patricia's consent	28.58 (27.82)	0.49	<.01	-0.09	26.96 (27.64)	0.01	<.01	0.02	0.54	<.01
	26.02 (27.82)			[-0.35, 0.17]	27.54 (28.05)			[-0.24, 0.28]		
Chris' consent	44.57 (36.92)	46.30***	.17	0.89	58.04 (35.83)	1.32	.01	0.13	0.07	<.01
	75.09 (31.29)			[0.62, 1.17]	62.75 (38.71)			[-0.13, 0.39]		
Punishment	3.80 (1.68)	13.62***	.06	0.48	4.13 (1.66)	0.58	<.01	0.09	0.20	<.01
	4.58 (1.54)			[0.22, 0.75]	4.28 (1.64)			[-0.17, 0.35]		
Reporting	3.73 (1.72)	12.82***	.05	0.48	4.36 (1.69)	3.59	.02	-0.25	0.02	<.01
	4.53 (1.66)			[0.21, 0.74]	3.93 (1.76)			[-0.51, 0.01]		

The *ds* represent the effect sizes for the main effects (i.e., difference between sober and drunk conditions averaging across the knowledge conditions and vice versa). The interaction column represents the interaction between knowledge and intoxication. For responsibility, negative scores indicate that Chris is seen as more responsible and positive scores indicate that Patricia is seen as more responsible

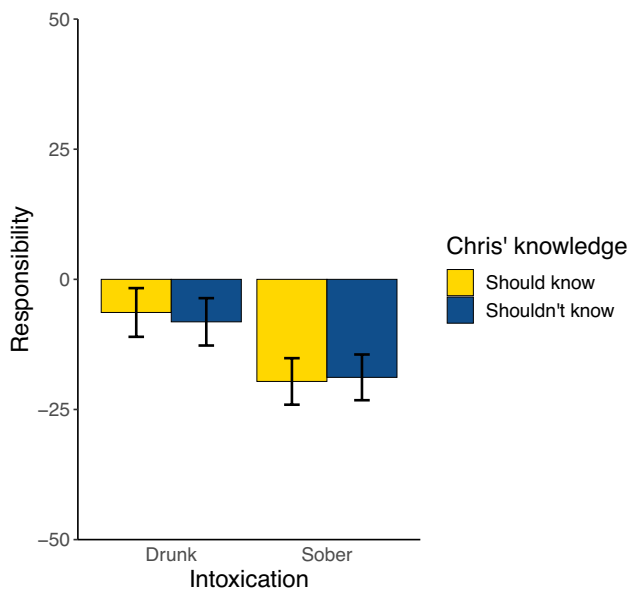
\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

### Discussion

In Study 1, we investigated whether a respondent's level of intoxication impacted college students' perceptions of a sexual encounter. We found that respondent intoxication led to a lower likelihood of perceiving a sexual assault, less agreement with punishing the respondent, finding the respondent less responsible for the encounter, and

decreased willingness to report the incident. These effects show that participants were influenced by the intoxication of the respondent in judging the situation, even though university policy explicitly states that intoxication does not determine respondent culpability.

Interestingly, participants also perceived the respondent as providing less consent when he was drunk compared to when he was sober. While Patricia was seen as providing low levels of consent across all four conditions, Chris was also seen as providing low levels of consent (below 50 on average) in the conditions in which he was intoxicated. This suggests that, when both Chris and Patricia were intoxicated, participants believed that neither of them provided adequate consent. This may help explain why they considered Chris less responsible for the hook-up and were less likely to consider the scenario an assault in those conditions. These results highlight student perceptions that may inhibit their understanding of university policies: while they correctly link alcohol use with the ability to consent, they also incorrectly perceive alcohol use as reducing Chris' responsibility for his sexual behavior.



**Fig. 1** Effects of the Manipulations on Ratings of Responsibility. *Note.* Responsibility was measured on a 101-point sliding scale with anchors of *Christopher* (-50), *Both are equally responsible* (0), and *Patricia* (50)

### Study 2

A limitation of Study 1 was that the manipulation of Chris' knowledge of the situation (whether a reasonable person should or should not have known how intoxicated Patricia was at the party) was not successful. In Study 2, we aimed to strengthen this manipulation to more rigorously assess

students' awareness of what a reasonable person should know in that scenario. Additionally, we investigated perceptions of Chris' agency as a potential mediator of the respondent intoxication effects observed in Study 1. Students may have been more lenient on Chris when he was intoxicated because he was perceived as having less agency (as suggested by the decrease in his consent). We designed Study 2 to test this potential mechanism and further investigate student perceptions of the sexual encounter.

## Method

### Participants and Procedure

The study was preregistered (aspredicted.org), and we aimed to recruit at least 400 participants to detect similar effects as those in Study 1. Ultimately, we recruited college students in early 2019 ( $N = 501$ ) in the same manner as Study 1. Similar to the previous study, participants who reported their gender and ethnicity ( $n = 454$ ) were predominately women ( $n = 357$ , 79%; men:  $n = 90$ , 20%; other:  $n = 6$ , 1%) and ethnically heterogeneous (Latino:  $n = 150$ , 33%; Asian,  $n = 141$ , 31%; White:  $n = 63$ , 14%; Multiracial:  $n = 51$ , 11%; Other:  $n = 50$ , 11%). The procedure was identical to that in Study 1.

