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Does drinking refusal self-efficacy mediate the impulsivity–problematic alcohol use relation?

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HIGHLIGHTS

- This is the first study to use the UPPS-P to study drinking refusal self-efficacy.
- Results indicate drinking refusal self-efficacy proximally predicts alcohol use.
- Findings support prevention efforts to enhance drinking refusal.

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ABSTRACT

There is consistent evidence that impulsivity-like traits relate to problematic alcohol involvement; however, identifying mechanisms that account for this relation remains an important area of research. Drinking refusal self-efficacy (or a person's ability to resist alcohol; DRSE) has been shown to predict alcohol use among college students and may be a relevant mediator of the impulsivity–alcohol relation. The current study examined the indirect effect of various constructs related to impulsivity (i.e., urgency, sensation seeking, and deficits in conscientiousness) via several facets of DRSE (i.e., social pressure, opportunistic, and emotional relief) on alcohol-related problems among a large sample of college students ($N = 891$). Overall, results indicated that certain DRSE facets were significant mediators of the relation between impulsivity-related constructs and alcohol problems. More specifically, emotional-relief DRSE was a mediator for the respective relations between urgency and deficits in conscientiousness and alcohol problems, whereas social-DRSE was a significant mediator of the respective relations between urgency and sensation seeking with alcohol problems. Results from this study suggest particular types of DRSE are important mediators of the relations between specific impulsivity constructs and alcohol-related problems. These findings support prevention and intervention efforts that seek to enhance drinking refusal self-efficacy skills of college students, particularly those high in certain personality features, in order to reduce alcohol-related problems among this population.

1. Introduction

Evidence suggests that problematic alcohol involvement peaks in the early 20s (Dawson, Grant, Stinson, & Chou, 2004; Fillmore, 1988; Johnston, O'Malley, & Bachman, 1998). Indeed, pathological alcohol involvement has been considered a "developmental disorder of young adulthood" (Sher & Gotham, 1999), and numerous studies suggest college-attending young adults are more likely to engage in problematic drinking compared to their non-attending peers (Grant, Harford, & Grigson, 1988; O'Malley & Johnston, 2002; Schulenberg, O'Malley, Bachman, Wadsworth, & Johnston, 1996; Slutske et al., 2004; Slutske, 2005). Recent heavy episodic drinking (at least 5/4 drinks in one sitting for men/women) among college students is common (Johnston, O'Malley, Bachman, & Schulenberg, 2010), and alcohol is the greatest single contributor to college student morbidity and mortality (Hingson, Heeren, Winter, & Wechsler, 2005).

Given the concerns regarding problematic alcohol use among college students and other young adults, much focus has been placed on identifying factors that may contribute to alcohol-related problems. A large body of work has linked traits related to impulsivity with problematic alcohol use (see Littlefield & Sher, 2010; Littlefield, Stevens, & Sher, 2014; Sher, Trull, Bartholow, & Vieth, 1999, for reviews). Notably, impulsivity has been conceptualized as a heterogeneous construct with distinct facets (e.g., Cloninger, Svrakic, & Pryzbeck, 1993; Eysenck &

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Eysenck, 1987; see Evenden, 1999; King et al., 2014). Expanding on work by Lynam, Smith, Whiteside, and Cyders (2006), Whiteside and Lynam (2001) proposed a five-facet model of impulsivity, which includes positive urgency (i.e., the tendency to act rashly when experiencing extremely positive emotion; e.g., "When I am in a great mood, I tend to get into situations that could cause me problems."), negative urgency (i.e., the tendency to act rashly in response to distress; e.g., "When I feel bad, I will often do things I later regret in order to make myself feel better now."), sensation seeking (i.e., the tendency to seek out new and thrilling experiences; e.g., "I generally seek new and exciting experiences and sensations."), lack of planning (i.e., the tendency to act without thinking; e.g., reverse-scored item "I usually think carefully before doing anything."), and lack of perseverance (i.e., the inability to remain focused on a task; e.g., "I tend to give up easily."). At the facet level, each of these impulsivity-like traits have been shown to be associated with various alcohol-related outcomes, including binge drinking, alcohol dependence symptoms, and alcohol-related problems (see Littlefield et al., 2014, for a review; Cyders & Smith, 2008).

