



# PSYCHOSOCIAL STRESS INCREASES CRAVING FOR ALCOHOL IN SOCIAL DRINKERS: EFFECTS OF RISK-TAKING

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## BACKGROUND

Long-term excessive alcohol use may escalate into alcohol use disorder (AUD) (including tolerance, withdrawal, compulsive alcohol seeking, anhedonia, social/familial problems)<sup>1</sup>.

Alcohol use disorder is a chronic relapsing disorder and despite decades of accumulating evidence to address chronic relapse in treatment programs, little cogent progress has been made<sup>2</sup>.

Chronic alcohol use causes neuroadaptations in the stress and reward pathways e.g. within the sympathetic adrenomedullary (SAM) and hypothalamic pituitary adrenocortical (HPA) axes<sup>3</sup>.

These neuroadaptations may lead to alcoholic patients suffering from an increased craving for alcohol following stressful stimuli.

Trait impulsivity - the tendency to take risks or act without adequate forethought or reflection<sup>4</sup> is a risk factor in predicting those who develop addictions and for those at high risk of relapse following treatment<sup>5,6</sup>. Additionally, impulsivity and stress interact to predict problem drinking in healthy (social) drinkers<sup>7</sup>.

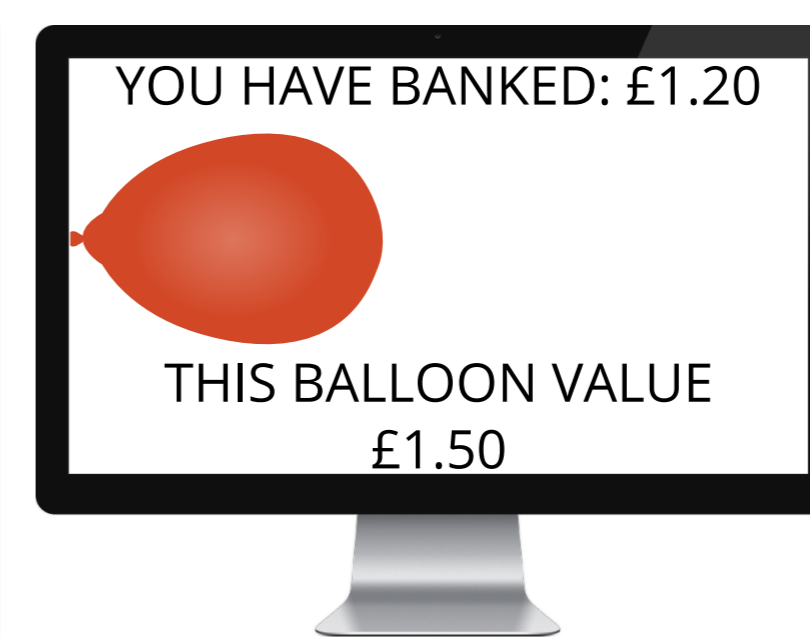
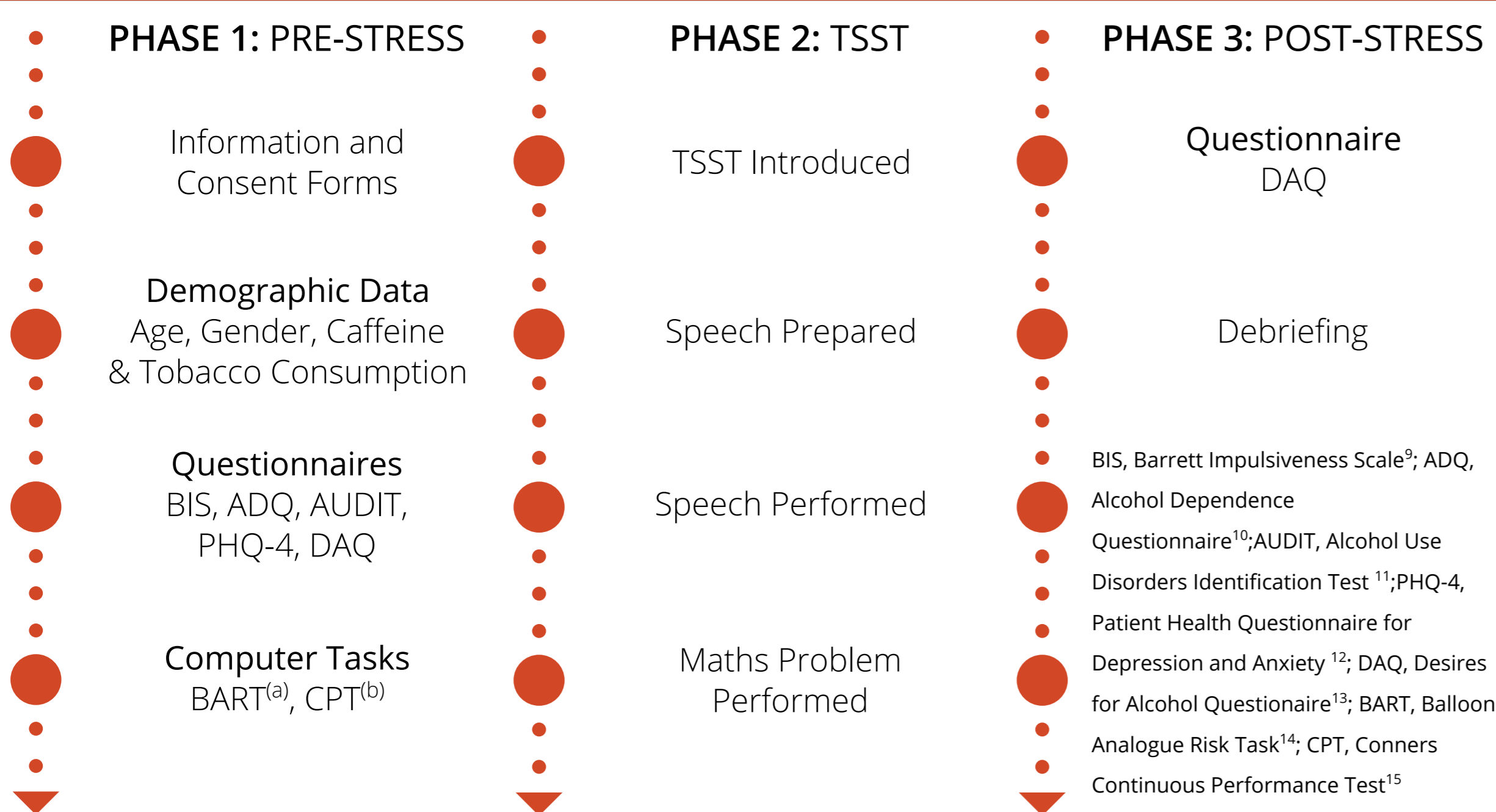
## OBJECTIVES