### Vignettes

In this study, we made slight modifications to the vignettes used in Study 1. First, we made it more likely that "witnesses" at the party would have seen Patricia drinking (even if they did not witness her being particularly drunk). Rather than stating that Patricia was drinking the entire night, the vignette clarified that "Patricia was seen drinking the entire night." Additionally, we added a sentence to clarify Patricia's level of intoxication, which varied by the two conditions of Chris' knowledge (should know vs. shouldn't know): "People remember her with a drink in hand throughout the night, [but she didn't stand out/and she stood out] as being drunker than most at the party." This additional sentence clarified that Patricia was drinking the entire night but was only noticeably drunk in the should know conditions. We aimed to clarify that Patricia was drunk in both conditions, but people at the party only noticed she was drunk in the should know conditions. We also changed the end of the vignette to indicate that Patricia's friend reported the incident instead of Patricia. Other than these changes, the vignettes were identical to those used in Study 1.

## Measures

All the primary measures used in Study 2 were identical to those used in Study 1, with the following exceptions:

### Friend File Report

One item asked participants if they agreed with the statement, "Patricia's friend should NOT have filed a report of the hook-up," from 1 (*Strongly disagree*) to 7 (*Strongly agree*). We reverse coded the item such that higher scores indicated agreement that Patricia's friend should have filed the report.

### Consent

Based on pilot feedback on the consent measures, we changed the continuous measures of consent from 101-point sliding scales to 7-point Likert scales of agreement with the following statements: "Chris/Patricia consented to hooking up with Patricia/Chris" (agreement measured from 1 = *Strongly disagree* to 7 = *Strongly agree*). We also added dichotomous measures of consent (*Yes/No*) for both Chris and Patricia as robustness checks for the analyses using the continuous measures.

### Agency

Adapted from Tang and Gray (2018), three items measured how much Chris and Patricia each were capable of the following: carrying out actions, planning, and thinking (agreement measured from 1 = *Strongly disagree* to 7 = *Strongly agree*). The three items showed suitable internal reliability for each target (Patricia:  $\alpha = .82$ ; Chris:  $\alpha = .85$ ) and were combined into one measure of agency each for Chris and Patricia.

### Experience

Also adapted from Tang and Gray (2018), three items measured how much Chris and Patricia each were capable of the following: experiencing emotions, feeling, and having desires (agreement measured from 1 = *Strongly disagree* to 7 = *Strongly agree*). The three items showed suitable internal reliability for each target (Patricia:  $\alpha = .91$ ; Chris:  $\alpha = .90$ ) and were combined into one measure of experience each for Chris and Patricia.

### University Definitions of Consent

We added measures to capture the UC's definition of consent as being affirmative, conscious, voluntary, and able to

be revoked. On 7-point Likert scales, participants indicated their agreement with items regarding the targets' abilities to 1. affirmatively give consent, 2. consciously give consent, 3. voluntarily give consent, and 4. be capable of revoking consent. Participants completed these items for both Chris and Patricia separately. These four items had high internal consistency for both Chris ( $\alpha = .88$ ) and Patricia ( $\alpha = .83$ ), so we combined them into a composite measure of consent. These items were preregistered as part of our exploratory analyses, and additional exploratory measures and analyses can be found in the Supplementary Information (<https://osf.io/g9a52>).

### Demographic Information

In Study 1, participants were asked to report their sex. In Study 2 (and Study 3), participants were asked to report their gender; the wording of these items can be viewed on our OSF page (<https://osf.io/dhke7>).

### Analyses

We conducted 2 (intoxication: sober vs. intoxicated) by 2 (knowledge: should know vs. shouldn't know) ANCOVAs for the continuous dependent variables (for alternative regression analyses, please see the Supplementary Information: <https://osf.io/g9a52>). These ANCOVAs included the main effects of each factor and their interaction, as well as Patricia's level of intoxication as a covariate (as preregistered: <https://osf.io/qgfyu>). For the dichotomous dependent variables, we conducted logistic regressions with a similar 2 (intoxication: sober vs. intoxicated) by 2 (knowledge: should know vs. shouldn't know) structure with Patricia's level of intoxication as an additional predictor. Intoxication and knowledge were contrast coded in the same way as in Study 1. We also included the interaction between these two factors. For the mediation analyses, we used the *mediation* package (Tingley et al., 2014) in R. The mediation models used 95% bootstrapped percentile confidence intervals with 5000 replications, adjusting for perceptions of Patricia's level of intoxication as a covariate in both direct and indirect effects.

