Evaluations and Perceptions of Others' Evaluations of Negative Alcohol-Related Consequences Predict Negative Alcohol-Related Consequences Among College Drinkers

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ABSTRACT. Objective: A key assumption when assessing alcohol-related problems is that these problems are considered negative. A growing literature suggests that college drinkers do not perceive all measured consequences to be negative. Research has established the impact of others' beliefs on personal beliefs and behaviors. The purpose of this study was to assess the effect of perceptions of others' evaluations (POE) of consequences on one's own evaluations and subsequent experiences of consequences. **Method:** A sample of 885 heavy drinking college students participated in a longitudinal study. Participants reported the number of alcoholic drinks consumed per week, experiences of alcohol-related problems, evaluations of those consequences, and perceptions of how typical university students evaluate those consequences. A moderated mediation of POE on negative alcohol-related consequences via evaluations of consequences at differing levels of alcohol consumption

was conducted, with gender, baseline consequences, and intervention effects being controlled for. **Results:** Results indicated that POE had no direct effect on subsequent consequences. However, an indirect effect was found through evaluations of consequences, such that there was a positive association between both POE and evaluations of consequences, and evaluations of consequences and subsequent consequences. Average weekly drinking moderated the association between POE and evaluations of consequences, such that the association between POE and evaluations of consequences was stronger for those who drank more heavily. **Conclusions:** Results are consistent with social cognition processes, such as pluralistic ignorance, and suggest that POE and evaluations of consequences should be considered in the construction of interventions targeting heavy-drinking college students. (*J. Stud Alcohol Drugs*, 78, 249–257, 2017)

THE USE AND MISUSE OF ALCOHOL by college students has been relatively stable over the last 30 years and is consistently associated with negative consequences (White & Hingson, 2014). Although the most recent large representative survey of college drinkers suggests that alcohol use and misuse has declined slightly (Johnston et al., 2014), the majority of surveyed students report drinking. This decline may be, in part, the result of intervention efforts focused on reducing hazardous drinking in this population. Specifically, brief individually based motivational interventions that incorporate normative feedback have been found to be successful in reducing the average amount of alcohol consumed by students (Cronce & Larimer, 2011; Larimer & Cronce, 2002, 2007; Larimer et al., 2004, 2005; Miller et al., 2013; Walters & Neighbors, 2005). However, despite these successes, such brief interventions have been less effective in reducing alcohol-related problems (Borsari & Carey, 2000, 2005; Larimer et al., 2001, 2007; Marlatt et al., 1998; Neighbors et al., 2004). This may be because specific components of these brief interventions, such as normative feedback, most often focus on alcohol consumption and not

consequences. Understanding the possible reasons for this discrepancy in outcomes is important for improving college alcohol prevention efforts and improving overall student well-being.

Evaluations of negative alcohol-related consequences

Evaluations of alcohol outcomes have previously been examined in the context of alcohol expectancy effects, demonstrating the utility of distinguishing between expectancies and evaluations of expectancies related to drinking (Burden & Maisto, 2000; Fromme et al., 1993; Wood et al., 1996). More recent research has focused specifically on students' evaluations of negative consequences and how these perceptions influence their future drinking behavior (Mallett et al., 2013; Patrick & Maggs, 2011; White & Ray, 2014). Findings have suggested that certain consequences may not be considered negative but, in fact, may be considered neutral or even positive among college students. Mallett and colleagues (2008) examined college students' perceptions of the positive and negative valence of alcohol-related consequences they experienced during the past year. Hangovers, blackouts, and physical or social embarrassment were rated by students to be neutral or even positive (Mallett et al., 2008).

Evaluations of these consequences are important to consider, especially as they may affect individuals' willingness to experience them. Given the continued ubiquity of drinking in college (Johnston et al., 2014) and evidence

Received: May 3, 2016. Revision: November 15, 2016.

This research was supported by National Institute on Alcohol Abuse and Alcoholism Grant R01AA014576.