As noted by several authors (e.g., Lahey, 2009; Littlefield & Sher, 2010), identifying proximal, mediating factors that account for the more distal influence of impulsivity (and other personality features) on alcohol involvement (and other health-related behaviors) remains an important research goal. Despite a paucity of studies on the topic, drinking refusal self-efficacy (DRSE; a person's belief in their ability to resist alcohol across a variety of situations) appears to be a promising potential mechanism of the impulsivity–alcohol relation. DRSE has been found to explain unique variance in alcohol use among college students (Oei & Jardim, 2007; Young, Connor, Ricciardelli, & Saunders, 2006). Importantly, individuals lower in impulsivity may exhibit greater self-efficacy to resist drinking, which would potentially lead to decreased hazardous drinking and alcohol-related problems compared to those higher in impulsivity. Consistent with this notion, Gullo, Dawe, Kambouropoulos, Staiger, and Jackson (2010) found that DRSE mediated the relation between rash impulsiveness (as indexed by Impulsiveness scale of the I_7 questionnaire [Eysenck, Pearson, Easting, & Allsopp, 1985], the EPQ-R psychoticism scale [Eysenck & Eysenck, 1994], and the Planfulness scale from the International Personality Pool [IPIP; Goldberg, Johnson, Eber et al., 2006]) and hazardous drinking among college students (as well as treatment-seeking substance users). These findings suggest that DRSE is an important covariate to consider in the nomological network of problematic alcohol use and constructs related to impulsivity.

However, the extant literature examining drinking refusal self-efficacy as a mediator of the impulsivity–alcohol relation is limited, and the existing work in this area has utilized heterogeneous assessments of impulsivity (e.g., "rash impulsivity"; Gullo et al., 2010) that contain items that do not represent more contemporary conceptualizations of impulsivity (e.g., EPQ-R psychoticism scale [Eysenck & Eysenck, 1994], "Is (or was) your mother a good woman?"). Particular types of DRSE (rather than broadband measures) may be especially relevant to specific impulsivity facets. For example, given that individuals higher in urgency tend to act rashly in the presence of intense mood states, emotional-relief DRSE may be an important mechanism in which urgency influences alcohol outcomes.

To advance the extant literature, we examined the extent to which facets of DRSE mediated the relation between impulsivity-like traits and problematic alcohol use. To our knowledge, this is the first study to use the UPPS-P conceptualization of impulsivity (the recommended measure of impulsivity by the PhenX Toolkit; Hamilton, Strader, Pratt et al., 2011) to examine the potential mediating role of three facets of DRSE (i.e., *social pressure*, the ability to refuse alcohol in social situations; *emotional relief*, the ability to refuse alcohol in heightened negative mood states; and *opportunistic*, the ability to refuse alcohol when given the opportunity to consume) in the impulsivity–alcohol link.

2. Methods

2.1. Participants

Eight hundred and ninety-one college students were recruited for this study from a large, southwestern university. Participants (recruited from an introductory to psychology or a media and communications course) completed a battery of self-report measures online to meet the larger aims of this data collection. All participants were reimbursed for their time by earning required credits for their course. The study protocol was approved by the Institutional Review Board.

2.2. Measures

2.2.1. Demographics

Participants completed a baseline measure of demographic questions including age, gender, race, and ethnicity. Participants were 20.12 years old on average ($SD = 2.89$); 71.30% of participants identified as female, 71.49% identified as White, 9.20% identified as Black, and 23.63% identified as Hispanic/Latino(a).

2.2.2. Alcohol-related problems

Alcohol frequency, quantity, alcohol dependence symptoms, and alcohol-related problems were assessed via the 10-item Alcohol Use Disorders Identification Test (AUDIT; Babor, de la Fuente, Saunders, & Grant, 1989). A total score of this measure was calculated for each participant ($M = 6.49$, $SD = 6.07$, range = 0–39; coefficient alpha = .83), and higher scores reflected more severe alcohol-related problems. Typically, problematic alcohol use is defined by a score greater than or equal to eight; 36% of the current sample met this criteria.

