Process evaluation of a smartphone app (Drink Less) for reducing alcohol consumption in the UK: engagement and behavioural mechanisms of action

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Team

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Disclosure of interest

None of the authors have received funding from the alcohol industry.

Outside the submitted work, EK has previously co-authored papers that analysed raw market research consumer-based data provided to Newcastle University under a direct contract with Kantar Worldpanel at no cost to Newcastle University. Kantar Worldpanel received reimbursement from AB InBev to cover the costs of the data, Kantar WordPanel having similar commercial relationships with other customers who pay to have data collected on food and non-food items available for sale in supermarkets and other retail outlets covered by the WorldPanel.

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Acknowledgements

- Community of people who participated

- I acknowledge I am a visitor on the lands of the Ngunnawal people

Funding

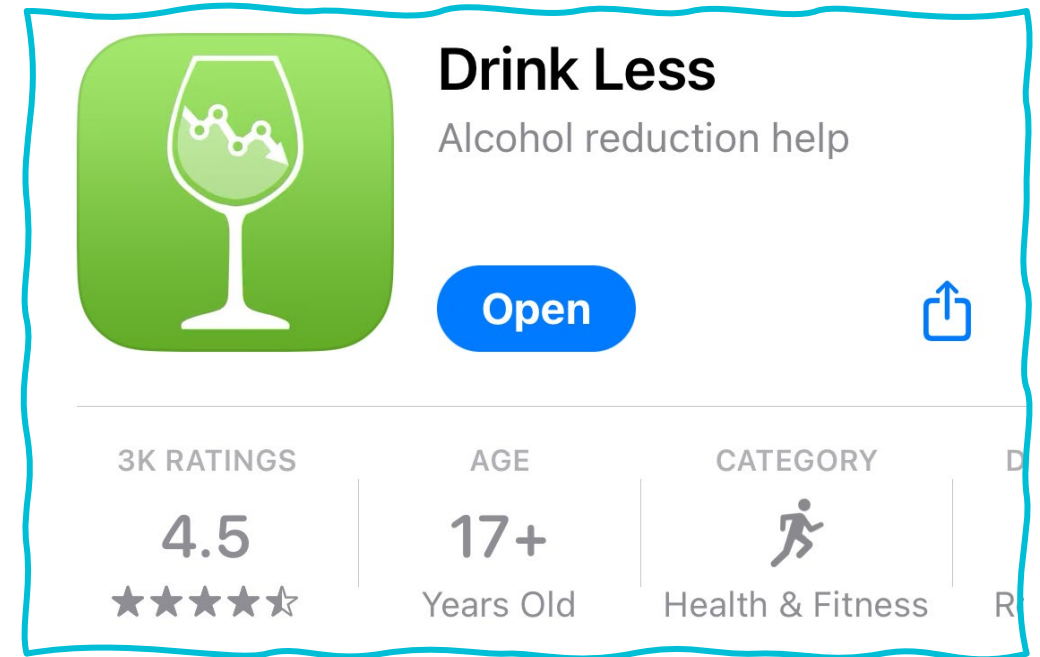FUNDED BY

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Introduction

- Drink Less is an alcohol reduction app for adults in the UK who drink at increasing and higher risk levels

- Evidence- and theory-informed[1,2]

- Popular with its users

Drink Less
Alcohol reduction help

Open

3K RATINGS	AGE	CATEGORY	
4.5 ★★★★☆	17+ Years Old	🏃 Health & Fitness	

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[1] Garnett et al., Translational Behavioural Medicine (2019); [2] Garnett et al. F1000Research (2021)

Introduction

- Its effectiveness was recently evaluated in a large randomised controlled trial (n=5,602) in comparison with usual digital care

- Drink Less resulted in a 2.00-unit (UK) greater weekly reduction at 6-month follow-up compared with the NHS alcohol advice webpage

- But how does it work…

Effectiveness of a smartphone app (Drink Less) versus usual digital care for reducing alcohol consumption among increasing-and-higher-risk adult drinkers in the UK: a two-arm, parallel-group, double-blind, randomised controlled trial

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Summary
Background Digital interventions, including apps and websites, can be effective for reducing alcohol consumption. However, many are not evidence- or theory-informed and have not been evaluated. We tested the effectiveness of the Drink Less app for reducing alcohol consumption compared with usual digital care in the UK.

