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# Is urgency emotionality? Separating urgent behaviors from effects of emotional experiences

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## Abstract

Previous research has supported the role of positive and negative maladaptive behaviors, but has not addressed the strong conceptual overlap of these traits with frequency/intensity of emotions and lack of premeditation. The current study empirically examined the differential effects of urgency, emotions, and lack of premeditation on risk-taking behavior in a sample of 520 U.S. undergraduate students. The results of the study indicate that (1) urgency is a significant predictor of risky behavior, independent of frequency/intensity of emotions, (2) urgency predicts above and beyond the additive and interactive effects of lack of premeditation and frequency/intensity of emotions, and (3) those who are high in both urgency and drinking motives are at greatest risk for drinking/drunkenness.

### Keywords

Urgency; emotion; risky behavior; alcohol

## Introduction

Research within the field of risky behaviors has often focused on the strong impetus of emotional state as a risk factor for impulsive and risky behavior (Cyders & Smith, 2008a). Recent research has considered the traits of negative urgency (NUR) and positive urgency (PUR), the tendency to act rashly while experiencing a negative or positive emotional state, respectively, and their effect in risky behaviors. However, research has yet to control for the intensity and frequency of the experience of emotion in accounting for the relationship between urgency and risky behavior. It is possible that urgency's role could be explained by additive or interactive relationships among emotional intensity, frequency of extreme emotions, and lack of premeditation. The goal of this paper is to separate the role of urgency from these variables and to determine whether it is a better predictor of risky behavior during extreme emotional states.

PUR and NUR have become well-established as important risk factors for problematic risky behaviors. Although they have additional unique relationships, NUR and PUR are both related to alcohol consumption, gambling, negative outcomes from risk-taking, and drinking to cope with or enhance emotions, respectively (Cyders et al., 2007; Cyders, Flory, Rainer, & Smith, 2009; Cyders & Smith, in press; Fischer & Smith, 2008; Fischer, Smith, Annus, & Hendricks, 2007; Miller, Flory, Lynam, & Leukefeld, 2003). Emotions, as well, are related to many of

these same behaviors. Emotions can reduce advantageous decision making, impair one's ability to maintain self-control behaviors (Bechara, 2004, 2005; Dolan, 2007; Dreisbach, 2006; Shiv, Loewenstein, & Bechara, 2005; Tice, Bratslavsky, & Baumeister, 2001), and lead to behaviors such as alcohol use, dysregulated eating, drug use, gambling, and self-harm behaviors (Larsen, 2000). Specifically, people tend to drink, engage in binge eating and purging, and gamble on days when they are more stressed (Cyders & Smith, 2008b; Holub, Hodgins, & Peden, 2005; Smyth et al., 2007; Swendson et al., 2000). Individuals prone to experiencing negative emotions engage in risky behaviors to cope with the aversive mood states, whereas, extraverted individuals engage in risky behaviors in a way to enhance experiences of positive affect (Cooper, Agocha, & Sheldon, 2000).

### Are urgency and emotionality one and the same?

Given the conceptual overlap between these constructs, research should address whether or not urgency and intensity/frequency of emotions have separable effects on risk-taking. It is possible that urgency may be an additive or interaction combination of lack of premeditation and frequency/intensity of emotional experiences. Cyders & Smith (2008a) examined the relationship between the urgency traits and the 30 facets of the NEO Personality Inventory – Revised (NEO-PI-R). They found that NUR and PUR load most highly on neuroticism in factor analysis and have reliable variance (72-85% of the variance in PUR, and 45-61% of the variance in NUR) unexplained by the sums and interactions of the facets of neuroticism and conscientiousness. Although this begins to address the question, it is not sufficient to answer this inquiry. The goals of the current paper are to (1) examine the interaction between the urgency traits and frequency/intensity of emotional experiences to demonstrate the unique role of the urgency traits for general and mood-based risky behavior; (2) demonstrate whether or not the urgency traits have reliable predictive utility over and above these aspects of emotional experience, lack of premeditation, and their interaction, in the prediction of mood-based risky behaviors; and (3) examine the differential role of the urgency traits, lack of premeditation, frequency/intensity of emotional experiences, and drinking motives to predict drinking behaviors.

## Method

### Participants

Participants were undergraduate students in a large U.S. Midwestern university who participated in a larger research study that was examining the role of personality in risky behavior participation (see Cyders et al., 2009).

### Measures

**The UPPS-R Impulsive Behavior Scale (Whiteside & Lynam, 2001)—**The UPPS-R is a 45-item self-report scale, ranging from 1 (Agree strongly) to 4 (Disagree strongly), that consists of four subscales of impulsivity: Urgency, Sensation Seeking, (lack of) Premeditation, and (lack of) Perseverance. The UPPS-R scales have been shown to have adequate convergent and discriminant validity and appear to have unique predictive utility for various aspects of risky behavior participations (Smith et al., 2007). In the current sample, the coefficient alpha was .83 for the (lack of) Premeditation subscale, and .88 for the Urgency subscale.