2.2.3. Drinking refusal self-efficacy

A person's belief in their ability to resist alcohol was assessed by the 19-item Drinking Refusal Self-Efficacy Questionnaire — Revised (DRSEQ-R; Oei, Hasking, & Young, 2005). Items were assessed from 1 ("very sure I could *not* resist") to 6 ("very sure I could resist"). These items assessed the participants' ability to refuse alcohol in a variety of situations (i.e., higher scores reflect a greater perceived ability to refuse). This questionnaire yielded three subscales: social pressure (5 items, e.g., "How sure are you that you could resist drinking alcohol when you are at a party?"), opportunistic (7 items, e.g., "How sure are you that you could resist drinking alcohol when you are watching TV?"), and emotional relief (7 items, e.g., "How sure are you that you could resist drinking alcohol when you are angry?"). The means, standard deviations (SDs), and coefficient alphas of the three subscales were 22.94 ($SD = 6.67$; $\alpha = .94$), 39.19 ($SD = 6.12$; $\alpha = .90$), and 37.65 ($SD = 7.10$; $\alpha = .96$) for social pressure, opportunistic, and emotional relief, respectively.

2.2.4. Self-report impulsivity

Lack of planning, lack of perseverance, negative urgency, positive urgency, and sensation seeking were assessed using the 59-item UPPS-P Impulsive Behavior Scale (Lynam et al., 2006). Items were assessed from 1 ("strongly agree") to 4 ("strongly disagree"). Scales were scored such that higher scores reflect higher impulsivity. The means, SDs, and coefficient alphas of the five subscales were 22.86 ($SD = 5.64$; $\alpha = .84$), 20.08 ($SD = 4.88$; $\alpha = .80$), 27.45 ($SD = 7.09$; $\alpha = .97$), 28.56 ($SD = 9.31$; $\alpha = .93$), and 32.99 ($SD = 7.08$; $\alpha = .85$) for lack of planning, lack of perseverance, negative urgency, positive urgency, and sensation seeking, respectively.

3. Data analysis

Structural equation modeling was conducted in Mplus Version 7 (Muthén & Muthén, 2012). Three-item parcels (see Cyders, Flory,

Rainer, & Smith, 2009; Little, Cunningham, Shahar, & Widaman, 2002) were used as indicators for each facet of impulsivity from the UPPS-P. Two higher-order factors reflecting urgency (with positive and negative urgency subscale scores as indicator variables) and deficits in conscientiousness (with lack of planning and perseverance subscale scores as indicator variables) were modeled (Cyders & Smith, 2007) in addition to retaining a sensation seeking latent factor. Due to the presence of negative (though non-significant) residual variances for an indicator variable of the positive urgency latent factor as well as the lack of perseverance latent factor, residual variances for these indicators were constrained to zero.

To test the extent to which facets of drinking refusal self-efficacy (DRSE) mediated the relation between the three higher-order impulsivity constructs and alcohol problems, models were run for each corresponding manifest indicator of DRSE, such that sensation seeking, urgency, and deficits in consciousness predicted DRSE, and DRSE in turn predicted AUDIT scores.[1] More specifically, nine separate models were run, and a full model was also tested after running separate models. All constructs were adjusted for age and sex.

The following fit indices for each analysis are reported: chi-square (χ^2), the comparative fit index (CFI), the Tucker–Lewis Index (TLI), and the root mean square error of approximation (RMSEA). Given that chi-square is highly sensitive to sample size, we relied on other fit indices to assess model fit (Wang & Wang, 2012). Guidelines for CFI and TLI values suggest that .90 represents "good" fit to the data and .95 represents "excellent" fit (Hu & Bentler, 1999; Kline, 2005). RMSEA values of .05 (or below) indicate a close fit to the data, .08 a fair fit, and .10 a marginal fit (Browne & Cudeck, 1993). Full information maximum likelihood (FIML) in Mplus was used to estimate missing data. Maximum likelihood robust estimation (MLR) in Mplus was used to handle variables for nonnormal distributions, as this estimator is robust against violations of nonnormality (Mallinckrodt, Abraham, Wei, & Russell, 2006). Mediated (i.e., indirect [IE]) effects with 95% asymmetric confidence intervals (CI) were calculated for each model using Program RMediation (Tofighi & MacKinnon, 2011).

