

# Drinking to regret?

## The effects of alcohol on intrusive memories and mental health

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### Introduction

- Increased alcohol use following a traumatic experience is associated with poorer mental health and increased likelihood of developing PTSD<sup>1</sup>.
- Alcohol intoxication prior to trauma has been shown to affect memory for the event, increasing the frequency of intrusive memories<sup>2</sup>.
- There is no evidence as to how alcohol intoxication after a traumatic event affects intrusive memories and mental health, despite many people drinking more post-trauma. This study tests this in laboratory conditions.

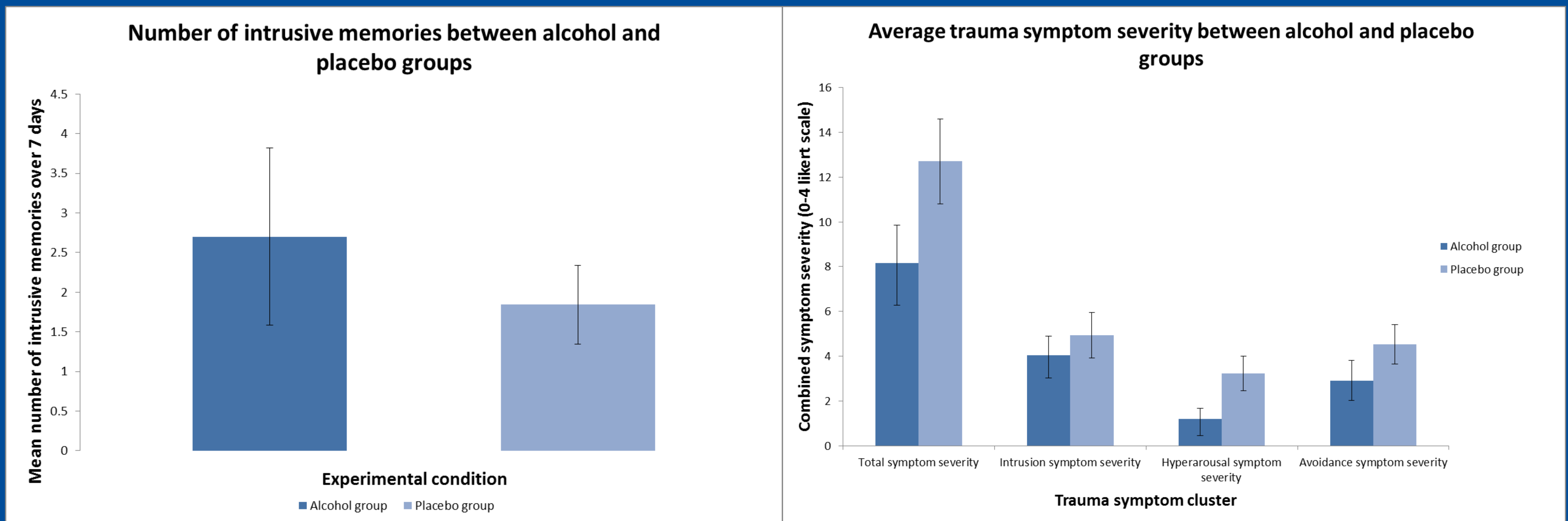
### Method

- 43 participants from the local community in Glasgow, Scotland (24 males 19 females, Age range 18-60, all consume >14 units of alcohol on average per week)
- Independent groups design: One group consumes alcohol and the other placebo beverages.
- After watching a traumatic film, participants drink either alcoholic or placebo beverages, before completing memory tests related to the film.
- Participants keep diaries of their intrusive memories for one week, returning for a follow-up session to assess their mental health symptoms.



Figure 1: A still from the traumatic film (click image to play full film)

### Preliminary Results



- Participants in alcohol group had more intrusive memories over one week compared to the placebo group, but this difference was non-significant ( $U=200, p=.437, r=.07$ ).
- Participants in the placebo group reported greater overall trauma symptom severity after one week compared to the alcohol group ( $U=118, p=.016, r=.38$ ), as well as more severe hyperarousal symptoms ( $U=137, p=.04, r=.32$ ). Intrusion and avoidance symptom severity were also greater, but not statistically significant ( $U=150.5, p=.118, r=.24; U=142.5, p=.075, r=.28$ ).

### Discussion

- Results are only preliminary- study currently underpowered as priori power analysis suggests N=60)
- Data do not consistently support that post-traumatic alcohol use affects intrusive memory development. This could be affected by extraneous variables (e.g. all participants were heavy drinking individuals, reporting different amounts of alcohol use during the study week) and measurement techniques (e.g. not all diaries were completed fully). Further investigation is required.
- Data show that alcohol is associated with better mental health over one week. This may provide temporary relief for symptoms and explain greater alcohol use post-trauma, but may not be the case long-term.

#### References

1. Kaysen, D., Dillworth, T. M., Simpson, T., Waldrop, A., Larimer, M. E., & Resick, P. A. (2007). Domestic violence and alcohol use: Trauma-related symptoms and motives for drinking. *Addictive behaviors, 32*(6), 1272-1283.
  2. Bisby, J. A., Brewin, C. R., Leitz, J. R., & Curran, H. V. (2009). Acute effects of alcohol on the development of intrusive memories. *Psychopharmacology, 204*(4), 655-666.
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