**The PUR Measure (PUM; Cyders et al., 2007)—**The PUM is a 14-item Likert-type self report scale ranging from 1 (Agree strongly) to 4 (Disagree strongly), that assesses the tendency to act rashly in response to positive emotional states. The PUM has been shown to have adequate internal consistency (.94 in the developmental sample; Cyders et al., 2007), convergent validity, and discriminant validity, in a wide range of studies (Cyders & Smith,

2007, 2008a, 2008b; Cyders et al., 2007). The scale had a coefficient alpha of .94 in the current study sample.

**The Mood Based Questionnaire (MBQ; Cyders & Smith, 2007)—**The MBQ is a self-report scale that combines quantitative and qualitative data concerning an individual's engagement in risky behavior during both positive and negative emotional experiences. Individuals are first asked to rate the frequency of experiencing a negative mood, the average intensity of the mood, and the frequency of a particularly intense negative mood, over the last month (defined as a 5 out of 5 rating on a 1-5 scale of intensity, from slight mood to extreme mood). Then participants are asked to indicate, from a list, which risky behaviors they had participated in during a negative mood. Finally, participants are asked for qualitative examples of these occurrences. All questions are then repeated for positive mood experiences. For the current paper, we merged ratings of (1) frequency of mood (1 Never to 5 Almost all the time), (2) average intensity of mood (1 Slight mood to 5 Extreme mood), and (3) frequency of an intense mood in the last month (1 Never to 5 Almost every day), to create two index scores of frequency and intensity of negatively-valenced emotions and positively-valenced emotions. The MBQ has been shown to be validly related to mood-based risky behaviors (Cyders & Smith, 2007) and correlations of the MBQ with the study variables follow similar patterns as have been previously reported (see Cyders & Smith, 2007).

**The Risky Behavior Scale (RBS; Fischer & Smith, 2004)—**The RBS is an 83-item self-report scale that measures the frequency of a wide range of risky behaviors on a Likert-scale ranging from 1 (never) to 5 (often). We created a 27-item index score of potentially problematic risk-taking behavior by using items that were very likely to result in negative outcomes, such as driving a car after drinking alcohol, having more than 5 drinks in one evening, and using illegal drugs. Items that were not potentially problematic were things such as playing sports or riding a roller coaster.

**The Drinking Motives Questionnaire-Revised (DMQ-R; Cooper, 1994)—**The DMQ-R is a 20-item Likert-type self-report measure, ranging from 1 (almost never/never) to 5 (almost always/always), which assesses self-reported motivations for using alcohol. There are four scales in the DMQ-R, each assessing distinct motivation for alcohol consumption: social motives, coping motives (COPE), enhancement motives (ENH), and conformity motives. The current study utilized only coping and enhancement motives based on previous findings that have supported the interaction between positive urgency and enhancement motives and negative urgency and coping motives (see Cyders et al., 2007; Settles et al., in press). The ENH and COPE scales had coefficient alphas of .91 and .84, respectively.

**The Drinking Styles Questionnaire (DSQ; Smith, McCarthy, & Goldman, 1995)—**The DSQ is a self-report questionnaire that assesses information about one's frequency of alcohol use, quantity of alcohol use, problems associated with alcohol use, and other related drinking behaviors. The measure provides two subscales: The drinking/drunkenness subscale and the Alcohol-related problems subscale. The DSQ has been shown to have adequate internal consistency and convergent validity in many previous samples (Smith et al., 1995; Cyders et al., 2007). Based on recent findings that PUR is related to quantity, but not frequency of alcohol use (Cyders et al., 2009), and thus indicating that quantity and frequency of alcohol use are different dimensions, at least in a college student population, we removed the frequency item from the drinking/drunkenness scale; this resulting scale had a coefficient alpha of .94 and the alcohol-related problems subscale had a coefficient alpha of .82.

### Procedures

All of the participants signed an informed consent form before participating in the study, and received course credit for their participation. As part of their participation, they completed a series of self-report questionnaires (see above; see Cyders et al., 2009 for full discussion of procedures).

## Results[1]

### Sample Demographics

There were 520 participants (68.7% female; mean age = 18.46 years, SD = 1.6). Participants reported the following ethnicities: 7.9% African American, 85.4% European American, 2.1% Asian American, .8% Hispanic, and 1.5% identified the "Other" category. Participants reported experiencing a good mood "often" (M = 3.59, SD = .95) with an intensity of 4.17 out of 5 (SD = 1.06), and experiencing a bad mood "sometimes" (M = 2.33, SD = .67) with an intensity of 3.12 out of 5 (SD = 1.06). Participants experiences a 5 out of 5 good mood 3-4 times per month (M = 3.4, SD = 1.04) and a 5 out of 5 bad mood 1-2 times per month (M = 2.46, SD = .86). The drinking/drunkenness subscale had a mean of 3.15 (SD = 1.43) and the drinking problems subscale had a mean of 9.47 (SD = .85).