4. Results

Correlations among impulsivity facets, DRSE facets, total AUDIT scores, and relevant covariates are shown in Table 1. Consistent with prior work, results from three separate models suggested that urgency, deficits in conscientiousness, and sensation seeking significantly predicted alcohol problems, such that increased trait levels were associated with increased levels of alcohol problems (urgency: $\beta = .23$, $p < .01$; deficits in conscientiousness: $\beta = .18$, $p < .01$; sensation seeking: $\beta = .14$, $p < .01$).

Next, nine separate models with urgency, sensation seeking, and deficits in conscientiousness as independent variables were run with each facet of DRSE predicting alcohol problems. All separate mediation models fit the data well (i.e., CFI = .96–.99; TLI = .94–.99; RMSEA = .03–.06 across the nine models). Across all nine models, all but one of the tested indirect effects (IE) was significant. Urgency negatively related to social pressure-DRSE, opportunistic-DRSE, and emotional relief-DRSE, which, in turn, negatively related to alcohol problems (IE = .10, CI = .06, .13; IE = .06, CI = .03, .10; IE = .10, CI = .07, .13, for social pressure-DRSE, opportunistic-DRSE, and emotional relief–DRSE respectively). Further, deficits in conscientiousness negatively related to social pressure-DRSE, opportunistic-DRSE, and emotional relief-DRSE, which, in turn, negatively related to alcohol problems (IE = .05, .01, .08; IE = .05, CI = .03, .09; IE = .07, CI = .04, .10). Finally, the indirect effects of sensation seeking were significant through emotional relief-DRSE (IE = .03, CI = .01, .06) and social pressure-DRSE (IE = .06, CI = .02, .10), such that sensation seeking negatively related to DRSE, which, in turn, negatively related to alcohol problems.

A combined model was then estimated (see Fig. 1), which fit the data well ($\chi^2(157) = 520.99$, $p < .01$; CFI = .96; TLI = .94; RMSEA = .05). Consistent with aforementioned results, the IEs of urgency and deficits in conscientiousness on alcohol problems, via emotional relief-DRSE, remained significant (IE = .04, CI = .01, .08; IE = .02, CI = .01, .04, respectively). Further, the IEs of urgency and sensation seeking on alcohol problems remained significant via social pressure-DRSE (IE = .07, CI = .03, .11; IE = .05, CI = .01, .09, respectively). However, there were no significant IEs via opportunistic-DRSE. As shown in Fig. 1, the lack of significant IE for opportunistic-DRSE was largely driven by the small association between opportunistic-DRSE and alcohol problems (path = .15, $p = .07$), which was in the reverse direction of aforementioned models. This suggests that after taking into account emotional relief-DRSE and social pressure-DRSE, opportunistic-DRSE no longer maintains a significant, negative relation with total alcohol problems.

4.1. Supplementary analyses

Given the emotional relief subscale of the DRSE assesses drinking refusal in response to negative emotions, we tested the possibility that the influence of the higher-order urgency factor on opportunistic-DRSE was driven by negative urgency.[2] A similar pattern of results emerged for both positive and negative urgency, such that emotional relief-DRSE (as well as social pressure-DRSE and opportunistic-DRSE) was a significant mediator of the link between the respective urgency measures and alcohol problems (i.e., the IE of PU via emotional relief-DRSE = .10, CI = .02, .13; IE of PU via social pressure-DRSE = .09, CI = .06, .13; IE of PU via opportunistic-DRSE = .06, CI = .03, .10; IE of NU via emotional relief-DRSE = .09, CI = .06, .13; IE of NU via social pressure-DRSE = .12, CI = .09, .16; IE of NU via opportunistic-DRSE = .05, CI = .03, .08). These findings are consistent with the observation that the respective bivariate correlations between PU and NU with emotional relief-DRSE are of similar magnitude (see Table 1).

