



**DrinksRation – An alcohol app for help-seeking veterans**

**Results of a Randomised Controlled Trial**

[www.drinksration.app](http://www.drinksration.app)

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@DrinksRation



# Faculty/Presenter Disclosure

I am funded by the **Forces in Mind Trust** as a Research Fellow.

I am a member of the UK Armed Forces Army Reserve.

## **Co-Authors**

**A Simms** is a full-time member of the UK armed forces seconded to King's College London.

**N Fear** is part funded by a grant from the UK Ministry of Defence and is a trustee of a charity supporting the health and wellbeing of service personnel, veterans and their families.

**E Carr** is part funded by the National Institute for Health and Care Research Biomedical Research Centre at South London and Maudsley NHS Foundation Trust.



# Disclosure of Financial Support

- This project has received financial support from the **UKRI Medical Research Council** and the **Forces in Mind Trust** in the form of research grants.
- This project has received in-kind support from Combat Stress in the form of in-kind knowledge support and clinical oversight support.





# Mitigating Potential Bias

- The UK Ministry of Defence, Forces in Mind Trust and UKRI Medical Research Council had no input in the analysis or interpretation of results.
- All results have been peer reviewed.



# Learning Objectives:

- At the conclusion of this presentation participants will be able to describe a randomised controlled trial, and outline the findings of the study.



## ALCOHOL USAGE IN THE UK ARMED FORCES

1 June 2016 - 31 May 2017

### ALCOHOL SCREENING TOOL



74% (n = 109,459) of Regular UK Armed Forces personnel had completed a questionnaire (AUDIT-C). (1% declined)




This is the first large scale use of the AUDIT-C questionnaire in a military population

### RISK CATEGORIES


61% scored 5+ indicating that they may potentially be at increasing risk or above of alcohol related harm

(ranging from poor mood, accidents and reduced fitness, to possible long-term illness)

You would score in this category if you drank:


 3 glasses of wine twice a week

OR

 4 pints of beer on one occasion in the month

2% scored 10+ indicating that they may potentially be at increasing or higher risk and should be advised to see their GP

You would score in this category if you drank:

 3 pints of beer 5 times a week

### ALCOHOL ADVICE



80% of personnel who scored 1+ had been given an alcohol advice leaflet

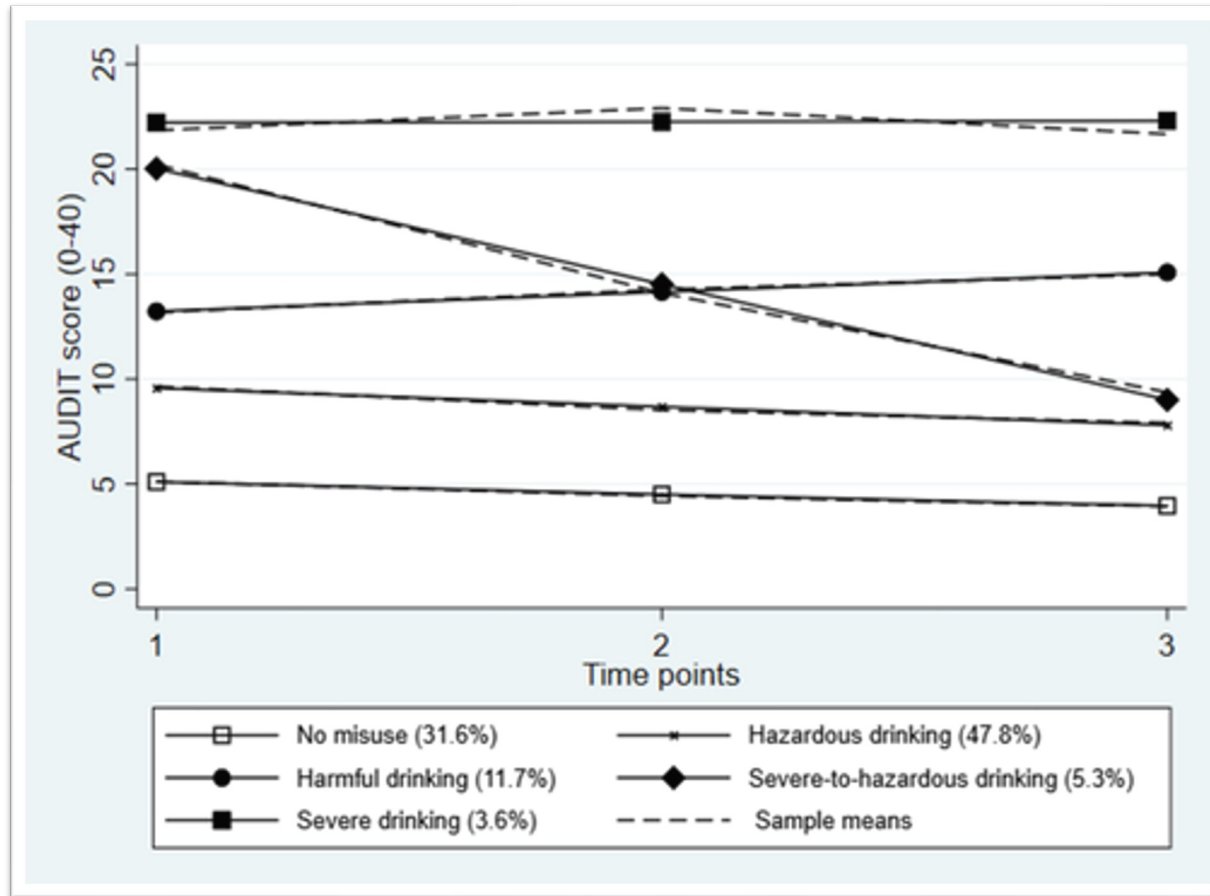


63% of personnel who scored 5+ had been given advice about reducing their drinking (alcohol brief intervention)

Is there a problem with drinking in the UK military?



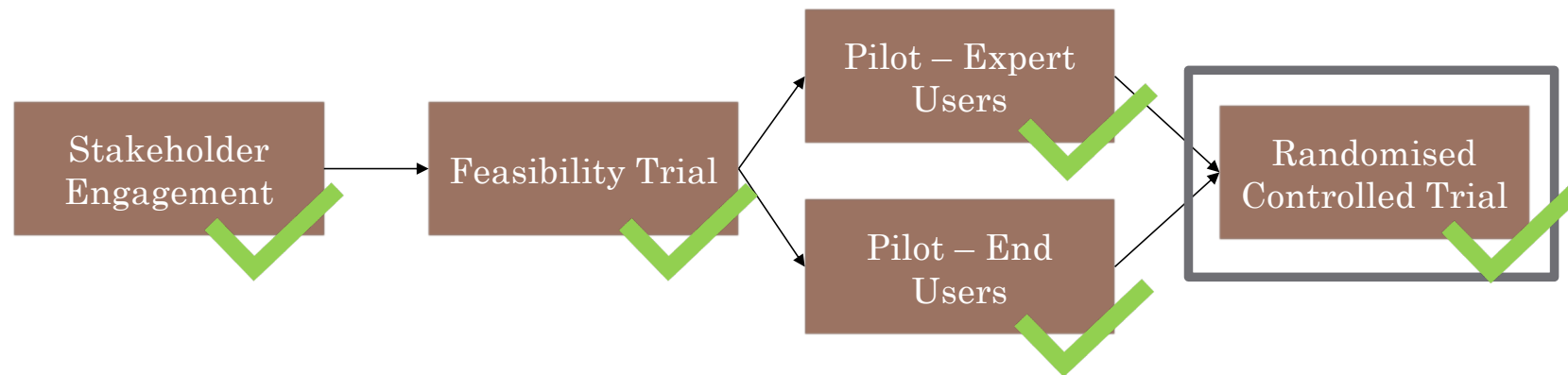
# Is there a problem with drinking after leaving service?



Trajectories of alcohol misuse among the UK Armed Forces over a 12-year period. Palmer *et al.* 2021. *Addiction*. doi:10.1111/add.15592

# The story so far...

Medical Research Council Complex Intervention Guidelines





# How is DrinksRation different to other apps?



Content tailored to ex-serving personnel

Focused on shorter term outcomes e.g. impact on relationship

Content driven by user feedback and interaction

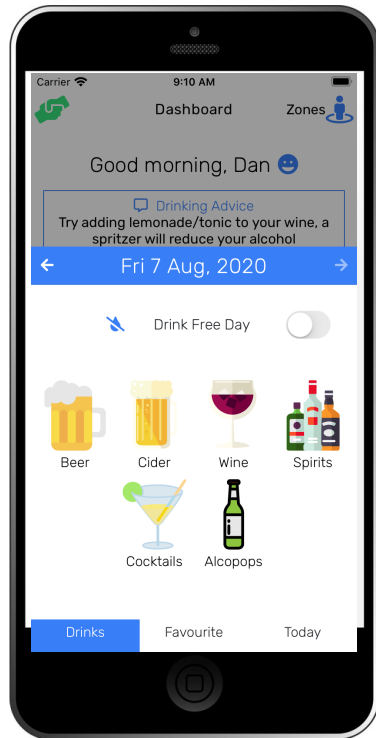
Daily *personalised* text messages and/or push notifications