Methods In this two-arm, parallel group, double-blind, randomised controlled trial, we enrolled increasing-and-higher-risk drinkers (AUDIT ≥ 8) in the UK who were motivated to reduce their alcohol consumption and

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Aim

To assess whether participants' engagement and behavioural characteristics were mechanisms of action underpinning the effectiveness of Drink Less.

Methods

- Design
  - Two-arm RCT with an embedded process evaluation

- Process evaluation
  - Engagement
    - Self-reported adherence to the digital tool (n=5,602)
    - Frequency, amount, duration and depth of engagement with Drink Less (n=2,788)
  - Behavioural characteristics
    - Urges to drink
    - Self-monitoring behaviour
    - Self-regulatory behaviour

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Results

Self-reported adherence

- 78.0% (95% CI=77.6-78.4) reported using the Drink Less app (in intervention group)

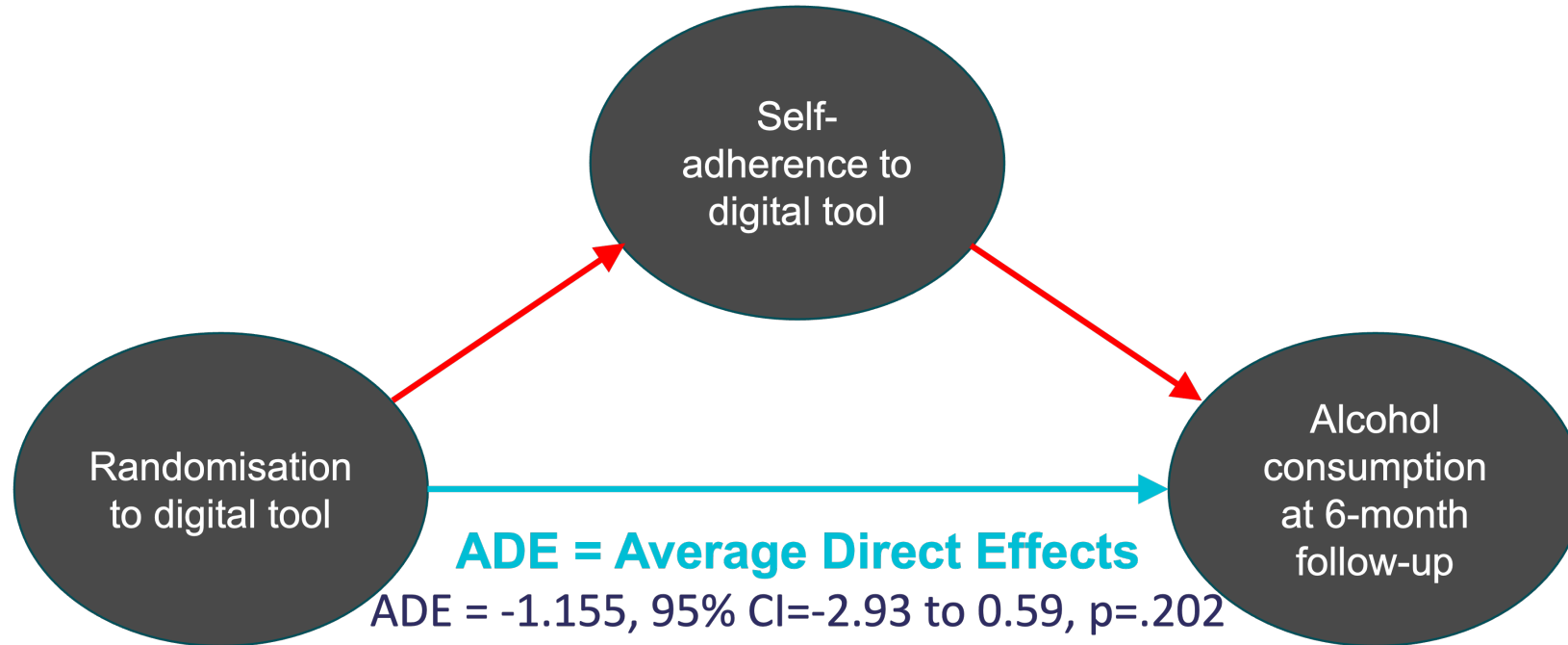- 71.5% (95% CI=71.0-71.9) reported using the NHS webpage (in comparator group)