1) To test the hypothesis that an acute psychosocial stressor i.e. the Trier Social Stress Test (TSST)<sup>8</sup> would increase subjective craving for alcohol in a healthy (non-alcoholic) sample of social drinkers

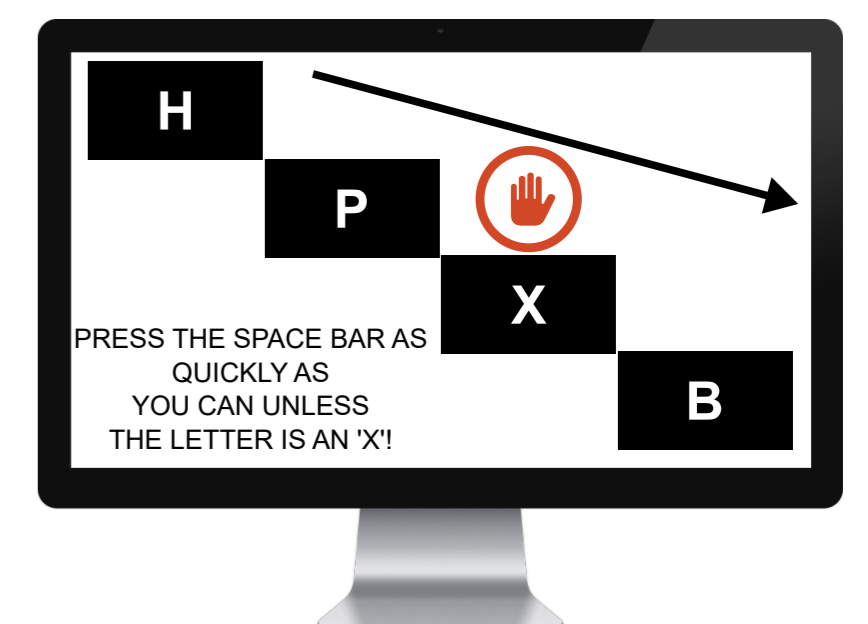
“ If we were better able to predict those that were at risk of stress-induced relapse, for example, by understanding more about underlying personality traits that put some at higher risk, we would be able to develop novel stratified interventions to prevent relapse. ”

2) To test the hypothesis that different subtypes of impulsivity and risk-taking would influence craving for alcohol, with those high in impulsivity and risk-taking showing higher rates of stress induced craving.