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suggesting that drinking is considered part of the college culture (Osberg et al., 2010, 2011), college students may be more willing to experience certain consequences that may not be considered as problematic (e.g., vomiting, hangovers) compared with others (e.g., sexual assault, legal problems). The “price to pay for drinking” may be considered minimal, given the potential for experiencing positive consequences of drinking, such as having a good time or having a funny story to tell. Mallett and colleagues (2011) further examined willingness to experience specific consequences as a predictor of experiencing alcohol-related problems. Willingness to experience negative consequences was associated with norms and attitudes toward these consequences and accounted for a significant portion of the variance in experiencing consequences (Mallett et al., 2011). In addition, research has found that perceiving recently experienced consequences more negatively was associated with reductions in both drinking and consequences in the short term (Barnett et al., 2015; Merrill et al., 2013). Taken together, these results suggest that what researchers deem to be “negative” consequences of drinking may not be perceived as negative by many heavy drinking college students. Furthermore, these perceptions affect subsequent drinking behaviors and experiences of these consequences, both globally and on an event level.

Perceptions of evaluations of negative alcohol-related consequences

Although there is empirical evidence to suggest that subjective evaluations of alcohol-related consequences may affect the experience of actual consequences, it is unclear where these evaluations come from and to what extent they are grounded within a social context. Although not previously examined with respect to alcohol specifically, the impact of perceptions of how others evaluate behaviors and associated outcomes have been found to have pervasive and sometimes dramatic influences on individual’s own behaviors and evaluations of related outcomes. This principal and related phenomenon have been described and examined in a number of seminal and diverse perspectives on social influence, including social norms (Sherif, 1936), reasoned action and planned behavior (Ajzen, 1985; Fishbein & Ajzen, 1975), modeling and social learning (Bandura et al., 1961), adoption of social roles (Zimbardo, 1973), obedience to authority (Milgrim, 1963), and others. These include Cialdini and colleagues’ (1990, 1991) social norms framework, which suggests that perceptions of how others behave, or their perceptions of others’ attitudes with regard to a specific behavior, affect their own perceptions and consequently their own behaviors. As such, perceptions of the frequency with which other college students experience “negative” consequences, as well as perceptions of their evaluations of such consequences, may affect drinking behaviors and subsequent experiences of those consequences. A study by

Lee and colleagues (2010) examined alcohol use and eight specific consequences selected from the Young Adult Alcohol Problems Screening Test (Hurlbut & Sher, 1992), as well as beliefs about the frequency of experiencing the consequences and evaluations of the consequences in a sample of college students over the course of 2 years. The results indicated that college students tended to overestimate the frequency with which others experienced alcohol-related consequences and underestimated how negatively other students viewed these consequences.

In addition, recent research by Brett and colleagues (2016) examined self–other discrepancies between descriptive/injunctive and perceived descriptive/injunctive norms for alcohol-related consequences. In keeping with the literature on self–other discrepancies, the authors found that participants overestimated the prevalence of other same-sex students’ alcohol-related consequences and viewed consequences as more acceptable for others to experience than for themselves to experience (Brett et al., 2016). These misperceptions may then affect the prevalence of experiencing these consequences after drinking, which is the central aim of the present research.

Current study

Evidence suggests that evaluations of alcohol consequences may affect one’s own evaluations and experiences of these consequences. Moreover, based on the social norms literature, perceived evaluations of consequences may affect personal evaluations of consequences and subsequent experiences of these consequences. Heavier drinkers who have higher positive expectancies and higher perceived drinking norms may evaluate these consequences more positively and may be more influenced by the perceptions of others’ evaluations (POE) of these consequences. Therefore, the purpose of the present study was to examine whether POE of consequences were associated with one’s own evaluations of consequences and prospective experiences of consequences, as well as whether these prospective associations were moderated by alcohol consumption.

Method

Participants and procedures

Participants included 885 (45% women) undergraduate students at a large southern university. Participants were between 18 and 26 years old ($M = 21.5$, $SD = 1.97$), and met 4+/5+ (i.e., four or more standard drinks for women/five or more standard drinks for men in one sitting) criteria for heavy drinking in the past month. Approximately 26.4% of participants identified as White, 22% as Asian, 15.3% as Black/African American, and 29.5% Hispanic. These demographics are representative of the university student body.

From summer 2013 to fall 2014, all students who were enrolled at the university were invited via e-mail to participate in a brief online screening survey as part of a larger intervention study to examine the effect of a deviance regulation-based personalized normative feedback intervention to reduce drinking ($n = 31,294$). Of those invited, 12,471 (40%) completed the screening survey. Students who were 18-26 years old and met 4+/5+ drinking criteria in the past month were invited to complete baseline and intervention activities ($n = 2,970$; 24%). Of these, 959 (32%) completed baseline activities, which took place in-lab between the summer of 2013 and the fall of 2014. Follow-up surveys were completed remotely 3 months ($n = 780$; 83%) and 6 months ($n = 758$; 80%) after baseline. In total, 885 baseline completers completed all relevant measures at baseline, the 3-month follow-up, and the 6-month follow-up and were thus included in the present analyses.