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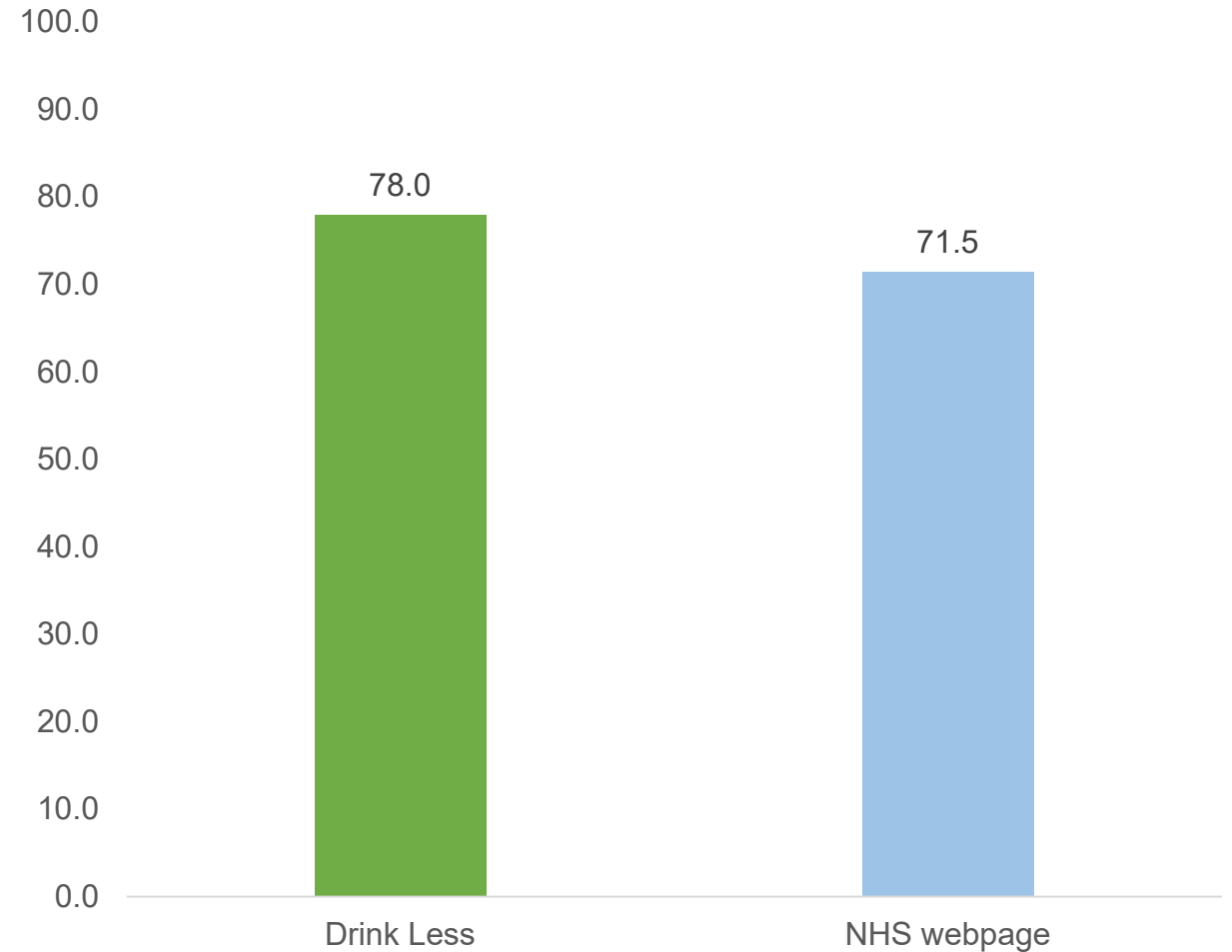
Results

Does self-reported adherence mediate effectiveness?