## Results

### Manipulation Check

The manipulation of Chris' intoxication was successful, with participants perceiving him as more drunk in the intoxicated conditions ( $M = 6.82$ ,  $SD = 1.86$ ) than in the sober conditions ( $M = 4.56$ ,  $SD = 2.00$ ),  $t(455.88) = 12.55$ ,  $p < .001$ ,  $d = 1.17$ . Unlike in Study 1, the knowledge manipulation

was successful, such that participants believed that a reasonable person should have known that Patricia was too drunk to consent more in the should know conditions ( $M = 5.87$ ,  $SD = 1.25$ ) than in the shouldn't know conditions ( $M = 5.45$ ,  $SD = 1.40$ ),  $t(450.91) = 3.38$ ,  $p < .001$ ,  $d = 0.32$ . However, the size of the knowledge manipulation was small, and it also impacted perceptions of Patricia's intoxication such that participants in the should know conditions saw Patricia as more intoxicated ( $M = 8.68$ ,  $SD = 1.43$ ) than those in the shouldn't know conditions ( $M = 7.82$ ,  $SD = 1.49$ ),  $t(456.70) = 6.29$ ,  $p < .001$ ,  $d = 0.59$ . As preregistered, due to this significant difference, we added Patricia's level of intoxication as a covariate in all analyses.

### Perceptions of a Sexual Assault

Nearly 66% of participants considered the scenario a sexual assault (significantly different from 50%, 95% CI [0.61, 0.70],  $p < .001$ ). Unlike in Study 1, these perceptions did not differ by experimental condition: there was not a significant main effect of intoxication ( $b = 0.30$ ,  $SE = 0.21$ ,  $p = .14$ ,  $OR = 1.35$ , 95% CI [0.91, 2.03]), knowledge ( $b = -0.38$ ,  $SE = 0.22$ ,  $p = .08$ ,  $OR = 0.68$ , 95% CI [0.45, 1.04]), or their interaction ( $b = -0.14$ ,  $SE = 0.41$ ,  $p = .74$ ,  $OR = 0.87$ , 95% CI [0.39, 1.94]), adjusting for Patricia's intoxication (which was significantly positively related to perceiving a sexual assault occurred,  $b = 0.38$ ,  $SE = 0.07$ ,  $p < .001$ ,  $OR = 1.47$ , 95% CI [1.27, 1.70]).

Turning to perceptions of whether it would be considered a sexual assault under university policy, 83% of participants thought it would be (95% CI [0.79, 0.87],  $p < .001$ ). Similar to Study 1, 284 of the 299 students who thought it was a sexual assault also thought it would be considered a sexual assault by the university, and nearly half (61 out of 154) of the students who thought it was *not* a sexual assault thought the university would deem it an assault. There was a significant main effect of intoxication ( $b = 0.67$ ,  $SE = 0.27$ ,  $p = .01$ ,  $OR = 1.95$ , 95% CI [1.16, 3.30]) such that participants were more likely to think it would be considered a sexual assault under university policy when Chris was sober than when he was intoxicated. There was not a significant main effect of knowledge ( $b = -0.02$ ,  $SE = 0.27$ ,  $p = .95$ ,  $OR = 0.98$ , 95% CI [0.57, 1.68]) or a significant interaction ( $b = -0.28$ ,  $SE = 0.53$ ,  $p = .60$ ,  $OR = 0.75$ , 95% CI [0.27, 2.14]), but Patricia's level of intoxication was a significant positive predictor ( $b = 0.37$ ,  $SE = 0.08$ ,  $p < .001$ ,  $OR = 1.44$ , 95% CI [1.23, 1.69]).

Table 2 displays the results for the continuous dependent variables. There were only significant main effects of intoxication for three of the variables, such that participants in the sober conditions (compared to the intoxicated conditions) had more belief that Chris committed a sexual assault, thought Chris was more responsible, and perceived Chris as having