Participants were contacted multiple times, if necessary, to complete baseline and follow-up activities. Participants were contacted via phone calls, text messages (only to those who provided approval for being contacted by phone and texting) and emails to remind them to complete the assessments. Each survey took between 30 and 40 minutes to complete. Participants received a \$25 Amazon.com gift card code on completion of each survey. All study procedures were approved by the university's Committee for the Protection of Human Subjects.

Measures

All measures were assessed at baseline, the 3-month follow-up, and the 6-month follow-up. Follow-up measures assessed for the previous 3 months, so as not to overlap with baseline.

Drinks per week. The average number of drinks consumed per week was measured with the Daily Drinking Questionnaire (Collins et al., 1985; Kivlahan et al., 1990). Participants were instructed to fill in seven boxes (one for each day of the week) with their typical alcohol consumption for that day during the past 3 months. The number of drinks for all 7 days was then summed to create a composite measure of alcohol consumption. This measure has been found to have high levels of validity with other measures of drinking behaviors (Baer et al., 1991; Borsari & Carey, 2000; Neighbors et al. 2004, 2006).

Negative alcohol-related consequences. Negative alcohol-related consequences were measured with the Rutgers Alcohol Problem Index (RAPI; White & Labouvie, 1989). The original RAPI consisted of 23 items and asked students to rate how many times a problem related to alcohol consumption has occurred for them within the past 3 months on a scale from 0 (*none*) to 4 (*10+ times*). Two items have since been added, assessing driving after consuming two drinks and driving after four drinks ($\alpha = .89$).

Evaluations of consequences and perceptions of evaluations of consequences. Evaluations of consequences were measured with a modified version of the RAPI. In this version, participants were asked to evaluate how positive or negative each experience would be if it were to happen to them for each of the 25 items. Response options were provided on a 7-point Likert scale, ranging from -3 (*extremely negative/bad*) to +3 (*extremely positive/good*; $\alpha = .94$). POE were similarly measured with a modified version of the RAPI. In this version, participants were asked to evaluate how positive or negative a typical [university name] student would view each experience if it were to happen to them for each of the 25 items. Answers were again provided on a 7-point Likert scale, ranging from -3 (*extremely negative/bad*) to +3 (*extremely positive/good*; $\alpha = .93$).

The modified RAPI has been used extensively in similar samples. The modification of response options to assess evaluations and perceived evaluations was inspired by the evaluation of expectancies in the Comprehensive Effects of Alcohol measure of expectancies (Fromme et al., 1993). POE of consequences has been similarly assessed by Lee and colleagues (2010) with selected items from the Young Adult Alcohol Problems Screening Test.

Data analysis

To test for moderated mediation at baseline, 3-month follow-up, and 6-month follow-up, we used the PROCESS macro for SPSS, Model 8 (Hayes, 2013). PROCESS is a technique that tests for conditional process models. These models are used to understand and describe the conditional nature of the mechanism by which one variable affects another variable (i.e., moderated mediation). Hypotheses are tested through the construction of standard errors and bootstrapped confidence intervals (CIs). Mediation is tested by computing the indirect path following the *ab* product term approach (MacKinnon et al., 2002), as well as bootstrapped 95% asymmetric CIs around the indirect effect of *ab* (Hayes, 2013; MacKinnon et al., 2002).

First, we examined the effect of baseline POE on 6-month alcohol-related consequences, assessed both directly and indirectly, through 3-month evaluations of consequences, while we controlled for sex, intervention effects, and baseline alcohol-related consequences. Second, we assessed the conditional indirect effects of POE on alcohol-related consequences through evaluations of consequences as a function of drinks per week at baseline.

