

Impulsivity and Vulnerability for Transition from Binge Drinking to Alcohol Use Disorder

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Introduction: Heightened behavioural impulsivity – in the form choice impulsivity and/or response inhibition – has been proposed as a pre-existing risk factor for the development of alcohol use disorder. Nonetheless, studies examining impulsivity in adolescent/young adult binge drinkers, who are at increased risk of developing AUD, report mixed findings. This may be related to inconsistent definitions of binge drinking, the retrospective assessment of intake, and/or the modest sample size of some studies.

Method: Healthy individuals ($n = 543$, $M_{age} = 22.96$) completed online surveys, online measures of choice impulsivity and response inhibition, and submitted real-time alcohol consumption information for a period of 21 days using an app. Differences in choice impulsivity and response inhibition were assessed as a function of various binge drinking definitions. Hierarchical multiple regression was employed to determine whether impulsivity predicted alcohol use in the form of a continuous index comprising variables related to intake and consequences of use.

Key Findings: Significantly greater impulsivity – either in the form choice impulsivity or response inhibition – was not evident in binge drinkers, regardless of the criteria employed to categorise these at-risk individuals. Bayesian analyses revealed anecdotal to strong support for the null hypotheses. Neither choice impulsivity nor response inhibition significantly predicted the alcohol use index.

Discussions and Conclusions: Online assessment secured a large, reasonably representative sample (including 11% located in rural regions). While results could be attributed to the online nature of this research, it is possible more sensitive measures of behavioural impulsivity are required when assessing binge drinkers.

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