Weekly assessments of mood and drinking behaviours to inform personalisation

App split into stages using HAPA model

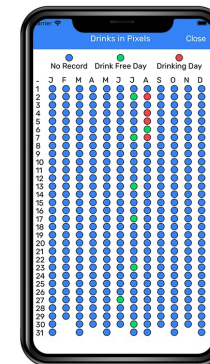
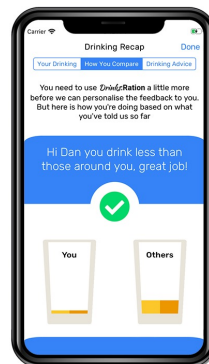
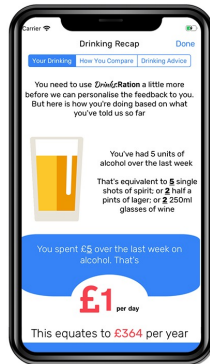
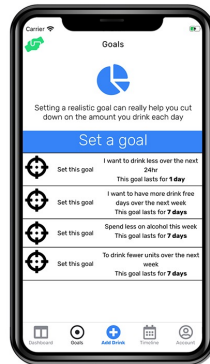
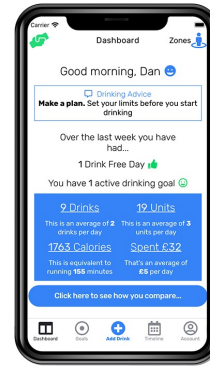
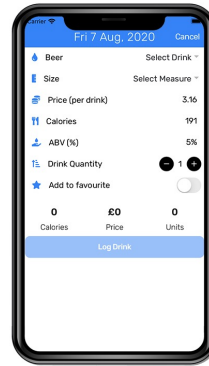
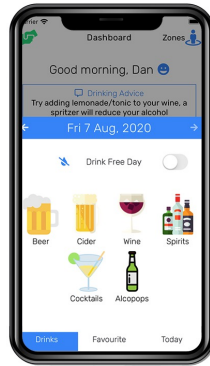
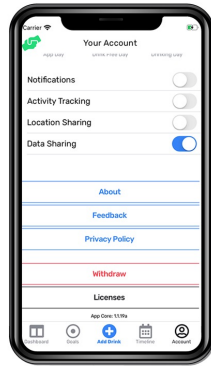
**Behavioural Change Theory underpins all DrinkRation components**