**Table 2** Main Effects and Interaction of the Experimental Manipulations on the Dependent Variables

Dependent variable	Main effect of intoxication				Main effect of knowledge				Interaction					
	$M_{drunk}$ (SE)	$M_{sober}$ (SE)	$F$	$\eta_p^2$	$d$	95% CI	$M_{should\ know}$ (SE)	$M_{shouldn't}$ (SE)	$F$	$\eta_p^2$	$d$	95% CI	$F$	$\eta_p^2$
Chris committed a sexual assault	4.50 (0.10)	4.50 (0.10)	5.09*	.01	0.21	[0.03, 0.40]	4.53 (0.10)	4.53 (0.10)	3.23	.01	0.18	[−0.02, 0.37]	0.12	<.01
Friend should file report	4.81 (0.10)	4.41 (0.10)	1.12	<.01	0.10	[−0.08, 0.28]	4.78 (0.10)	4.57 (0.11)	1.05	<.01	−0.10	[−0.29, 0.09]	2.83	.01
Responsibility	4.56 (0.10)	−14.11 (1.13)	5.67*	.01	−0.23	[−0.41, −0.04]	4.41 (0.11)	−15.51 (1.15)	0.36	<.01	−0.06	[−0.25, 0.13]	0.29	<.01
Patricia's consent	−17.91 (1.12)	3.16 (0.10)	3.32	.01	−0.17	[−0.35, 0.01]	−16.51 (1.16)	3.06 (0.10)	0.18	<.01	−0.04	[−0.23, 0.15]	1.82	<.01
Chris' consent	2.90 (0.10)	4.82 (0.11)	0.91	<.01	0.09	[−0.09, 0.27]	3.00 (0.10)	4.96 (0.11)	0.74	<.01	−0.08	[−0.28, 0.11]	0.21	<.01
Patricia's consent (university defined)	4.97 (0.11)	2.93 (0.08)	2.30	<.01	−0.14	[−0.33, 0.04]	4.83 (0.11)	2.85 (0.09)	0.05	<.01	−0.02	[−0.21, 0.17]	1.48	<.01
Chris' consent (university defined)	2.75 (0.08)	4.62 (0.09)	15.92***	.03	0.37	[0.19, 0.56]	2.83 (0.09)	4.92 (0.09)	0.47	<.01	−0.07	[−0.26, 0.12]	0.04	<.01
Punishment	5.13 (0.09)	4.08 (0.10)	2.16	<.01	0.14	[−0.05, 0.32]	4.83 (0.09)	4.19 (0.10)	0.00	<.01	−0.01	[−0.20, 0.19]	0.30	<.01
Reporting	4.29 (0.10)	4.22 (0.11)	0.03	<.01	−0.02	[−0.20, 0.17]	4.18 (0.10)	4.15 (0.12)	0.43	<.01	0.06	[−0.13, 0.26]	0.32	<.01
	4.19 (0.11)						4.26 (0.12)							

The means are adjusted for Patricia's level of intoxication. The *ds* represent the effect sizes for the main effects (i.e., difference between sober and drunk conditions averaging across the knowledge conditions and vice versa). For responsibility, negative scores indicate that Chris is seen as more responsible and positive scores indicate that Patricia is seen as more responsible

\*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

more consent. Additionally, neither dichotomous measure of consent had any significant effects (no main effects nor interactions with knowledge;  $ps > .06$ ).

### Mediation via Agency

To investigate a potential mechanism for the effect of intoxication, we tested whether there was a significant indirect effect of Chris' intoxication through perceptions of his agency (a preregistered analysis). We hypothesized that participants may have perceived Chris to be less likely to have committed a sexual assault when he was intoxicated because they believed that he had less control of his actions. Indeed, participants who read that Chris was intoxicated found him to be significantly less agentic ( $M=4.53$ ,  $SD=1.35$ ) than those who read that he only had one drink ( $M=5.29$ ,  $SD=1.14$ ),  $t(444.57)=-6.50$ ,  $p<.001$ ,  $d=-0.61$ . We tested whether agency mediated the significant effects on perceptions that Chris committed a sexual assault (continuous), perceptions of a sexual assault under university policy, and perceptions of responsibility (please see the Supplementary Information for the preregistered mediation analyses of the other main dependent variables: <https://osf.io/g9a52>).

For perceptions that Chris committed a sexual assault, there was not a significant indirect effect of intoxication via agency,  $b=-0.06$ , 95% CI  $[-0.16, 0.03]$ ,  $p=.21$ . Additionally, the indirect effect was not significant for perceptions of a sexual assault under university policy,  $b=-0.01$ , 95% CI  $[-0.03, 0.01]$ ,  $p=.20$ . However, the indirect effect was statistically significant for perceptions of Chris' responsibility,  $b=3.69$ , 95% CI  $[2.29, 5.36]$ ,  $p<.001$ . Perceived agency mediated a significant proportion of the effect of intoxication on responsibility (proportion = .97 of the effect mediated,  $p=.01$ ). Compared to those who read that Chris was sober, participants who read that Chris was intoxicated perceived that he had less agency and therefore was less responsible for the sexual encounter.

### Exploratory Analyses of Gender Differences

As in Study 1, we ran exploratory 2 (intoxication: sober vs. intoxicated) by 2 (gender: men vs. women) ANOVAs to assess whether men and women differed in their responses to the intoxication manipulation. Once again, no significant interaction effects emerged, indicating that the intoxication manipulation had equivalent influences on the judgments of men and women in our sample. Please see the Supplementary Information for additional statistics for these analyses (<https://osf.io/g9a52>).

### Discussion

In Study 2, we modified the vignettes to better distinguish between Patricia being visibly drunk and not visibly drunk, while still indicating that she was drinking in both

situations. Despite improving our manipulation of Chris' knowledge of the situation, it had little impact on the outcome variables. However, there was some evidence that Chris' level of intoxication impacted participants' perceptions: compared to when Chris was drunk, participants gave higher ratings of him committing a sexual assault, attributed more responsibility to him, and indicated that it was more likely to be a sexual assault under university policy when he was sober. Perceptions of Chris' agency mediated the effect on perceptions of his responsibility for the sexual encounter, but not the effects of whether he committed an assault. These results provide further evidence that students attend more to aspects of ambiguous hook-up scenarios that are not relevant to assault determinations (e.g., respondent intoxication) than they do to relevant aspects of the situation (e.g., what a reasonable person should have known about the complainant).