### Data Analysis Plan

To examine study hypotheses, a series of hierarchical multiple regressions were conducted. Since the goal of the manuscript was to examine the differential prediction of the urgency traits vs. emotional lability tendencies, we did not control for other personality-related variables (e.g., sensation seeking); however, analyses of this sort, which seek to determine the differential effects of the impulsivity traits, can be found in the literature (see Cyders & Smith, 2007, 2008a; Cyders et al., 2009; Fischer & Smith, 2008). Additionally, alcohol expectancies were not controlled for due to their conceptual overlap with drinking motives. While alcohol expectancies are considered to be more distal predictors of alcohol use, drinking motives are thought of to be the final common pathway to alcohol use (Cox & Klinger, 1988), and thus were more salient in the current analyses. Finally, due to the strong correlation between ENH and the drinking/drunkenness scale of the DSQ ($r$ = .79; similar to other research: see Cyders et al., 2007; Settles et al., in press), these scales were examined for overlap in item content and it was determined that, though related, there is a lack of criterion contamination in these measures and they measure related, though distinct, constructs. For example, ENH includes items such as: Because it's exciting or To get high. The drinking/drunkenness subscale includes: Which of the following best describes how much alcohol you usually drink at one time? (from 1 *I don't drink alcohol at all* to 5 *I usually drink a lot of alcohol-(more than 9 beers or drinks))* and, Which of the following is true for you (from 1 *I have never been drunk* to 6 *I get drunk more than once per week*)?

### The relationship between urgency and emotions

First, we predicted RBS problematic risk-taking in two separate hierarchical regression analyses with (1) frequency/intensity of negatively-valenced emotions (NEXP) and NUR in the first step and their interaction in the second step and (2) frequency/intensity of positively-valenced emotions (PEXP) and PUR in the first step and their interaction in the second step. For each analysis, NUR ($\beta$ = .40, $p$ < .001) and PUR ($\beta$ = .42, $p$ < .001) were the only significant predictors (Table 1).

[1]Since sex had a significant relationship with our outcome variables of interest, we replicated each multiple regression analysis controlling for sex. All results were unchanged and no other demographic variables significantly correlated with outcome variables.

Next, we predicted self-reported action during negative and positive mood states in 2 separate hierarchical regression analyses with the same independent variables as above (Table 2). For the endorsement of negative mood-based action, NUR ($\beta$ = .34, $p$ < .001), NEXP ($\beta$ = .19, $p$ < .001), and their interaction ($\beta$ = .085, $p$ = .03), were all significant predictors. This interaction was probed as suggested by Cohen et al. (2003) and indicated that experiencing frequent and intense NEXP had a greater relationship to negative mood-based risk-taking for those individuals who were also high in NUR ($\beta$ = .27, $p$ < .001), although the relationship remained significant for low levels of NUR ($\beta$ = .11, $p$ = .03) (Figure 1). For the endorsement of positive mood-based risk-taking, PUR ($\beta$ = .35, $p$ < .001) and PEXP ($\beta$ = .09, $p$ = .03) were significant predictors; there was no interaction.

## Urgency, lack of premeditation, emotions, and their additive/interactive effects

Next, we predicted self-reported action during negative and positive mood states in 2 separate hierarchical regression analyses with lack of premeditation and the corresponding valenced emotional experiences in step one, their interaction in step two, and the corresponding urgency trait in the third step (Table 2). For each analysis, the urgency traits were able to add significantly to the prediction (for NUR, $\beta$ = .28, $p$ < .001, adding 5.4% predictive variance; for PUR, $\beta$ = .31, $p$ < .001, adding 8.5% predictive variance).

We next predicted the drinking/drunkenness subscale and the alcohol-related problems subscales using the same order of entry as above (Table 3). Both NUR ($\beta$ = .28, $p$ < .001, adding 5.4% predictive variance) and PUR ($\beta$ = .27, $p$ < .001, adding 6.5% variance) added significant variance to the prediction of drinking-related problems. Similarly, NUR ($\beta$ = .21, $p$ < .001, adding 3% variance) and PUR ($\beta$ = .27, $p$ < .001, adding 6.5% variance) both added significant variance to the prediction of drinking/drunkenness.

