

Rethink My Drink: The efficacy of an online alcohol intervention on alcohol use and cognition in older adults

Louise Mewton¹, Virginia Winter¹, Nicholas Hoy¹, Rachel Visontay¹, Sarah Davies^{2,3}, Nicole Kochan⁴, Andrew Baillie⁵, Cath Chapman¹, Nicola C. Newton¹, Matthew Sunderland¹, Perminder S. Sachdev⁴ & Maree Teesson¹

¹ *The Matilda Centre for Research in Mental Health and Substance Use, University of Sydney*

² *Centre for Neuroscience and Regenerative Medicine, UNSW School of Clinical Medicine, High Street, Kensington, Sydney, NSW 2052, Australia*

³ *St. Vincent's Centre for Applied Medical Research (AMR), 405 Liverpool St, Sydney, NSW 2010, Australia*

⁴ *Centre for Healthy Brain Ageing, School of Clinical Medicine, University of New South Wales Sydney*

⁵ *Sydney School of Health Sciences, University of Sydney & Sydney Local Health District*

Presenter's email: louise.mewton@sydney.edu.au

Introduction: Alcohol use is increasing among older adults and is associated with cognitive impairment and dementia. The efficacy of scalable approaches to reduce alcohol use and related harms in older adults has not been tested. This study evaluated the efficacy of an online alcohol intervention in reducing alcohol use and cognitive decline in older adults.

Methods: A two-arm randomised controlled trial was conducted online among 888 community-based older adults (aged 60-75 years) who screened as risky drinkers. Participants across Australia were randomised (1:1) to *Rethink My Drink* (a four-module online intervention designed specifically for older adults) or an active control group (online information booklet), stratified by age and gender. Participants and lead statistician were blind to group assignment. Number of drinks in the past month and global cognition z-scores were the primary outcomes. The primary endpoint was 12-months follow-up. Intention-to-treat analyses were conducted using generalised mixed effects regression. Trial registration: ACTRN12621000292875 (16th March 2021).

Results: Recruitment ran from 29th October 2021 to 6th June 2022. Four hundred and forty eight participants were randomised to intervention and 400 to control conditions. At 12-months those in the intervention group had greater reductions in their monthly number of standard drinks when compared with the control group [difference = 5.02 (95% CI: 1.81-8.24; p = .002) standard drinks]. For global cognition, the difference between the two groups was not statistically significant at 12-months [difference = 0.12 (95% CI: 0.49-0.29; p = .161) standard deviations].

Conclusions: This randomised controlled trial indicated that the online *Rethink My Drink* intervention was effective in reducing both monthly drinking and frequency of high-risk drinking days in older risky drinkers, compared to an active control. No positive benefits on cognitive outcomes were identified over 12 months follow-up among those in the intervention group when compared with the control group.

Implications on communities, practice, policy and/or First Nations communities: Within the context of increasing alcohol use and alcohol-related morbidity and mortality among older adults, Rethink My Drink is an effective and scalable intervention that has considerable potential for reducing alcohol-related burden of disease among our fastest growing age group.

Disclosure of Interest Statement: This study was funded by an Australian Dementia Centre for Research Collaboration World Class Research Grant. NHMRC Fellowships support authors MT, NN, CC, PS. The funders had no role in the study design; in the collection, analysis, and interpretation of data; in the writing of the report; and in the decision to submit the article for publication. The authors confirm that they are independent from the funders and have full access to all of the data (including statistical reports and tables) in the study and take responsibility for the integrity of the data and the accuracy of the data analysis. All authors declare: no support from any organisation for the submitted work; no financial relationships with any organisations that might have an interest in the submitted work in the previous three years; no other relationships or activities that could appear to have influenced the submitted work.