### Study 3

Studies 1 and 2 relied on participants from a social sciences subject pool, resulting in samples of mostly women who study the social sciences. Thus, we could not be certain that our main findings would emerge in a more diverse sample of students. In Study 3, we recruited participants from across our campus to test the effects of respondent intoxication in a more representative sample of the university's population.

## Method

### Participants and Procedure

The study was preregistered (aspredicted.org), and we aimed to recruit at least 200 participants. Participants were recruited by flyers in Spring 2019, which were placed mostly in the engineering and sciences areas of campus (within the same university as Studies 1 and 2). Although 308 students consented to take the study, only 224 advanced past the vignette page, suggesting many students opened the QR code on the flyer but quickly decided not to take the study. Participants received a \$5 Amazon gift card for completing the survey. As expected due to flyer placement, participants who reported demographic information ( $n=200$ ) were majority men ( $n=114$ , 57%; women:  $n=81$ , 41%; non-binary:  $n=3$ , 2%; other, or prefer not to say:  $n=2$ , 2%) and mostly studying in STEM fields ( $n=151$ , 76%). Participants were also predominately Asian ( $n=106$ , 53%; Latino:  $n=30$ , 15%;, Other:  $n=25$ , 12.5%; White:  $n=21$ , 10.5%; Multiracial:  $n=18$ , 9%).

## Vignettes

The vignettes were largely the same as those in Study 2 with three modifications. First, we changed the name of Patricia to Alexis to provide a more common name among the age demographic being sampled. Second, instead of officially filing a report, Alexis considered filing a report the day following the incident. Third, we removed the manipulation of Chris' knowledge; in all conditions, Alexis was noticeably drunk and stood out as being drunker than most at the party. The focal experimental manipulation was Chris' intoxication, where he either had one drink at a pregame or had many drinks and became intoxicated. We also manipulated whether Alexis or her friend considers filing a report. Analyses of the full  $2 \times 2$  design can be found in the Supplementary Information (<https://osf.io/g9a52>). Following our preregistration, we focus on the effect of intoxication in the main analyses.

## Measures

Nearly all the measures were the same as those in Study 2, with the following exceptions.

### Responsibility

Instead of one item measuring responsibility, we asked participants to rate Chris' and Alexis' responsibility for the hook-up on separate scales from 0 (*Not at all responsible*) to 10 (*Completely responsible*). This change allowed us to better assess whether the intoxication manipulation independently affected responsibility perceptions of the complainant and respondent.

### Consent

We measured consent with the two dichotomous items and the four university-defined consent items used in Study 2. Due to space limitations and our preference for the more granular multi-item university-defined consent measure, we did not include the 7-point continuous measures of consent used in Study 2. Furthermore, due to a coding error, about 15 participants saw the dichotomous item phrased as Patricia's consent rather than Alexis', but the error was quickly corrected and switched to Alexis. For both Alexis ( $\alpha = .82$ ) and Chris ( $\alpha = .91$ ), the four consent items showed suitable reliability, so we combined them into one index of consent for each person.

### Exploratory Items

We asked participants about their perceptions of Chris' and Alexis' promiscuity and their attitudes about the #MeToo movement. We explored whether these perceptions mediated the effect of intoxication on the key dependent variables, but none of these secondary analyses yielded statistically significant results.

## Analyses

Since the focus of Study 3 was on the effect of intoxication, we conducted Welch's *t*-tests for the continuous dependent variables and chi-squared tests for the dichotomous dependent variables. As in Study 2, the mediation models used 95% bootstrapped percentile confidence intervals with 5000 replications.

## Results

The manipulation was successful, such that participants perceived Chris as being more intoxicated in the intoxicated conditions than in the sober conditions,  $t(210.43) = 5.42$ ,  $p < .001$ ,  $d = 0.74$ . Nearly 72% of participants indicated that Chris committed a sexual assault (significantly different than 50%, 95% CI [0.65, 0.78],  $p < .001$ ), and 82% believed that it would be a sexual assault under university policy (95% CI [0.76, 0.87],  $p < .001$ ). Like in Studies 1 and 2, 138 of the 148 students who thought it was a sexual assault also thought it would be considered a sexual assault by the university, but approximately half (30 out of 58) of the students who thought it was *not* a sexual assault thought the university would deem the incident an assault.

When looking at the impact of Chris' intoxication on the outcome variables, there were two significant effects. Participants who read that Chris was sober were significantly more likely to say that Chris consented to the encounter (82%) than those who read that Chris was intoxicated (66%),  $\chi^2(1) = 6.74$ ,  $p = .01$ ,  $OR = 2.29$ . Additionally, participants perceived that Chris had more consent (measured continuously) when he was sober than when he was intoxicated (Table 3). None of the other dependent variables were significant between the two conditions, including perceptions of sexual assault ( $p = .07$ ), considering it a sexual assault under university policy ( $p = .65$ ), Alexis' consent ( $p = .11$ ), or any of the other continuous variables (Table 3). It is important to note, however, that most of the effects were in the expected direction and of a similar magnitude as in Studies 1 and 2. Study 3 had the smallest sample of the set of studies, with statistical power (0.80) to only detect medium effect sizes ( $d = 0.50$ ) and larger.