## METHODS

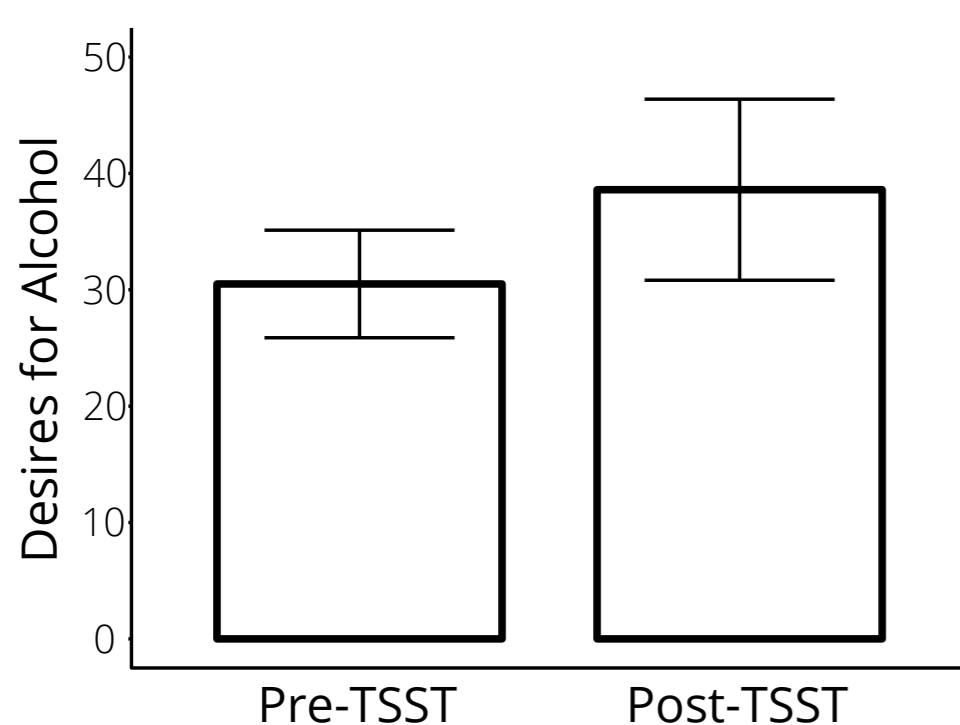


(a). BART Computer Task



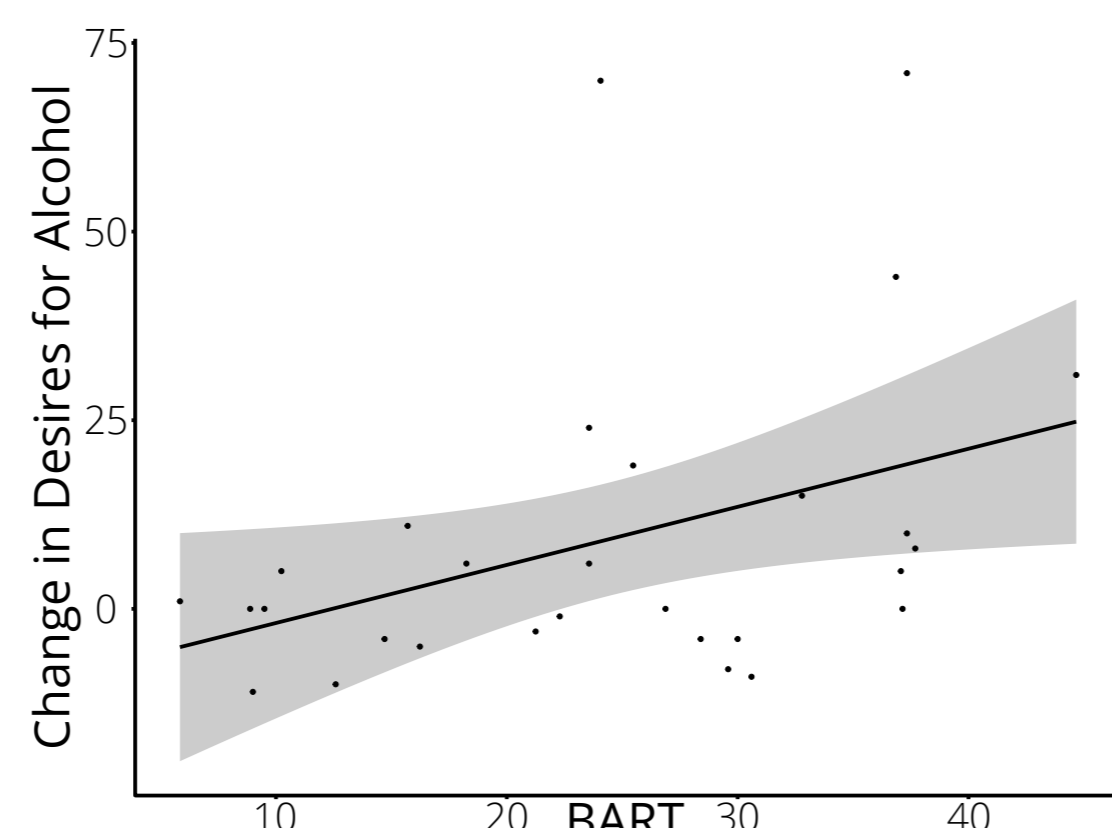
(b). CPT Computer Task

## RESULTS



**Figure 1.** Mean (±SEM) Desires for Alcohol Questionnaire (DAQ) scores (high score=higher desire) prior to, and immediately following, the Trier Social Stress Test (TSST).  $t(28) = -2.36, p < .05$ , Cohen's  $d = 0.44$  [95% CI 1.2-17.2]

**Figure 2.** Relationship between change in Desires for Alcohol (DAQ) and score on risk-taking (BART). Grey area = 95% CI.  $p < .05$



## KEY FINDINGS

- 1 Acute psychosocial stress increases craving for alcohol in social drinkers.
- 2 Increases in stress-induced craving are correlated with risk-taking.
- 3 Risk-taking may be important in predicting those at risk of stress-induced relapse.

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