# DrinksRation Overview



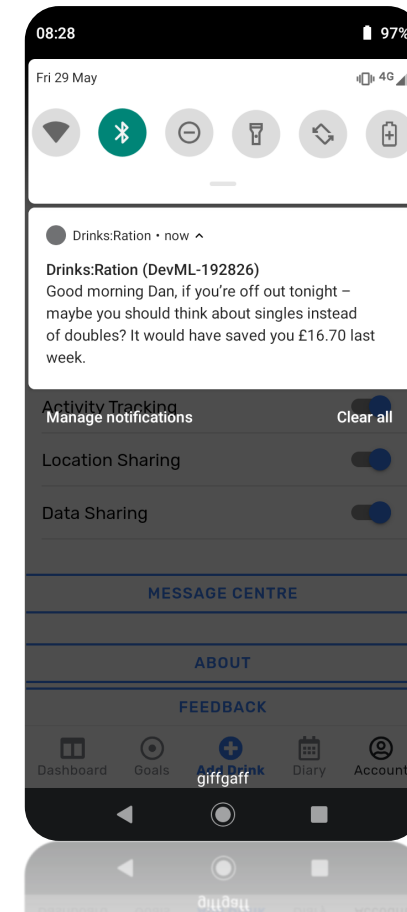
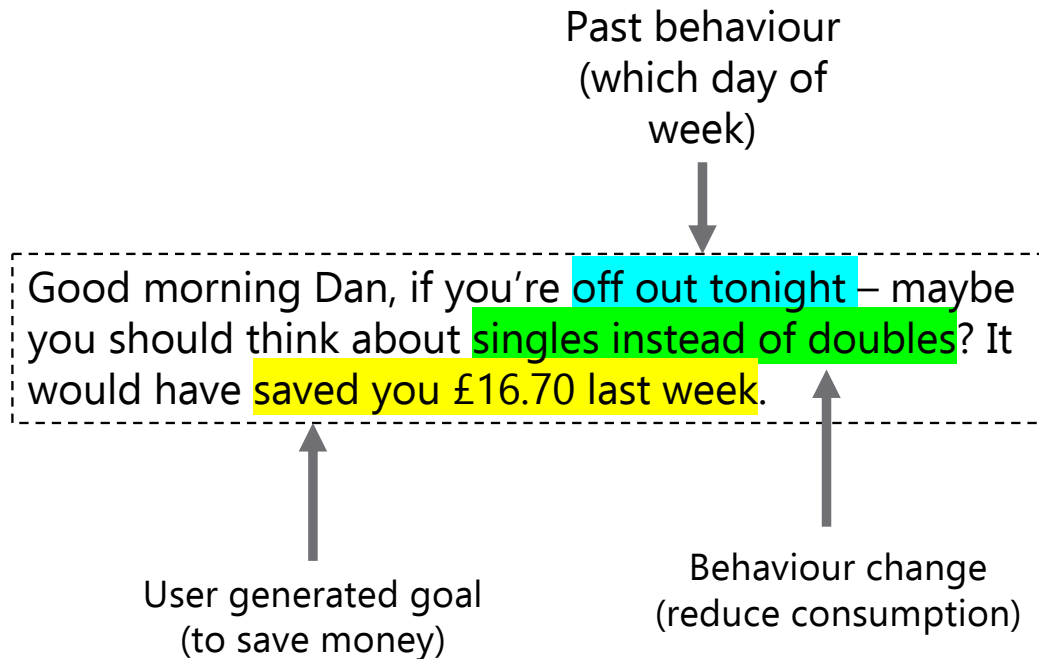
- **Designed as a 28-day intervention using a staged approach:**
  - **Stage 1:** Normative feedback, promote self-efficacy and self-monitoring
  - **Stage 2:** Maintenance of self-efficacy and introduce goal/action planning
  - **Stage 3:** Managing self-efficacy and coping development.
- **User interaction required.**
- Log alcohol and drink free days.
- Log mood and mental health state.





# DrinksRation Screenshots

# Personalising the 'message' - Example



# Study design



Hypothesis: The intervention arm would be more efficacious in **reducing alcohol consumption** compared with the control arm.

Design: Two-arm randomised controlled trial powered to detect a **four unit decrease** in alcohol consumption at follow-up.