### Mediation via Agency

As in Study 2, participants who read that Chris was intoxicated found him to be significantly less agentic ( $M = 4.49$ ,  $SD = 1.43$ ) than those who read that he only had one drink ( $M = 5.18$ ,  $SD = 1.27$ ),  $t(196.56) = -3.64$ ,  $p < .001$ ,  $d = -0.51$ . Following our preregistration, we examined whether perceptions of Chris' agency mediated the effect of intoxication on perceptions of whether Chris committed an assault, whether an assault occurred under university policy, and Chris'

**Table 3** Main Effects of Intoxication Manipulation on Dependent Variables

Dependent Variable	$M_{\text{sober}} (SD)$	$M_{\text{drunk}} (SD)$	$t$	$df$	$d$ [95% CI]
Chris committed an assault	4.86 (1.54)	4.56 (1.61)	1.38	210.16	0.19 [−0.08, 0.46]
Chris' responsibility	8.01 (2.18)	7.64 (2.38)	1.17	198.77	0.16 [−0.11, 0.44]
Alexis' responsibility	5.28 (3.42)	6.01 (3.21)	−1.58	202.87	−0.22 [−0.50, 0.06]
Alexis' consent	2.88 (1.27)	2.95 (1.47)	−0.32	194.16	−0.05 [−0.32, 0.23]
Chris' consent	5.20 (1.31)	4.51 (1.56)	3.44***	192.13	0.48 [0.20, 0.76]
Punishment	4.30 (1.59)	4.08 (1.58)	0.99	202.82	0.14 [−0.14, 0.41]
Reporting	4.31 (1.76)	4.06 (1.73)	1.02	203.26	0.14 [−0.13, 0.42]

\*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ 

responsibility for the encounter. The other preregistered mediation analyses of the main dependent variables are presented in the Supplementary Information (<https://osf.io/g9a52>).

There was not a significant indirect effect through Chris' agency in explaining variation in perceptions of whether Chris committed an assault ( $p = .74$ ) or whether an assault occurred under university policy ( $p = .78$ ). However, despite the lack of a significant effect of intoxication on Chris' responsibility, there was a significant indirect effect of intoxication on Chris' responsibility through perceived agency,  $b = -0.25$ , 95% CI [−0.54, −0.06],  $p = .003$ . Like in Study 2, participants who read that Chris was intoxicated considered him less agentic and, consequently, less responsible for the hook-up than those who read that Chris was sober.

### Exploratory Analyses of Gender Differences

As in the previous studies, we explored whether responses to the intoxication manipulation differed by participant gender using 2 (intoxication: sober vs. intoxicated) by 2 (gender: men vs. women) ANOVAs. Unlike our first two studies, we observed one significant interaction between gender and intoxication condition: while men and women in the sober condition perceived Chris as committing an assault to the same degree,  $t(191) = -0.09$ ,  $p_{\text{Tukey}} = .99$ ,  $d = -0.02$ , women in the intoxication condition thought that Chris committed an assault significantly more than men in the intoxication condition,  $t(191) = 2.65$ ,  $p_{\text{Tukey}} = .043$ ,  $d = 0.56$ . There were no other significant interactions for the remaining outcome variables. Additional statistics for these analyses are presented in the Supplementary Information (<https://osf.io/g9a52>).

### Discussion

In Study 3, we recruited more men to explore the generalizability of our findings from Studies 1 and 2. Unlike previous studies, we did not find evidence that Chris' intoxication directly impacted participants' perceptions of the encounter other than perceptions of Chris' consent. Though smaller effects may have gone undetected due to the small sample

size, this suggests that students' judgements of an ambiguous hook-up are only modestly influenced by the intoxication of the respondent. Nevertheless, as in Study 2, we found a significant indirect effect whereby perceptions of Chris' agency significantly mediated the influence of Chris' intoxication on perceptions of his responsibility. Although men and women differed in how much they believed that Chris committed an assault in the drunk condition, there were not any significant differences between men and women in how the intoxication manipulation influenced their perceptions of Chris' agency and responsibility. Once again, despite university policies to the contrary, students perceived intoxicated respondents as having less agency and thus less responsibility for their sexual behavior than sober respondents.

### Internal Meta-Analysis

Given the varying findings and sample sizes in our previous studies, we conducted an internal meta-analysis of the three studies to provide clarity on the size of the effects (Goh et al., 2016). We conducted random-effects meta-analyses (using restricted maximum likelihood as the estimator) for the effect of intoxication (sober vs. intoxicated) on the various dependent variables using the *metafor* package in R (Viechtbauer, 2010). For the two dichotomous consent variables (for Chris and Patricia), only Study 2 and Study 3 were included in the meta-analyses since we did not measure dichotomous consent in Study 1. For the continuous consent variables, we included the 0–100 measure from Study 1, the 1–7 measure from Study 2, and the index of university-defined consent from Study 3.

