Positive affective states and alcohol consumption: The moderating role of trait positive urgency

Linda Dinc *, Andrew J. Cooper

Department of Psychology, Goldsmiths, University of London, United Kingdom

HIGHLIGHTS

- We examined relationships between positive urgency, positive mood and alcohol use.
- Positive urgency positively correlated with alcohol use and problems measures.
- Positive urgency predicted increased beer consumption in an activated positive mood.
- Positive urgency was unrelated to positive emotion before and after mood induction.

ARTICLE INFO

ABSTRACT

Trait positive urgency is characterised by risky and maladaptive actions in response to extreme positive affective states. Positive urgency has previously been shown to be a risk factor for alcohol consumption and alcohol-related problems; however, there has been limited experimental research examining how positive urgency may moderate relations between affective states and alcohol consumption. In the current study, a sample of 106 participants completed a trait measure of positive urgency and were then randomly assigned to one of three mood induction conditions: a high-activation positive, a low-activation positive or a neutral mood condition. Subsequently, participants took part in a bogus beer taste test, where their alcohol consumption was subsequently measured. The results revealed that positive urgency significantly predicted increased beer consumption, but only for those participants in the high-activation positive mood induction group. The findings from this study provide support for positive urgency as a risk factor for alcohol use and suggest that it may be of particular relevance in social situations where individuals experience highly activated positive affective states.

© 2015 Elsevier Ltd. All rights reserved.

1. Introduction

Individuals engage in risky and maladaptive behaviours, such as substance abuse, gambling, excessive alcohol use and risky sexual behaviours, in response to positive affect (Cheung & Mikels, 2011; Moore & Chater, 2003; Zapolski, Cyders, & Smith, 2009). Although much research has examined the direct relationship between affective states and engagement in risky behaviours, the degree to which these relationships are moderated by stable individual differences has been less widely studied. More specifically, we might expect that individual differences in impulsivity-related traits will moderate relationships between affective states and risky behaviour. Trait impulsivity is now widely regarded as comprising several distinct, but related, facets. For example, Whiteside and Lynam (2001) factor analysed

a number of self-report impulsivity inventories and found a robust four-dimensional structure, comprised of factors for sensation seeking, (lack of) premeditation, (lack of) perseverance and urgency. Whiteside and Lynam (2001) developed a novel measure of these four facets of impulsivity, the UPPS. Urgency refers to the tendency to engage in risky and disinhibited behaviour when in a heightened emotional state. While the original UPPS focused more on negative emotionality in relation to urgency, a measure was later developed for assessing disinhibited behaviour in relation to positive emotional states (positive urgency; Cyders et al., 2007). The urgency traits have been shown to strongly predict a number of potentially risky behaviours (Cyders, Flory, Rainer, & Smith, 2009; Zapolski et al., 2009), and to also potentiate the relationship between affect and maladaptive actions (e.g. Cyders et al., 2010; Simons, Dvorak, Batien, & Wray, 2010). Alcohol use has been one such potentially risky behaviour that has been examined in relation to the urgency traits.

Evidence suggests that positive urgency prospectively predicts increases in drinking quantity and negative outcomes from drinking in college students, even when controlling for the other UPPS traits

* Corresponding author at: Department of Psychology, Goldsmiths, University of London, Lewisham Way, SE14 6NW, United Kingdom. Tel.: +44 7960 814824.
E-mail addresses: psp01ld@gold.ac.uk (L. Dinc), a.cooper@gold.ac.uk (A.J. Cooper).

(Cyders et al., 2009). Despite this, there have been relatively few studies that have examined positive urgency as a moderator of the link between positive affective states and alcohol consumption, and more experimental studies are needed in this area (Cyders & Smith, 2008). A potentially useful approach in this context would be to directly manipulate mood state and then examine the effect of this manipulation on alcohol consumption, as a function of trait positive urgency. As far as we are aware, only one previous paper has done this. Across two studies, Cyders et al. (2010) examined the effects of a positive mood manipulation on alcohol consumption and risk taking as a function of positive urgency. In the second of these studies, they showed that positive urgency was the only UPPS facet to significantly predict increases in alcohol consumption, using a bogus beer taste test method, after a positive mood induction, controlling for the amount of beer consumed after a neutral mood induction.

While the mood induction procedure appeared generally successful in increasing positive emotional state, using a single positive mood induction condition leaves open the possibility that the target behaviour may vary by the level of arousal (Russell & Feldman Barrett, 1999; Yik, Russell, & Steiger, 2011). While the mood induction used in Cyders et al. (2010) appeared to be designed to induce a high-activation positive mood, it was notable in the second study that a measure of elation derived from the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988) showed a non-significant decrease from pre- to post-induction. Given the centrality of aroused emotion to the urgency construct (Cyders & Smith, 2008), it may be of benefit to specifically manipulate level of arousal in a positive mood induction, as suggested by others (Treloar & McCarthy, 2012).