To determine whether the current findings shown in Fig. 1 extended to a binary measure of problematic drinking, a model that replaced the continuous AUDIT measure with a binary measure of problematic drinking (distinguishing those who scored eight or higher on the AUDIT from those who scored less than eight) but was otherwise identical to the model shown in Fig. 1 was estimated (this model requires "INTERGRATION = MONTECARLO" in Mplus and thus standard model fit indices are not available). Importantly, all of the statistically significant IEs noted above remained significant in this model, with similar estimates compared to the Model shown in Fig. 1 (i.e., urgency via emotional relief-DRSE IE = .05, CI = .01, .10; deficits in conscientiousness via emotional relief-DRSE IE = .02, CI = .01, .05; urgency via social pressure-DRSE IE = .07, CI = .03, .11; sensation seeking via social pressure-DRSE IE = .05, CI = .01, .09). These analyses suggest the mediational pathways shown in Fig. 1 are robust to various operationalizations of alcohol involvement (also see Footnote 1). Finally, supplementary analyses (available from the first author upon request) did not indicate that any of the mediational pathways were conditional on biological sex.

[1] We also tested the indirect effects of urgency, deficits in conscientiousness, and sensation seeking on three subscales of the AUDIT: 1) hazardous use (e.g., "How often do you have six or more drinks on one occasion?") 2) dependence (e.g., "How often during the last year have you failed to do what was normally expected from you because of drinking?) 3) harmful use (e.g., "Have you or someone else been injured as a result of your drinking?"). A similar pattern of results were found with social pressure-DRSE significantly mediating the relations between sensation seeking and urgency on the three subscales of alcohol problems, opportunistic-DRSE significantly mediating the relations between urgency and deficits in conscientiousness on the three subscales of alcohol problems, and emotional relief-DRSE significantly mediating the relations between urgency and deficits in conscientiousness on the three subscales of alcohol problems.

[2] We appreciate an anonymous Reviewer for noting this possibility.

Table 1
Correlations among impulsivity-like traits, DRSE facets, alcohol problems, and covariates.

	Age	Gender	NU	PU	LPlan	LPer	SS	DRSE-SP	DRSE-O	DRSE-ER	AUDIT
Age	1.00										
Gender	−0.11**	1.00									
NU	−0.02	−0.01	1.00								
PU	−0.01	−0.11**	0.75**	1.00							
LPlan	0.03	−0.01	0.09**	0.15**	1.00						
LPer	−0.01	−0.01	0.31**	0.32**	0.58**	1.00					
SS	−0.04	−0.18	0.25**	0.27**	−0.15**	−0.25**	1.00				
DRSE-SP	−0.03	0.06	−0.25**	−0.21**	−0.11**	−0.08*	−0.14**	1.00			
DRSE-O	−0.07*	0.16**	−0.21**	−0.32**	−0.14**	−0.22**	−0.03	0.52**	1.00		
DRSE-ER	−0.04	0.12**	−0.28**	−0.30**	−0.12**	−0.18**	−0.09**	0.64**	0.82**	1.00	
AUDIT	0.04	−0.06	0.22**	0.21**	0.19**	0.10**	0.14**	−0.49**	−0.25**	0.65**	1.00

Note. Male = 1; Female = 2. NU = negative urgency. PU = positive urgency. LPlan = lack of planning. LPer = lack of perseverance. SS = sensation seeking. DRSE-SP = drinking refusal self-efficacy social pressure. DRSE-O = drinking refusal self-efficacy opportunistic. DRSE-ER = drinking refusal self-efficacy emotional pressure. AUDIT = total alcohol problems score. n = 795–857.
* $p < .05$.
** $p < .01$.

5. Discussion

Identifying mechanisms that account for the relation between the distal influences of impulsivity constructs on downstream health behaviors has been identified as "a top priority for research" (Lahey, 2009, p. 241). This study examined the extent to which drinking refusal self-efficacy (i.e., social pressure, opportunistic, and emotional relief) could account for the relation between impulsivity-like traits (i.e., urgency, deficits in conscientiousness, and sensation seeking) and alcohol-related problems. As expected, the three impulsivity constructs were significantly and positively related to alcohol problems in models that did not consider the DRSE facets as potential mediators of these relations, though the extent to which DRSE was a significant mediator of these relations varied as a function of DRSE-type and impulsivity facet. Implications of these findings are discussed below.