As shown in Table 4, there was a significant effect of intoxication on 6 out of the 10 dependent variables. Figures 2 and 3 illustrate the meta-analytic effects of the intoxication manipulations on perceptions that Chris committed an assault (continuous) and Chris' responsibility, respectively. Overall, participants were more likely to perceive a sexual assault occurring and see Chris as more responsible for the encounter when he was sober compared to when he was intoxicated.

**Table 4** Internal Meta-Analyses of the Effect of Intoxication on the Dependent Variables

Variable	<i>d</i>	<i>OR</i>	<i>p</i>	95% CI
<b>Chris’ consent</b>	<b>0.48</b>		<b>.04</b>	<b>[0.02, 0.94]</b>
<b>Chris’ responsibility</b>	<b>0.34</b>		<b>.047</b>	<b>[0.00, 0.68]</b>
Sexual assault under university policy		1.78	.16	[0.80, 3.97]
<b>Chris’ consent (dichotomous)</b>		<b>1.69</b>	<b>.02</b>	<b>[1.08, 2.64]</b>
<b>Perceptions of a sexual assault (dichotomous)</b>		<b>1.65</b>	<b>.01</b>	<b>[1.14, 2.41]</b>
<b>Punishment</b>	<b>0.23</b>		<b>.048</b>	<b>[0.00, 0.47]</b>
<b>Chris committed a sexual assault</b>	<b>0.21</b>		<b>.002</b>	<b>[0.08, 0.34]</b>
Reporting	0.19		.21	[-0.10, 0.48]
Patricia/Alexis’ consent	-0.10		.12	[-0.24, 0.03]
Patricia/Alexis’ consent (dichotomous)		0.83	.56	[0.45, 1.53]

Variables are ordered from the strongest effect to the smallest. Effects are calculated such that positive effect sizes indicate participants had higher scores on that variable in the sober conditions compared to the intoxicated conditions. Bolded rows indicate statistically significant effects ( $p < .05$ )

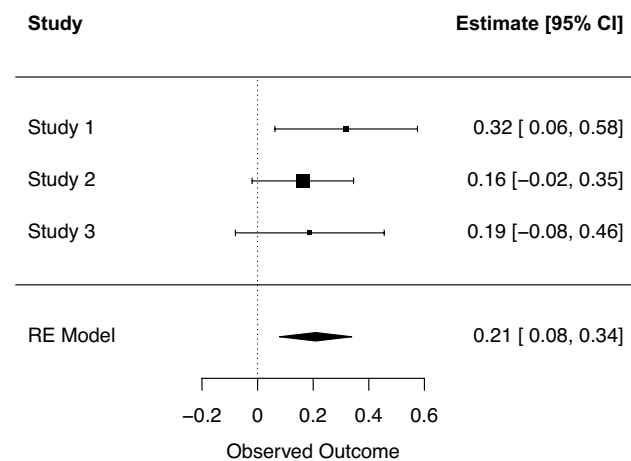
### General Discussion

Three studies provided evidence that a respondent’s level of intoxication influenced university students’ judgments of an ambiguous hook-up scenario. Students more strongly believed that a respondent had committed a sexual assault against a complainant when he was sober than when he was intoxicated. While the effects of perceived intoxication on judgments of sexual assault fluctuated across samples, our internal meta-analysis (Goh et al., 2016) found modest, significant effects across the two operationalizations of perceived sexual assault. Furthermore, although university policy states that a respondent’s own intoxication is not a valid excuse for believing they had obtained consent from a complainant (University of California, 2020), students believed that the respondent in our studies was less responsible for the encounter and deserved less punishment when he was intoxicated. Our findings align with recent research that deployed similarly ambiguous hook-up scenarios (Henry et al., 2021), yet our results run counter to those of studies

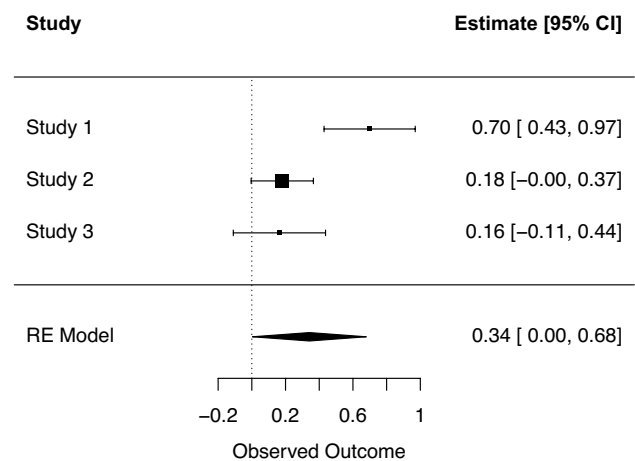
that used unambiguous depictions of assault, which found no effects of respondent intoxication on assault determinations and character judgments (Maurer, 2016; Maurer & Robinson, 2008; Untied et al., 2012). These findings, taken together, suggest that a respondent’s level of intoxication influences students’ judgments more strongly—or perhaps exclusively—when they evaluate scenarios in which it is not clear whether an assault occurred. Overall, the present results indicate that students’ perceptions of the culpability of respondents in ambiguous sexual scenarios are influenced by factors which are deemed irrelevant to assault determinations under university policies.