This study aimed to extend Cyders et al. (2010) by examining whether the induction of high-activation and low-activation positive affective states influence post-induction alcohol consumption, as a function of trait positive urgency. It is necessary to empirically validate that positive urgency is most influential in more activated positive affective states. In the current study, we induced mood state across three conditions, a high-activation and low-activation positive mood induction and a neutral mood induction, and examined the effects of these on alcohol consumption using a bogus taste test method. Following from Cyders et al. (2010), we hypothesised that trait positive urgency would moderate the relationship between mood induction group and alcohol consumption, such that those with high scores on positive urgency would consume the most alcohol, but only in the high-activation mood induction condition.

2. Methods

2.1. Participants

The participants in this study were undergraduate students studying psychology at Goldsmiths, University of London, who participated in return for course credits. The study sample consisted of 106 participants, with 60 females ($M = 24.07$ years of age, $SD = 7.74$) and 46 males ($M = 23.76$ years of age, $SD = 5.72$). All participants were at least 18 years of age and provided informed consent prior to participation. They were told that they would be participating in a study examining beer taste preferences in university students and that they would complete several questionnaires and thinking exercises before completing a beer taste preference test. Only individuals who typically consumed at least 1 U of alcohol per week and enjoyed drinking beer were eligible for participation. Participants who were on any prescribed psychoactive medication, or who were receiving treatment for neurological, psychiatric or substance abuse related conditions, were excluded from participating in the study. Ethical approval for this study was granted by the Goldsmiths Psychology Ethics Committee. Participants were fully debriefed at the end of the study.

2.2. Measures

2.2.1. UPPS-P Impulsivity Scale

The UPPS-P is a 59-item scale designed to assess trait impulsivity (Lynam, Smith, Whiteside, & Cyders, 2006). The inventory measures five distinct facets of impulsive behaviour; these are negative urgency, lack of perseverance, lack of premeditation, sensation seeking and positive urgency. Each item on the UPPS-P is scored using a 4-point Likert scale from 'strongly agree' to 'strongly disagree'. Cronbach's alpha for the UPPS-P facets in the current study was .87 for negative urgency, .80 for lack of premeditation, .83 for lack of perseverance, .84 for sensation seeking and .93 for positive urgency facet.

2.2.2. Alcohol Use Questionnaire (AUQ)

Alcohol use was measured using the AUQ, based on the timeline follow-back method. In this method participants are asked to retrospectively estimate their daily alcohol consumption over a time period ranging from a week to 6 months. The AUQ consists of 12 items: the first 9 items required participants to indicate their typical consumption of alcoholic beverages on a weekly basis over the last 6 months. The last three items asked participants about the speed of their drinking, the number of times they have been drunk in the last 6 months and the percentage of times they get drunk each time they drink. Several scores can be derived from the AUQ. First, the total number of alcohol units consumed in an average week over the last 6 months was calculated. The standard UK measures for units were used. According to that, 25 ml single shot of any spirit was calculated as 1 U; 175 ml standard glass of wine (12%) as 2 U and a pint of beer (4%) as 2.3 U. Second, a general alcohol use score (AUQ) was obtained by adding and weighting the weekly amount of wine, beer and spirit consumption, speed of drinking on one occasion, the number of times a participant gets drunk and the percentage of time feeling drunk in the last 6 months. Lastly, a binge drinking score was calculated for all participants (see Townshend & Duka, 2002, for more details on the scoring used for the AUQ).

2.2.3. Alcohol Use Disorder Identification Test (AUDIT)

The AUDIT is a screening tool that is used to identify people who are at risk of developing alcohol problems. The self-report measure was developed by the World Health Organisation in 1982, and it is used in identifying the preliminary signs of hazardous drinking and mild dependence within the last year. The self-report measure contains 10 multiple choice items examining three distinct domains: recent consumption, dependence and harmful use. The responses to the questionnaire are scored using a points-based system, and the overall score is obtained by adding scores for responses on each domain. The AUDIT measure was used to identify risky and hazardous drinking behaviour. Cronbach's alpha for the AUDIT was .79.

2.2.4. The UWIST Mood Adjective Checklist (UMACL)

The UMACL (Matthews, Jones, & Chamberlain, 1990) is a mood adjective checklist that comprises 24 adjectives used to describe different mood states, rated on a 4-point Likert scale. Participants are required to circle the response that best matches their current mood, with 1 being 'definitely' and 4 being 'definitely not'. The UMACL consists of three subscales: energetic arousal (EA) measures feelings of subjective positive high-activation mood states; high scores on this scale indicate high EA. Tense arousal (TA) measures feelings of subjective tension; higher scores on this scale indicate higher TA. Hedonic tone (HT) measures the overall pleasantness of mood; higher scores indicate a more pleasant emotional state. In the current study, we only report on the EA and HT scales, as they were most germane to our mood induction procedure. Cronbach's alpha was .83 for pre-mood induction EA and .75 for post-mood induction EA, and .89 for pre-induction HT and .89 for post-induction HT.