# Mediational role of motives in the relationship between urgency and alcohol

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## ABSTRACT

Previous work has shown that both negative urgency (the tendency to engage in risky behavior in response to extreme negative affect) and positive urgency (the tendency to engage in risky behavior in response to extreme positive affect) correlate with problematic alcohol consumption (Cyders, et al., 2009). Research has also shown that coping motives (alcohol use to avoid or escape negative affect (Cooper et al., 2000)) and enhancement motives (alcohol use to pursue or enhance positive affect (Cooper et al., 2000)) also correlate with problematic alcohol use (Cooper, et al. 2000). We know, through previous research, that the concept of personality has an effect on acquisition of different learning experiences, which is also known as acquired preparedness (Smith, & Anderson, 2001). However, there has not been a lot of research done that looks at the mediational effects of learning on the relationship between urgency and alcohol problems. Thus, the goal of this paper is to examine whether negative and positive urgency predict drinking quantity through an increase in the coping and enhancement motives respectively. 418 first year students at a public mid-western university participated in the study (75% female, 25% male), they were all sampled three times during the first year of college (beginning of fall semester, end of fall semester, and end of spring semester). Their age ranged from 18 to 32 (mean = 18.2, SD = 0.76), and the majority of the sample was Caucasian. Results showed that negative urgency at time 1 was a significant predictor of drinking quantity at time 3 ($\beta = .239, p< .001$), but this relationship was reduced to non-significance with the addition of time 2 coping motives ($\beta = .035, p = .452$), and time 2 coping motives became a significant predictor of drinking quantity ($\beta = .498, p<.001$) . Positive urgency at time 1 was a significant predictor of drinking quantity at time 3 ($\beta = .258, p<.001$). The significance of this relationship was significantly reduced with the addition of time 2 enhancement motives ($\beta = .132, p = .001$), and time 2 enhancement motives became a significant predictor of drinking quantity ($\beta = .592, p<.001$). This study suggests that the initial presence of the urgency traits leads to learning mood congruent alcohol motives, which then leads to increased alcohol consumption during the first year of college (fully for negative urgency and partially for positive urgency).

## INTRODUCTION

- Fundamental Hypothesis 1: The association between positive urgency and drinking quantity is mediated by enhancement motives to use alcohol

- Fundamental Hypothesis 2: The association between negative urgency and drinking quantity is mediated by coping motives to use alcohol

- The urgency traits:
- More recently, researchers have identified two separate dimensions of urgency:
- *Negative Urgency (NUR)* – tendency to act rashly when faced with distress
- *Positive Urgency (PUR)* – tendency to act rashly when in an extreme positive emotional state
- Drinking motives:
- *Enhancement Motives (ENH)* – engagement in alcohol use to pursue or enhance positive affect (Cooper et al., 2000)
- *Coping Motives (COPE)* – engagement in alcohol use to avoid or escape negative affect (Cooper et al., 2000)
- Individuals prone to experiencing negative emotions (neurotic individuals) tend to engage risky behaviors to cope with their moods states (Cooper et al., 2000)
- Individuals prone to experiencing positive emotions (extraverted individuals) tend to engage in risky behavior to enhance their experiences of positive affect (Cooper et al., 2000)

- The Acquired Preparedness Model:
- Attempts to integrate psychosocial learning and disposition approaches to risk taking
- Suggests that personality traits influence the learning process, therefore, traits indirectly influence drinking through alcohol-related learning (Smith & Anderson, 2001)

The Acquired Preparedness Model:
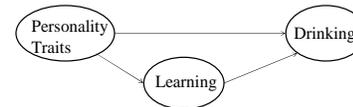


- Personality traits such as NUR and PUR influence what one learns from any given situation, therefore
  - NUR should predict learning to drink to cope with negative mood states, which then should predict increased alcohol consumption
  - PUR should predict learning to drink to enhance positive mood states, which then should predict increased alcohol consumption

- Urgency Traits and Motives Related to Wide Range of Problematic Risky Behaviors: (see, for example, Anestis, Selby, Fink, & Joiner, 2007b; Anestis, Selby, & Joiner, 2007a; Cooper et al., 2000; Cyders et al., 2007, Cyders et al., 2009, Fischer, Anderson, & Smith, 2004; Fischer & Smith, 2005; Fischer et al., 2005; Miller, Flory, Lynam, & Leukefeld, 2003)

| Positive Urgency | Negative Urgency |
|---|---|
| Drinking problems | Bulimic behaviors |
| Drinking quantity | Excessive reassurance seeking |
| Differentiates alcohol, eating disordered, and control status | Problem drinking |
| Longitudinally predicts increases in drinking quantity | Differentiate alcohol and eating disordered individuals from control |

| Enhancement Motives | Coping Motives |
|---|---|
| Engagement in risky sex (non-neurotic individuals) | Heavy alcohol consumption |
| Drinking quantity | Engagement in risky sex (neurotic individuals) |