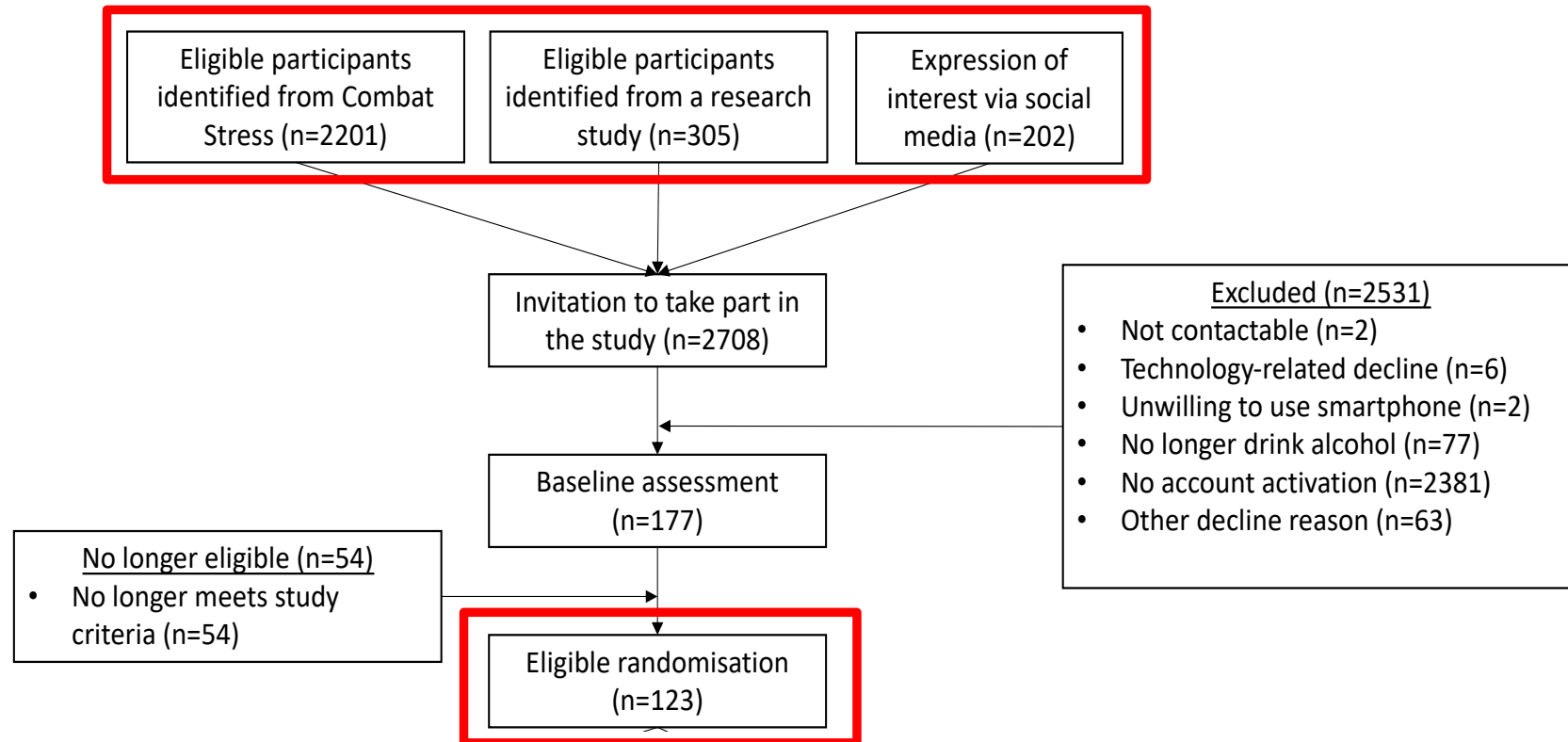
## Control Arm

No monitoring features except CMO guidance on alcohol consumption

## Intervention Arm

Full functionality including individualised normative feedback

Outcomes: Primary outcome is **change in alcohol consumption between baseline (day 0) and 3-month follow-up (day 84)**.