Results

The mean number of reported drinks per week at baseline was 7.87 ($SD = 7.75$) and the mean number of RAPI consequences endorsed at baseline was 1.09 ($SD = 2.28$). The mean baseline evaluation valence was -1.80 ($SD = 0.87$) and

TABLE 1. Percentage of Rutgers Alcohol Problems Index items endorsed and discrepancies between evaluations of consequences and POE

Item	%	Eval.	POE	Diff.
Tried to control your drinking by trying to drink only at certain times of the day or in certain places?	16.14%	-0.05	-0.11	-0.06
Noticed a change in your personality?	11.85%	-0.99	-0.87	0.12
Drove shortly after having more than two drinks?	7.90%	-1.97	-1.55	0.42
Felt that you needed more alcohol than you used to use to get the same effect?	7.34%	-1.38	-0.88	0.50
Neglected your responsibilities?	6.77%	-2.01	-1.60	0.41
Tried to cut down or quit drinking?	5.64%	0.15	-0.07	-0.22
Not able to do your homework or study for a test?	5.53%	-1.68	-1.45	0.23
Went to work or school high or drunk?	5.53%	-2.02	-1.62	0.40
Missed out on other things because you spent too much money on alcohol?	4.29%	-1.78	-1.49	0.29
Kept drinking when you promised yourself not to?	3.72%	-1.46	-1.45	0.01
Got into fights, acted bad, or did mean things?	3.16%	-2.05	-1.75	0.30
Felt that you had a problem with alcohol?	3.16%	-2.07	-1.79	0.28
Suddenly found yourself in a place that you could not remember getting to?	3.16%	-2.10	-1.80	0.30
Caused shame or embarrassment to someone?	2.93%	-1.79	-1.52	0.27
Missed a day (or part of a day) of school or work?	2.93%	-1.95	-1.52	0.43
Had a fight, argument, or bad feelings with a friend?	2.93%	-1.95	-1.54	0.41
Had a bad time?	2.93%	-2.15	-1.83	0.32
Felt physically or psychologically dependent?	2.93%	-2.15	-1.83	0.32
Drove shortly after having more than four drinks?	2.37%	-2.50	-2.13	0.37
Was told by a friend or neighbor to stop or cut down your drinking?	2.14%	-1.99	-1.56	0.43
Felt you were going crazy?	1.58%	-2.22	-1.93	0.29
Had a fight, argument, or bad feelings with a family member?	1.47%	-2.26	-1.97	0.29
Had withdrawal symptoms, that is, felt sick because you stopped or cut down on drinking?	1.02%	-2.16	-1.87	0.29
Relative avoided you?	0.90%	-2.02	-1.66	0.36
Passed out or fainted suddenly?	0.68%	-2.38	-2.00	0.38

Notes: Eval. = personal evaluations; POE = perceptions of others' evaluations; diff. = differences in personal and perceptions of evaluations.

the mean baseline perception of others evaluations valence was -1.51 ($SD = 0.79$). POE were significantly higher than personal evaluations, $t(883) = 11.84$, $p < .001$. Evaluations of consequences were positively correlated with drinks per week, $r(883) = .16$, $p < .001$, and negative consequences, $r(883) = .15$, $p < .001$. POE were also positively correlated with evaluations of consequences, $r(882) = .63$, $p < .001$.

Table 1 lists 25 consequences from the RAPI in order of most commonly experienced to least commonly experienced, as well as ratings of personal evaluations, POE, and the discrepancy between personal evaluation and POE. As a reminder, possible responses for evaluations and POE were -3 to 3 where 0 = *neutral*. All but one consequence had a negative evaluation. "Tried to cut down or quit drinking" was evaluated positively (.15), although not significantly

different from zero. There was a strong association between the frequency of a given consequence and its evaluation ($r = .76$). Consequences experienced least frequently tended to be among those evaluated most negatively (e.g., "Passed out or fainted suddenly" and "Had a fight, argument, or bad feelings with a family member"). In contrast, consequences experienced most frequently tended to be among those evaluated least negatively (e.g., "Tried to control your drinking by trying to drink only at certain times of the day or in certain places" and "Noticed a change in your personality"). Discrepancies between evaluations and POE ranged in magnitude but suggested a consistent tendency to believe others evaluated consequences less negatively than oneself.

Results of the moderated mediation analysis (Table 2 and Figure 1) indicated that there was no significant direct effect

TABLE 2. Conditional direct effects of POE on alcohol-related problems on different values of baseline drinks per week

Three-month evaluation of consequences	Baseline DPW	Effect	Bootstrapped SE	Bootstrapped LLCI	Bootstrapped ULCI
One SD below the mean	0.125	-0.081	0.527	-1.116	0.954
Mean	7.871	-0.500	0.372	-1.231	0.230
One SD above the mean	15.617	-0.920	0.544	-1.988	0.148

Notes: POE = perceptions of others' evaluations; DPW = drinks per week; LLCI = lower limit confidence interval; ULCI = upper limit confidence interval.

of baseline POE on 6-month consequences (direct effect CI [-1.2310, .2304]). Tests of conditional indirect effects (Table 3 and Figure 2) indicated that there was a significant indirect effect of baseline POE on 6-month consequences via 3-month evaluations of consequences and that the more one reported drinking at baseline, the stronger the indirect effect was (conditional indirect effect CI [.0009, .0329]).