## METHODS

- $N = 418$ (75% female, mean age = 18.2, 95.7% European-American)
- They completed a series of self-report questionnaires that included the following measures: Demographics, DSQ (Drinking Styles Questionnaire) (Smith, McCarthy, & Goldman, 1995), UPPS-P (Impulsive behavior scale) (Lynam et al., 2009), DMQ-R (Drinking Motives Questionnaire-Revised) (Cooper, 1994).
- We conducted a series of hierarchical multiple regression analyses (according to Cohen et al., 2003) to test study hypotheses.
- We conducted a mediational test with multiple regression in line with was suggested by MacKinnon et al. (2002).

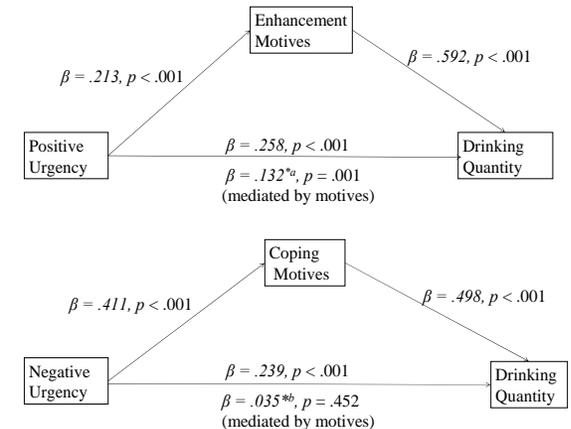## RESULTS

Table 1: Predicting drinking quantity with negative urgency and coping motives

| Model | Variable | $\beta$ | SE of $\beta$ | Beta | $R^2$ |
|---|---|---|---|---|---|
| 1 | | | | | |
| | Urgency | .422 | .084 | .239 | .050 |
| 2 | | | | | |
| | Urgency | .061 | .081 | .035 | |
| | Coping | .588 | .055 | .498 | .281 |

Table 2: Predicting drinking quantity with positive urgency and enhancement motives

| Model | Variable | $\beta$ | SE of $\beta$ | Beta | $R^2$ |
|---|---|---|---|---|---|
| 1 | | | | | |
| | Urgency | .449 | .082 | .258 | .06 |
| 2 | | | | | |
| | Urgency | .229 | .068 | .132 | |
| | Enhancement | .497 | .033 | .592 | .474 |



$\beta = .213, p < .001$
$\beta = .592, p < .001$
$\beta = .258, p < .001$
$\beta = .132^{*a}, p = .001$ (mediated by motives)

$\beta = .411, p < .001$
$\beta = .498, p < .001$
$\beta = .239, p < .001$
$\beta = .035^{*b}, p = .452$ (mediated by motives)

*We conducted a t-test according to MacKinnon et al. (2002), testing the reduction in the beta with the addition of motives to the model. The test provided the following results, indicating that in each case, there was a significant reduction in the beta with the addition of motives:
[a] $t = 3.128, p < .001$
[b] $t = 3.761, p < .001$

## DISCUSSION

- Negative urgency, coping motives and alcohol:
  - Negative urgency was a significant predictor of drinking quantity
  - When coping motives were added to the analysis, coping motives fully mediated the relationship between negative urgency and drinking quantity

- Positive urgency, enhancement motives and alcohol:
  - Positive urgency was a significant predictor of drinking quantity
  - When enhancement motives were added to the analysis, enhancement motives partially mediated the relationship between positive urgency and drinking quantity

- Positive and negative urgency both lead to engagement in alcohol consumption, but they do so (partially or fully) through their effects on the social learning process.

- These findings lead to more precise understanding of the development of risky alcohol use behaviors during the first year of college, a time period in which students are at a significant risk of increased risk-taking behaviors of clinical interest (Hingson, Heeren, Winter, & Wechsler, 2005; Wechsler, Moeykens, Davenport, Castillo, & Hansen, 1995) in part due to their leaving home (Budde & Testa, 2005).

- These findings could inform identification of those at risk and the design of intervention and prevention programs in this population.

- Cyders, M. A., & Smith, G. T. (2008). An emotion-based disposition to rash action: The trait of urgency. *Psychological Bulletin, 134*, 807-828.
- Cyders, M. A., Flory, K., Rainer, S., & Smith, G. T. (2009). The role of personality dispositions to risky behavior in predicting first year college drinking. *Addiction, 104,* 193-202.