## The interactive effects of urgency, emotions, and drinking motives to predict drinking behaviors

First, we predicted the drinking/drunkenness subscale with a hierarchical regression analysis, entering NUR, COPE, NEXP in step one, the three two-way interactions in step two, and a three-way interaction in step three. COPE ($\beta$ = .68, $p$ < .001), NEXP ($\beta$ = -.08, $p$ = .02), the interaction between NEXP and COPE ($\beta$ = .11, $p$ = .004), and the interaction between NUR and COPE ($\beta$ = .15, $p$ < .001) were all significant predictors. The three-way interaction was marginal ($\beta$ = .06, $p$ = .08) (Table 4) and was probed; mean slope differences were tested as suggested by Dawson & Richter (2006) (Figure 2). Significant slope differences were found between slope (1) and slope (2) ($t$ = -.2.65, $p$ = .004), between slope (1) and slope (4) ($t$ = -5.30, $p$ < .001), slope (2) and slope (4) ($t$ = -2.30, $p$ = .01), and slope (3) and slope (4) ($t$ = -4.11, $p$ < .001). We replicated this analysis using the positive mood variables. PUR ($\beta$ = .07, $p$ = .01), ENH ($\beta$ = .78, $p$ < .001), and their interaction ($\beta$ = .06, $p$ = .02) were significant predictors (Table 4). The three-way interaction was marginal ($\beta$ = .05, $p$ = .07) (Figure 3). No significant slope differences were found.

Next we focused on alcohol-related problems. We entered the variables as described in the previous 2 analyses. For negative mood related variables, NUR ($\beta$ = .19, $p$ < .001), COPE ($\beta$ = .35, $p$ < .001), and the interaction between NEXP and COPE ($\beta$ = .07, $p$ = .02) were the significant predictors. For positive mood related variables, ENH ($\beta$ = .28, $p$ < .001), PUR ($\beta$ = .23, $p$ < .001), and their interaction ($\beta$ = .07, $p$ = .03) were the only significant predictors. Probing of this interaction indicated a stronger relationship between PUR and drinking problems for individuals also high in ENH ($\beta$ = .29, $p$ < .001), although the relationship remained significant for those low in ENH ($\beta$ = .15, $p$ = .03) (Figure 4).

## Discussion

Previous research concerning personality-based risk factors for risky behavior has focused on many constructs, including PUR and NUR, frequency/intensity of emotional experiences, and lack of premeditation (Cyders & Smith, 2008a, 2008b; Larsen, 2000; Lynam & Miller, 2004; Zapolski, Cyders, & Smith, 2009). The current study is the first to compare the distinct and unique predictions of these conceptually-related traits for risk-taking behaviors.

When predicting general risk-taking behavior, NUR and PUR have a unique predictive value for general risk-taking that does not interact with frequency and intensity of emotional experience. However, when considering risky behavior that specifically occurs under extreme emotional states, the relationship becomes more complex. For negative emotional states, frequency and intensity of NEXP predicts greater increases in negative mood-based risky behavior for those individuals who are also high in NUR. For positive mood-based risky behavior, however, both PUR and PEXP are important, but they do not interact in any appreciable way. When we use more precision and predict more specific behavioral outcomes that are context-specific, frequency and intensity of emotional experiences does appear to have a role of risky behavior participation that may differ based on the valence of the emotional state.

Additionally, PUR and NUR add unique predictive value to the prediction of mood-based risky behavior, drinking/drunkenness, and alcohol-related problems, over and above the additive and interaction effects of lack of premeditation and frequency/intensity of emotional experiences. Therefore, it appears that although emotional experiences and lack of premeditation are important for the prediction of risky behaviors, NUR and PUR are distinct traits that contribute significantly. It is important to note that given the high correlations between the urgency traits and the variables of lack of premeditation and emotional experiences, this was a stringent examination of the unique predictive power of the urgency traits.

Additionally, we found that individuals at greatest risk for drinking/drunkenness are those who are (1) high in both NUR and COPE or (2) those who endorse ENH. Specifically, just being high in NUR is not enough, one also has to have COPE for drinking to put one at risk for drinking/drunkenness; however, those with simply ENH, without PUR or high frequency/intensity of emotional experiences, are also at great risk. For alcohol-related problems, the urgency traits and alcohol motives predict greatest risk.

Overall, this study demonstrates that the urgency traits, although conceptually related, are distinct from and have unique predictive value over and above the related constructs of emotional experiences and lack of premeditation, providing further validity evidence for these traits. Therefore, it is not just the frequent experience of extreme emotions that predicts risk, but the tendency to act while experiencing them. Additionally, this research has further supported the important interactive role between COPE and the urgency traits for problems related to alcohol use. These findings illustrate that individuals high in the urgency traits are most likely to be at risk and that efforts to prevent or treat these types of behavior should be focused more on regulating one's emotions and learning to act adaptively during extreme emotional states rather than reducing rates of these emotions.

The current study does of course have some limitations: First, the data is based on retrospective self-report surveys with a mostly Caucasian, college-student sample, which limits the generalizability of the results. Future research should replicate these findings on a more diverse sample utilizing interview, other report, laboratory task, and longitudinal designs (see Cyders et al., 2009, Zapolski et al., 2009). Second, there is an overlap in construct between drinking/drunkenness and enhancement drinking motives, however individual items in these constructs

do not overlap, which was the reason for still predicting drinking/drunkenness with ENH. Third, the study only addresses general "negative emotional states" and "positive emotional states;" however, there is emerging evidence that there is much variability within negative and positive emotions, respectively and that the distinct subfacet of the emotion (e.g., anger vs. sadness) might have differential relations to risky behavior participation. This should be examined in future studies.