Considering the possibility that POE and one's own evaluations of consequences are correlated and might not demonstrate significant variance over time, we tested an alternative model in which we conducted the same analysis reversing POE and evaluations as the predictor and mediator, respectively. In this model, personal evaluations did not predict subsequent POE. In addition, multilevel examinations of personal evaluations as a function of POE indicated significant variance at between- and within-person levels, with within-person variance accounting for 46.5% of total variance across POE scores through the three assessment points.

Discussion

The purpose of this study was to examine whether POE of consequences were associated with one's own evaluations and experiences of consequences, as well as whether alcohol consumption moderated these associations. Similar to find-

ings by White and Ray (2014), the most commonly experienced consequences were generally found to be evaluated the least negatively. Contrary to the findings of Mallett et al. (2008), the majority of consequences were evaluated negatively. "Tried to control your drinking by trying to drink only at certain times of the day or in certain places" and "Tried to cut down or quit drinking" were evaluated as least negative and even neutral by most participants. Although these two items map most closely onto the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (American Psychiatric Association, 2013), criterion of recurrent attempts to cut down or stop drinking, it may be that students are interpreting the actions depicted in these statements as attempts to reduce drinking or to drink more responsibly (i.e., harm reduction or protective behavioral strategies). In addition, both of these items were highly endorsed at baseline (Table 1), which may explain to some extent why they were perceived as neutral. It may be that if students experience certain consequences more frequently, their subjective evaluation of these specific consequences may become less negative.

Findings also revealed no direct effect of POE on subsequent consequences. However, there was an indirect effect of POE on consequences via evaluations of consequences, such that there was a positive association between POE and evaluations of consequences, and evaluations of consequences and

FIGURE 1. Indirect effect of baseline perceptions of others' evaluations (POE) on 6-month consequences via 3-month evaluation of consequences
* $p < .05$; *** $p < .001$.

TABLE 3. Conditional indirect effects of POE on alcohol-related problems on different values of baseline drinks per week

Three-month evaluation of consequences	Baseline DPW	Effect	Bootstrapped SE	Bootstrapped LLCI	Bootstrapped ULCI
One SD below the mean	0.125	0.109	0.085	-0.002	0.356
Mean	7.871	0.197	0.103	0.048	0.465
One SD above the mean	15.617	0.286	0.147	0.070	0.663

Notes: POE = perceptions of others' evaluations; DPW = drinks per week; LLCI = lower limit confidence interval; ULCI = upper limit confidence interval.

subsequent consequences. These are similar to findings by Lee et al. (2010), which suggest that norms regarding POE may affect evaluations and experiences of consequences. Moreover, students' personal evaluations of consequences were more negative than their POE of consequences. One possible explanation for this may be based in the concept of pluralistic ignorance, or perceiving others as more approving of problematic drinking behaviors than one's self (Baer et al., 1991; Marks et al., 1992; Prentice & Miller, 1993). Participants may perceive that others evaluate consequences less negatively, or more positively, than they themselves do because individuals feel uncomfortable expressing their negative views. Although the majority may actually disapprove, failure to voice concerns or express disapproval may lead individuals to feel as though their disapproval is in the minority, which perpetuates unwillingness to express concern.

In addition, drinks per week moderated the association between POE and evaluations of consequences, such that the more one drank, the stronger the association between POE and evaluations of consequences. Results indicate

that more drinks per week were associated with more positive evaluations of consequences. Moreover, heavier drinkers have higher positive expectancies (Burden & Maisto, 2000; Fromme et al., 1993; Wood et al., 1996) and higher perceived drinking norms (Neighbors et al., 2007). Heavier drinkers may have social networks that have a higher proportion of heavy drinkers who are likely to experience more consequences. Greater exposure to individuals who experience consequences more frequently is likely to affect POE of consequences (e.g., "not a big deal" or "happens to everyone"). Evaluation of one's own consequences in this network is likely to mirror these perceptions. In contrast, individuals who have fewer heavier drinkers in their social networks may rarely see others experience alcohol-related consequences such as vomiting or passing out. Infrequent exposure to individuals who experience consequences is likely to correspond with POE of consequences (e.g., viewed as unprofessional or belief that the person has a problem). This would likely translate into more negative evaluations of one's own consequences and a lower likelihood of experiencing them.