The significant role of social pressure-DRSE in the urgency-alcohol problem relation is consistent with the notion that individuals high in urgency are more sensitive to situations when mood might be elevated (e.g., during drinking events). Therefore, individuals relatively high in urgency may be less likely to refuse alcohol in these situations. The findings involving emotional relief-DRSE are in line with the observations that individuals higher in urgency are more prone to act rashly when experiencing elevated mood states and that emotional-relief DRSE specifically taps the ability to resist alcohol in the presence of heightened moods (e.g., "How sure are you that you could resist drinking alcohol when you are angry?"). Primary analyses indicated that the influence of the higher-order trait of urgency on alcohol problems was significantly mediated by emotional relief-DRSE, and follow-up analyses suggested indirect effects were supported for the separate constructs of positive and negative urgency. Prior work suggests that positive and

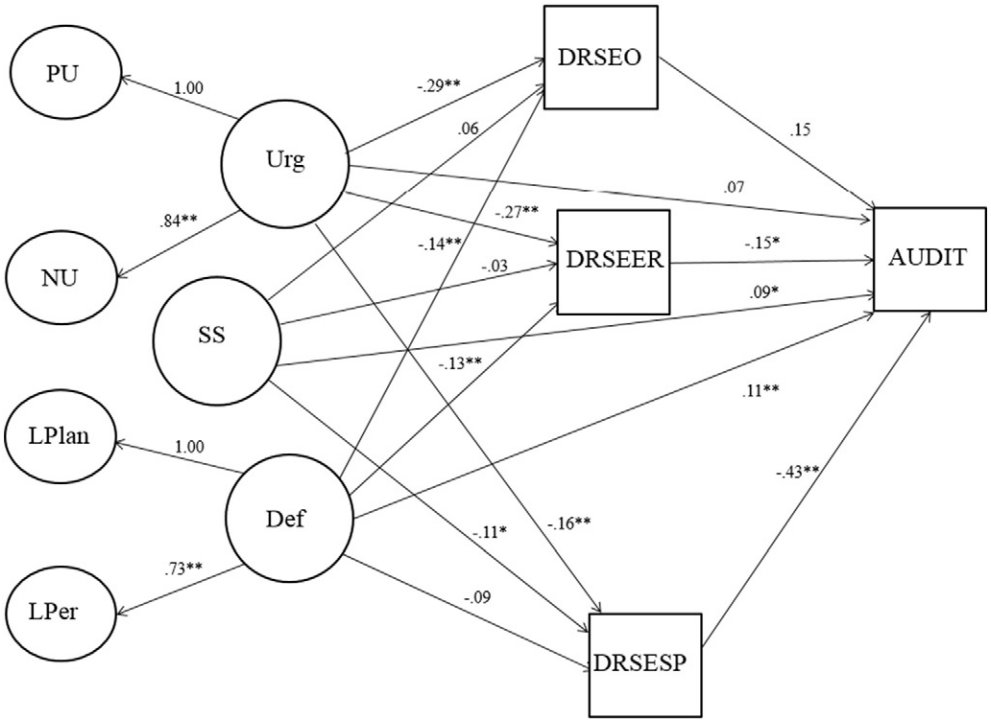

Fig. 1. Standardized parameter estimates for mediational path model. Higher order facets of impulsivity were allowed to correlate, and these correlations and all error terms were omitted for simplicity. All variables were adjusted for age and gender. Indicators of each facet of impulsivity were composed of three item parcels. PU = positive urgency. NU = negative urgency. LPlan = lack of planning. LPer = lack of perseverance. SS = sensation seeking. Urg = urgency. Def = deficits in conscientiousness. DRSESP = drinking refusal self-efficacy-social pressure. DRSEO = drinking refusal self-efficacy-opportunistic. DRSEER = drinking refusal self-efficacy-emotional relief. AUDIT = AUDIT score. $^{*}p < .05$. $^{**}p < .01$.

negative urgency load onto a higher-order trait (Cyders & Smith, 2007), and several research groups have combined these facets in their work (e.g., Dvorak & Day, 2014; Kuvaas, Dvorak, Pearson, Lamis, & Sargent, 2014). However, other studies support the distinction of these two factors (Dir, Karyadi, & Cyders, 2013; Simons, Dvorak, Batien, & Wray, 2010). In light of the current findings, it appears that the tendency to act rashly in the presence of extreme emotional states (regardless of the valence of the emotion) influences emotional relief-DRSE, which in turn impacts alcohol problems.