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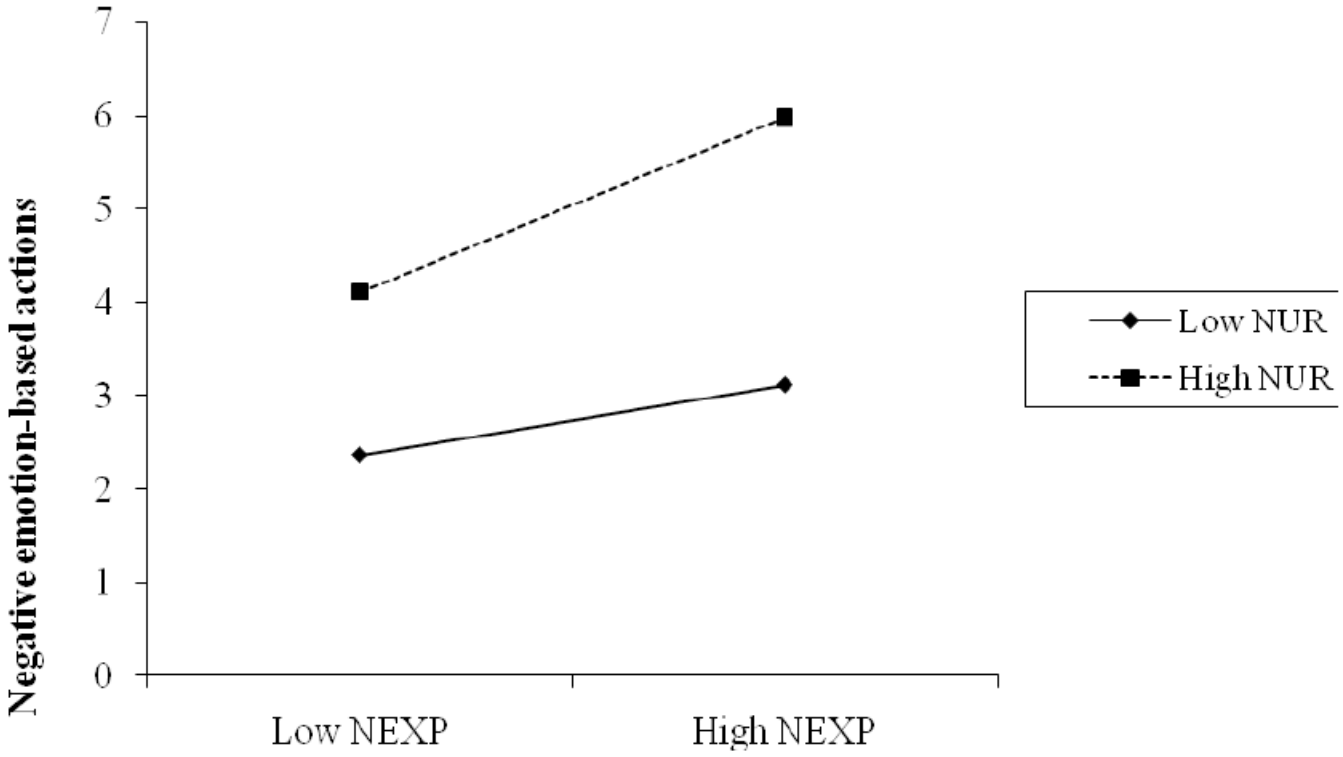


**Figure 1.**
Moderated relationship between frequency/intensity of NEXP and NUR to predict negative mood-based risky behavior.