FIGURE 2. Drinks per week at baseline moderates the association between baseline perceptions of others' evaluations (POE) and 3-month evaluation of consequences

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

Clinical implications

Future research would benefit from incorporating evaluations of consequences into current brief motivational interventions and personalized normative feedback interventions, which, although consistently efficacious in reducing risky drinking among college students (Cronce & Larimer, 2011; Larimer & Cronce, 2002, 2007), are less consistently effective at reducing negative alcohol-related consequences (Borsari & Carey, 2000, 2005), presumably because the normative feedback component is focused on alcohol consumption and not necessarily consequences. In light of growing literature that suggests that there are discrepancies between personal experiences of both the frequency with which consequences are experienced, as well as personal evaluations of consequences, and perceptions of frequency and evaluations (Lee et al., 2010), further research is warranted to examine the impact of POE of consequences on personal evaluations of consequences. Viewing discrepancies between POE and personal evaluations may reduce the perceived norms associated with how positively or negatively experiencing these consequences is viewed.

Although current individually focused interventions typically include a discussion of consequences experienced, they do not include a norms component specifically focused on alcohol-related consequences. Current normative feedback interventions could be modified to focus on consequences that students perceive to be most negative in order to increase motivation to reduce high-risk drinking behaviors. Feedback would be presented in a motivational interviewing style, similar to that in the Brief Alcohol Screening and Intervention for College Students (BASICS; Dimeff et al., 1999). For instance, participants could be presented with feedback indicating that they evaluate feeling as if they need more alcohol than they used to in order to get the same effect to be somewhat negative/bad; that they perceive that the typical student (or same-sex student) at their college/university evaluates needing more alcohol than he or she used to in order to get the same effect to be less negative/bad; but that according to students surveyed, the typical student at their college/university evaluates needing more alcohol than he or she used to in order to get the same effect to be extremely negative/bad. Upon highlighting this discrepancy, the facilitator would then ask the student in an open-ended questioning style what they made of the information presented to them. Moreover, interventions could focus on consequences that are perceived to be neutral or positive, again highlighting the discrepancy between the evaluations of these consequences and the actual experiences of these consequences.

Limitations/future directions

There are some limitations to consider with regard to our findings. First, because participants were also assessed

during the summer and because first-year college students were included, reported drinking behaviors, alcohol-related consequences, and POE may be reflective of time in high school, as opposed to college. Moreover, although statistically significant, the magnitude of effect between POE and evaluations with experienced consequences is relatively small. In addition, we assessed global evaluations of POE, without considering evaluations and POE of consequences already experienced. Future studies should examine the prospective association between POE and evaluations of consequences among a subset of consequences that the participant reported experiencing recently. Furthermore, we did not consider evaluations of positive consequences, which have been considered in other studies (Mallett et al., 2008). Further work should be done to include POE and evaluations of both negative and positive consequences, which may provide further support for the association between POE and evaluations of consequences as a whole, regardless of the consequence being labeled as “negative” or “positive.” Relatedly, these findings should be replicated with other measures of negative alcohol-related consequences (e.g., Young Adult Alcohol Problems Screening Test [Hurlbut & Sher, 1992]; Young Adult Alcohol Consequences Questionnaire [Read et al., 2006]).

It is also worth considering that evaluations of consequences, and POE more specifically, are functionally equivalent to injunctive norms as they have typically been operationalized (Baer, 1994). Injunctive norms are often assessed by asking participants the extent to which they believe others approve or disapprove of specific drinking behaviors (e.g., driving after drinking, drinking enough to pass out) (Krieger et al., 2016). It is unclear whether studies examining evaluations of consequences might be asking functionally equivalent questions that have been previously examined from the framework of injunctive norms. Additional research and conceptual reviews examining the extent to which these constructs are distinct would be worthwhile.

Conclusion

This study of college drinkers prospectively found that POE of what have been typically labeled “negative” consequences are positively associated with personal evaluations of consequences, which in turn are positively longitudinally associated with experiences of consequences. Moreover, drinking behaviors moderated the association between POE and evaluations, such that there was a stronger association between POE and evaluations for heavier drinkers. These findings are consistent with social cognition processes, such as pluralistic ignorance, and provide preliminary evidence for the modification of current brief interventions to include content related to POE of consequences, which may reduce the experience of alcohol-related problems among college students.

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