### Practice Implications

In Studies 2 and 3, we found evidence that perceptions of the respondent’s agency mediated the effect of intoxication on perceptions of responsibility for his sexual behavior. Aligning with research from moral psychology, which finds that reducing perceptions of agency can subsequently diminish



**Fig. 2** Forest Plot for the Meta-Analysis of Perceptions that Chris Committed a Sexual Assault



**Fig. 3** Forest Plot for the Meta-Analysis of Perceptions of Chris’ Responsibility

attributions of responsibility (Clark et al., 2014; Shariff et al., 2014), our research highlights how common moral intuitions may undermine universities' attempts to impart comprehension of their sexual assault policies. Students may be less inclined to judge others as responsible for initiating sexual behavior when their agency is perceived to be compromised by alcohol intoxication. Indeed, despite being mandated to complete annual sexual assault prevention trainings, the students in our studies forwarded judgments about the vignettes that were unduly influenced by the respondent's level of intoxication. Applying insights from fields like moral psychology (Inbar, 2018) may help university stakeholders clarify ambiguities in sexual violence policies and improve prevention programming.

### Limitations and Future Directions

Nevertheless, our studies had important limitations. First, our manipulations of what the respondent should have known about the complainant's intoxication in Studies 1 and 2 were not as effective or precise as intended. Thus, it remains unclear how attentive students are to various cues of intoxication and how perceiving those cues affects their evaluations of sexual encounters. Future research should refine these manipulations, though we note that such refinement may be difficult without definitions of intoxication and incapacitation that more clearly differentiate the constructs in terms of associated behaviors and mental states. This is a distinction that students likely have trouble making as well, and future research exploring students' understanding of the terms "intoxication" and "incapacitation" may also be of value to university stakeholders.

Second, we relied on student samples from a single university, and we predominantly recruited women from a social sciences lab pool (though Study 3 did recruit a broader convenience sample). Exploratory analyses indicated that men and women were generally influenced by the intoxication manipulations to the same degree across our samples (with one exception in Study 3), consistent with past research on sex roles and blame attributions (Sims et al., 2007). Both men and women in our studies found the male respondent less responsible for the hook-up when he was intoxicated, in line with a gendered double standard of intoxication and blame attributions observed in some prior work (Grubb & Turner, 2012; Richardson & Campbell, 1982). Nevertheless, future research should recruit more gender-balanced samples, and manipulate the gender and intoxication of both complainants and respondents, to further explore the ways in which gender influences perceptions of ambiguous hook-up scenarios. Additionally, our student samples were ethnically diverse, but we did not have sufficient statistical power to test for differences across participant ethnicity. Further examining how factors like gender, ethnicity, and education may

impact judgments of ambiguous hook-ups may illuminate important nuances in these effects that we could not detect.

Third, we could not determine the extent to which students' concerns about social desirability may have impacted our findings. We do not believe such concerns substantially influenced our results given that large proportions of participants did not believe that Chris committed an assault in each study (43%, 34%, and 28%, respectively); nonetheless, future research should attempt to account for potential social desirability effects more directly. Lastly, the observed effects were small and inconsistent across studies, and the use of vignettes may not fully capture how students would react to similar situations in more naturalistic contexts. Our internal meta-analyses indicated that we documented small-to-medium sized effects, but further examinations of these research questions should be conducted at other universities to assess the generalizability of these findings.

### Conclusion

Universities have an obligation to help students understand how to navigate sexual scenarios involving alcohol (Bennet & Jones, 2018; Schroeder, 2014; Yoffe, 2017). To fulfill this duty, university stakeholders must first understand how students perceive such situations, especially those in which it may not be immediately clear whether sexual misconduct is occurring. The present research found that students evaluated ambiguous hook-up scenarios more leniently when the respondent was intoxicated, despite university policies that explicitly state that respondent intoxication is not relevant to determinations of culpability. These effects emerged, in part, because students perceived intoxicated respondents as being less agentic and less responsible for their actions. Moreover, sizeable minorities of our samples (12–22%) believed that the hook-up was not an assault yet thought it would be considered an assault by university authorities. This is concerning, for students may not report ambiguous incidents if they believe that universities will be overzealous in their assault determinations. We encourage university stakeholders to consider how insights from psychological science, such as the present findings, may help them test and develop programming that better addresses the discrepancies between students' perceptions and university policies.

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**Data Availability** All preregistrations, data, and materials are available on our OSF page: <https://osf.io/fc7rh/>.

## Declarations

**Informed Consent** All our studies received IRB approval, and all participants involved in this research provided informed consent.

**Conflicts of Interest** The authors have no financial or non-financial conflicts of interests to disclose.

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