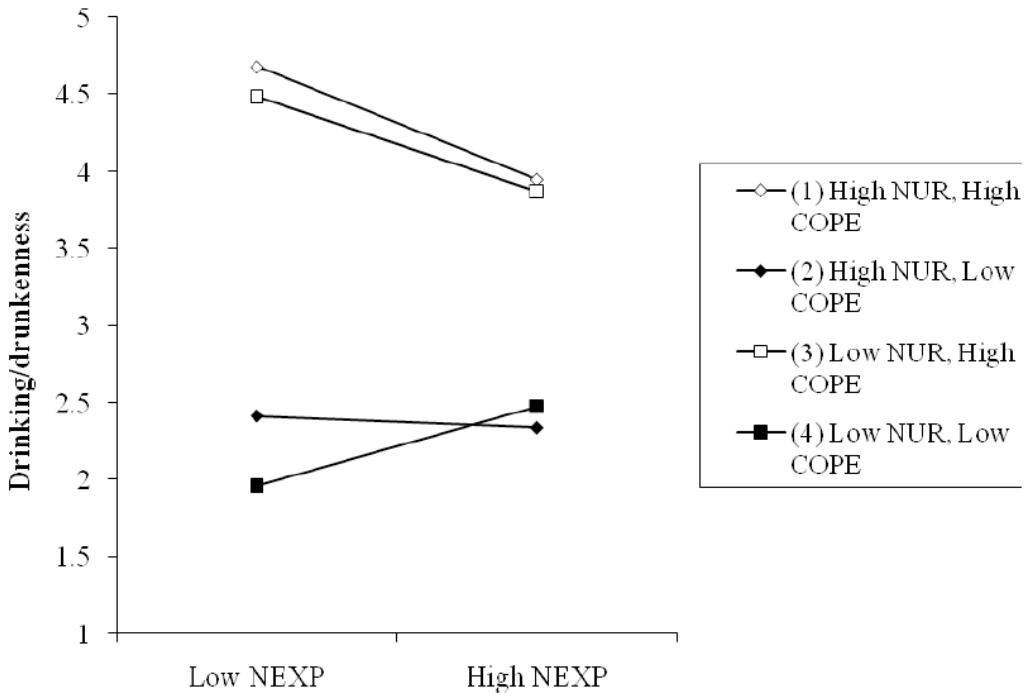


**Figure 2.**
Moderated relationship among NUR, COPE, and frequency/intensity of NEXP to predict drinking/drunkenness.

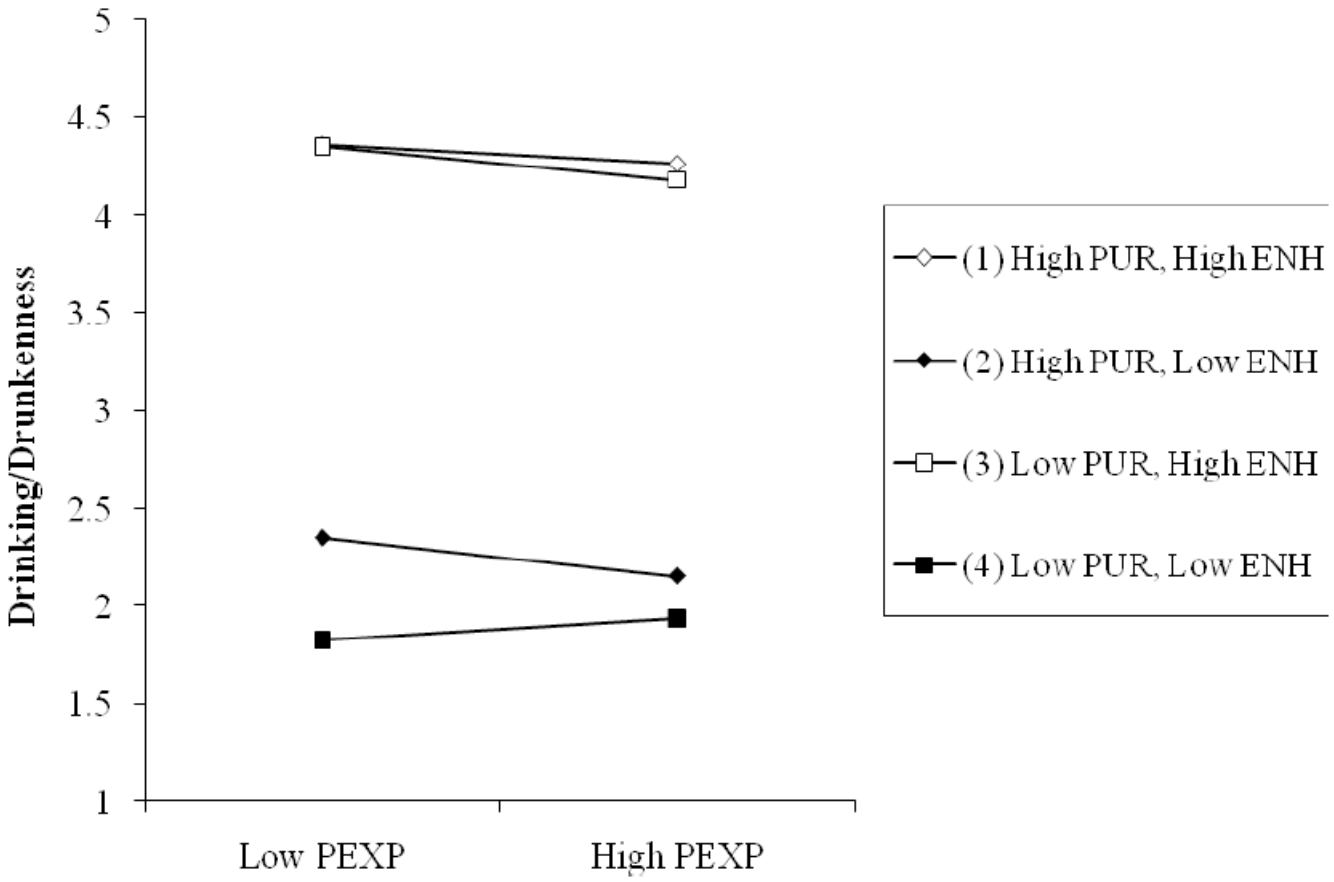


**Figure 3.**
Moderated relationship among PUR, ENH, and frequency/intensity of PEXP to predict drinking/drunkenness.

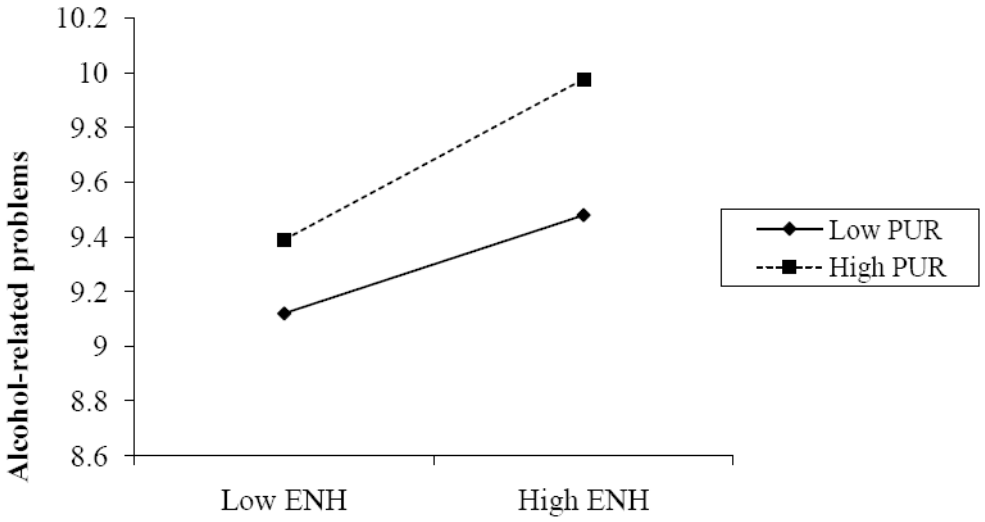


**Figure 4.**
Moderated relationship between PUR and ENH to predict alcohol-related problems.

**Table 1**

Hierarchical multiple regression of general and mood-based risk taking on urgency, emotional experiences, and their interaction (N = 520).

| Variable | B | SE B | B | $R^2$ | $R^2$ change |
|---|---|---|---|---|---|
| *Dependent variable: general risk taking* | | | | | |
| NUR and frequency/intensity of NEXP | | | | | |
| Step 1 | | | | .18 | .18** |
| NUR | .23 | .03 | .40** | | |
| NEXP | .03 | .02 | .06 | | |
| Step 2 | | | | .19 | .01 |
| Interaction | -.05 | .32 | -.06 | | |
| PUR and frequency/intensity of PEXP | | | | | |
| Step 1 | | | | .17 | .17** |
| PUR | .24 | .02 | .42** | | |
| PEXP | -.001 | .02 | -.001 | | |
| Step 2 | | | | .17 | .00 |
| Interaction | -.001 | .03 | -.002 | | |
| *Dependent variable: mood-based risk taking* | | | | | |
| Negative mood-based risk taking | | | | | |