Given individuals higher in deficits in conscientiousness are more likely to "give in" to consuming alcohol (i.e., due to less perseverance), it is not surprising that multiple facets of DRSE may be relevant mediators between this construct and alcohol outcomes. Notably, findings from the combined model suggest emotional relief-DRSE is a more relevant mediator when considering shared variance among impulsivity constructs and types of DRSE.

Findings from the combined model also indicated that social pressure-DRSE is a significant mediator of the relation between sensation seeking and alcohol outcomes. By definition, individuals higher in sensation seeking are more often drawn to rewarding, novel situations, which are characteristic of social drinking environments. Thus, it seems logically plausible that individuals higher in sensation seeking would report more difficulty refusing alcohol in social situations, which in turns related to problematic alcohol involvement.

These findings from the current study are consistent with, and extend the work by, Gullo et al. (2010), which found that the link between "rash impulsiveness" and hazardous alcohol use is mediated by a composite measure of drinking refusal self-efficacy. Providing refinement to this literature, the current work suggests particular facets for drinking refusal self-efficacy mediate the relation between certain impulsivity constructs and several indices of alcohol involvement. Overall, drinking refusal self-efficacy appears to proximally influence alcohol involvement and mediates the more distal influences of constructs related to impulsivity on key alcohol outcomes.

The current findings further illuminate mechanisms by which impulsivity-like traits may exacerbate risk for problematic alcohol use and have implications for reducing alcohol-related problems among college students. Speculatively, these findings support efforts that seek to increase drinking refusal self-efficacy skills (e.g., role-play activities, mindfulness; Witkiewitz, Marlatt, & Walker, 2005) among college students and imply that this skill training may be especially beneficial for individuals who are high in impulsivity (especially for those high in urgency and deficits in conscientiousness). Potentially, given that sensation seeking and urgency contribute to decreased drink refusal skills in social situations, interventions might include behavioral rehearsal role-play of social situations involving drinking (i.e., visualizing scenarios involving a group of people, imagining how the group will react to the client's drink refusal; Monti, 2002).

There are several limitations of the current study. Although this study included a predominantly White, female sample, 23.63% of this sample identified as Hispanic/Latino(a); nevertheless, future studies should investigate relations among the current constructs of interest using diverse samples and in other populations (e.g., clinical). This study is cross-sectional in nature, thus directionality cannot be inferred. Further, as with any mediational or structural model, the causal structure assumed by the proposed mediational models may also be fit equivalently by models which make no such attributions of causal influence between the psychological constructs of impulsivity, drinking refusal self-efficacy, and alcohol problems (see Tomarken & Waller, 2003). Finally, the current model could be expanded to include other relevant mediators (e.g., drinking motives, alcohol expectancies) and examined within a prospective design to better understand how the development of DRSE and other relevant covariates contributes to individual trajectories of problematic alcohol involvement across time.

5.1. Conclusions

In sum, these findings extend previous research by providing a more nuanced understanding of the relations among impulsivity, drinking refusal self-efficacy, and alcohol use by supporting the notion that drinking refusal self-efficacy is a more proximal factor influencing problematic alcohol consumption. Discerning mechanisms of the impulsivity-alcohol relation allows for more tailored treatment for AUDs (i.e., by considering more proximal risk factors), and results from this study emphasize the need for addressing drinking refusal self-efficacy in treatment, as it likely contributes to the maintenance of problematic alcohol use. The current findings also contribute to the broader personality and alcohol literature by further clarifying the ways in which impulsivity-related constructs impact drinking behaviors.

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Conflict of interest
No conflict declared.

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