ACME = Average Causal Mediation Effects
ACME = -0.559, 95% CI=-0.85 to -0.30, p<.001

ADE = Average Direct Effects
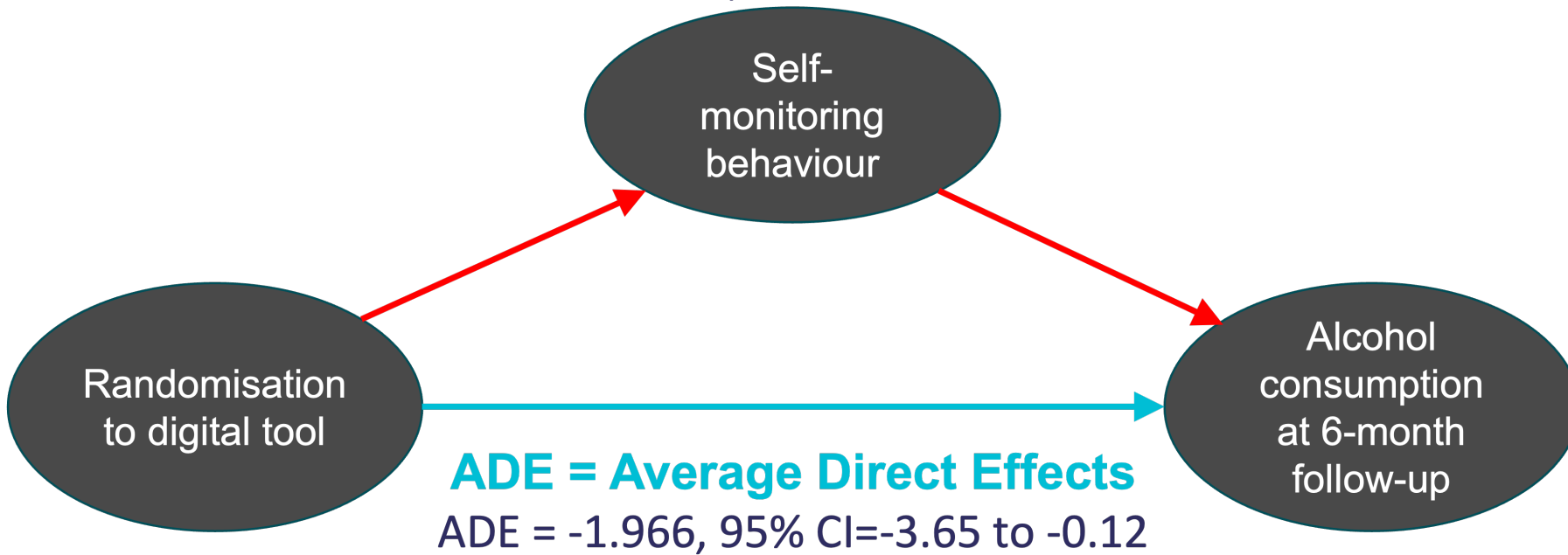ADE = -1.155, 95% CI=-2.93 to 0.59, p=.202

Results

Does self-monitoring behaviour mediate effectiveness?

ACME = Average Causal Mediation Effects
ACME = -0.235, 95% CI=-0.44 to -0.03

Self-monitoring behaviour

Randomisation to digital tool

Alcohol consumption at 6-month follow-up

ADE = Average Direct Effects
ADE = -1.966, 95% CI=-3.65 to -0.12

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Discussion and Conclusions

- Adults in the UK who drink at increasing and higher risk levels engaged frequently with the Drink Less app

- Following the recommendation to use the app (self-reported adherence) and using the tracking feature (self-monitoring behaviour) of the Drink Less app appear to be important mechanisms of action for alcohol reduction

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Thank you.

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Paper available here