| Step 1 | | | | .21 | .21** |
| NUR | 1.91 | .25 | .34** | | |
| NEXP | .97 | .22 | .19** | | |
| Step 2 | | | | .22 | .01 |
| Interaction | .68 | .32 | .09* | | |
| Positive mood-based risk taking | | | | | |
| Step 1 | | | | .13 | .13** |
| PUR | 2.25 | .27 | .35** | | |
| PEXP | .51 | .23 | .09* | | |
| Step 2 | | | | .13 | .00 |
| Interaction | .03 | .37 | .003 | | |

*Note*.

* $p < .05$,

** $p < .01$

**Table 2**

Hierarchical multiple regression of mood-based risk-taking on frequency/intensity of emotional experiences, lack of premeditation, and urgency (N = 520).

| Variable | B | SE B | β | $R^2$ | $R^2$ change |
|---|---|---|---|---|---|
| *Dependent variable: negative mood-based risk-taking* | | | | | |
| Step 1 | | | | .18 | .18** |
| NEXP | 1.08 | .22 | .21** | | |
| Lack of premeditation | 1.17 | .32 | .15** | | |
| Step 2 | | | | .19 | .01 |
| Interaction | 1.05 | .37 | .11** | | |
| Step 3 | | | | .24 | .05** |
| NUR | 1.60 | .26 | .28** | | |
| *Dependent variable: positive mood-based risk-taking* | | | | | |
| Step 1 | | | | .06 | .06** |
| PEXP | .53 | .23 | .09* | | |
| Lack of premeditation | 1.12 | .37 | .13** | | |
| Step 2 | | | | .06 | .00 |
| Interaction | .35 | .47 | .03 | | |
| Step 3 | | | | .14 | .09** |
| PUR | 1.97 | .28 | .31** | | |

*Note*.

* $p < .05$,

** $p < .01$

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**Table 3**

Hierarchical multiple regression of drinking variables on frequency/intensity of emotional experiences, lack of premeditation and urgency (N = 519).

| Variable | B | SE B | B | $R^2$ | $R^2$ change |
|---|---|---|---|---|---|
| *Dependent variable: drinking/drunkenness scale* | | | | | |
| Step 1 | | | | .09 | .09** |
| NEXP | .06 | .10 | .03 | | |
| Lack of premeditation | .62 | .14 | .20** | | |
| Step 2 | | | | .10 | .01* |
| Interaction | -.30 | .17 | -.07* | | |
| Step 3 | | | | .13 | .03** |
| NUR | .50 | .12 | .21** | | |
| Step 1 | | | | .08 | .08** |
| PEXP | .10 | .09 | .05 | | |
| Lack of premeditation | .67 | .14 | .21** | | |
| Step 2 | | | | .08 | .00 |
| Interaction | .11 | .18 | .03 | | |
| Step 3 | | | | .12 | .04** |
| PUR | .48 | .11 | .20** | | |
| *Dependent variable: alcohol-related problems scale* | | | | | |
| Step 1 | | | | .08 | .08** |
| NEXP | .06 | .06 | .05 | | |
| Lack of premeditation | .21 | .09 | .13* | | |
| Step 2 | | | | .08 | .00 |
| Interaction | .01 | .10 | .00 | | |
| Step 3 | | | | .13 | .05** |
| NUR | .40 | .07 | .28** | | |
| Step 1 | | | | .05 | .05** |
| PEXP | .01 | .05 | .01 | | |
| Lack of premeditation | .25 | .08 | .13** | | |

| Variable | B | SE B | B | $R^2$ | $R^2$ change |
|---|---|---|---|---|---|
| Step 2 | | | | .05 | .05 |
| Interaction | .01 | .11 | .00 | | |
| Step 3 | | | | .12 | .07** |
| PUR | .39 | .06 | .27** | | |

*Note*.

* $p < .05$,

** $p < .01$

**Table 4**

Hierarchical multiple regression of drinking variables on urgency, frequency/intensity of emotional experiences, and drinking motives (N = 519).

| Variable | B | SE B | β | $R^2$ | $R^2$ change |
|---|---|---|---|---|---|
| *Dependent variable: drinking/drunkenness scale* | | | | | |
| Step 1 | | | | .39 | .39** |
| NEXP | -.17 | .08 | -.08* | | |
| COPE | 1.08 | .07 | .68** | | |
| NUR | .12 | .10 | .05 | | |
| Step 2 | | | | .42 | .03** |
| NEXP × NUR interaction | -.01 | .12 | -.00 | | |
| NUR × COPE interaction | -.36 | .10 | -.15* | | |
| NEXP × COPE interaction | -.22 | .08 | -.11* | | |
| Step 3 | | | | .43 | .00 |
| NEXP × NUR × COPE interaction | .16 | .12 | .06[a] | | |
| Step 1 | | | | .62 | .62** |
| PEXP | -.06 | .06 | -.03 | | |
| ENH | .90 | .03 | .78** | | |
| PUR | .17 | .07 | .07** | | |
| Step 2 | | | | .63 | .00 |
| PEXP × PUR interaction | -.07 | .10 | -.02 | | |
| PUR × ENH interaction | -.11 | .05 | -.06* | | |
| PEXP × ENH interaction | -.03 | .05 | -.02 | | |
| Step 3 | | | | .63 | .00 |
| PEXP × PUR × ENH interaction | .10 | .06 | .05[a] | | |
| *Dependent variable: alcohol-related problems scale* | | | | | |
| Step 1 | | | | .23 | .23** |
| NEXP | -.02 | .06 | -.02 | | |
| COPE | .33 | .05 | .35** | | |
| NUR | .26 | .07 | .19** | | |

| Variable | B | SE B | β | $R^2$ | $R^2$ change |
|---|---|---|---|---|---|
| Step 2 | | | | .23 | .00 |
| NEXP × NUR interaction | .12 | .09 | .06 | | |
| NUR × COPE interaction | .05 | .07 | .03 | | |
| NEXP × COPE interaction | .08 | .06 | .07* | | |
| Step 3 | | | | .23 | .00 |
| NEXP × NUR × COPE interaction | .05 | .03 | .09[a] | | |
| Step 1 | | | | .17 | .17** |
| PEXP | .03 | .05 | .02 | | |
| ENH | .19 | .03 | .28** | | |
| PUR | .32 | .06 | .23** | | |
| Step 2 | | | | .18 | .01 |
| PEXP × PUR interaction | .02 | .09 | .01 | | |
| PUR × ENH interaction | .08 | .04 | .07* | | |
| PEXP × ENH interaction | .03 | .04 | .00 | | |
| Step 3 | | | | .18 | .00 |
| PEXP × PUR × ENH interaction | .02 | .06 | .02 | | |

*Note*.

*$p < .05$,

**$p < .01$,

[a]p < .10



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