# Recruitment

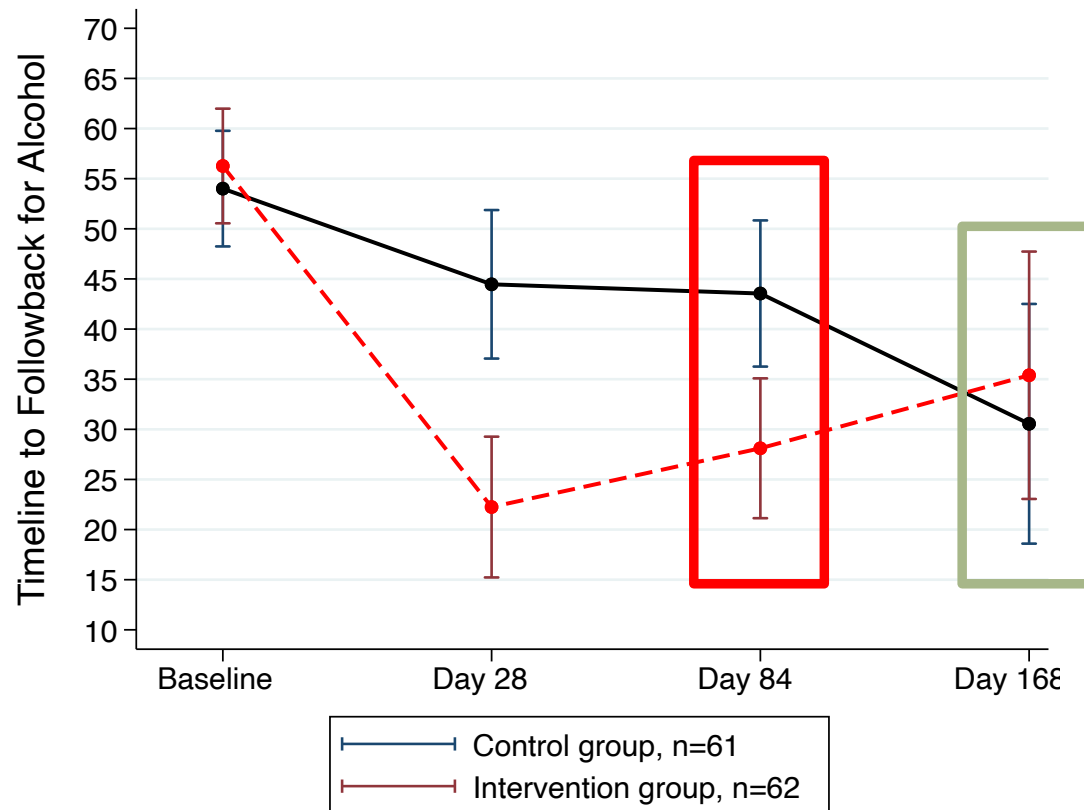


Characteristic	Control (n=61)	Intervention (n=62)
<b>Age (mean, 95% CI)</b>	47.42 (44.86 to 49.98)	47.67 (45.25 to 50.09)
<b>Gender (%)</b>		
Male	<b>95.1</b>	95.2
Female	4.9	4.8
<b>Military branch (%)</b>		
Royal Navy/Royal Marines	9.8	12.9
Royal Air Force	13.1	13.1
Army	<b>73.2</b>	69.6
Other	4.9	4.9
<b>Length of military service (median, IQR)</b>	15 (8 to 22)	12 (7 to 22)
<b>Post-Traumatic Disorder (%)</b>		
Probable PTSD	<b>42.6</b>	50.0
<b>Depression (%)</b>		
Probable depression	49.2	56.5
<b>Anxiety (%)</b>		
Probable anxiety	52.5	46.8
<b>AUDIT score (mean, 95% CI)</b>	16.2 (14.0 to 18.4)	17.2 (15.3 to 19.1)
<b>Device type</b>		
iOS	52.5	38.7
Android	47.5	61.3

# Demographics



# Does DrinksRation reduce self-reported alcohol consumption?

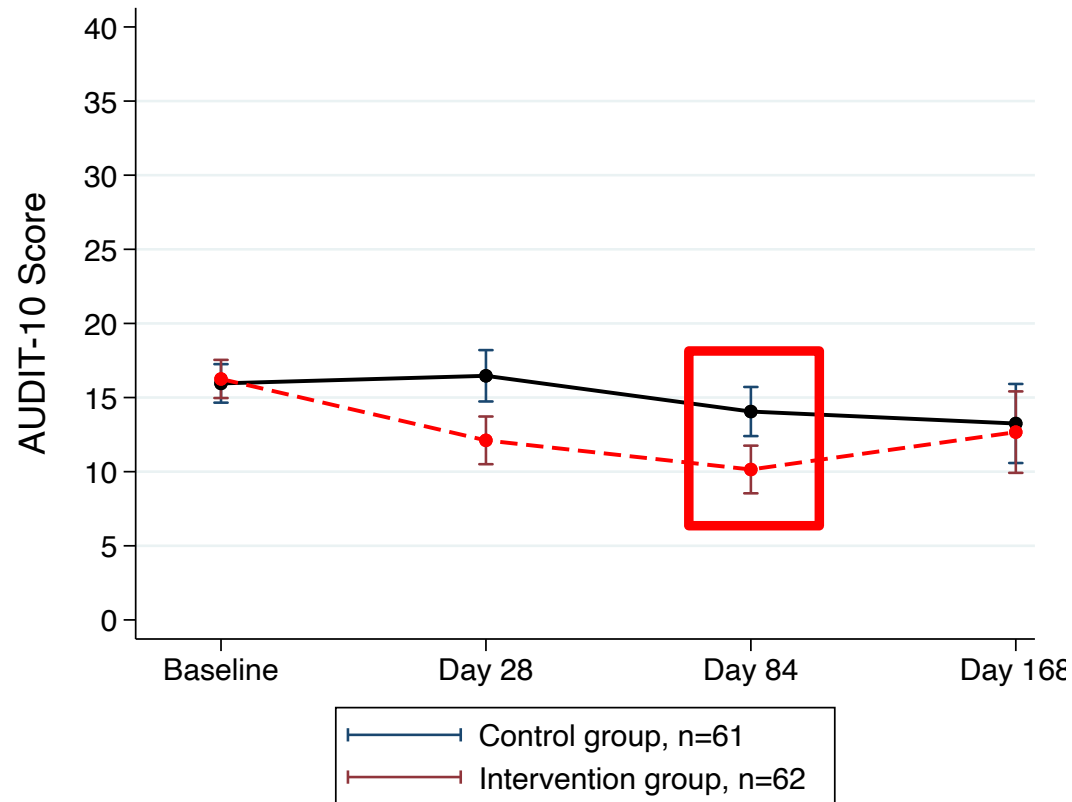


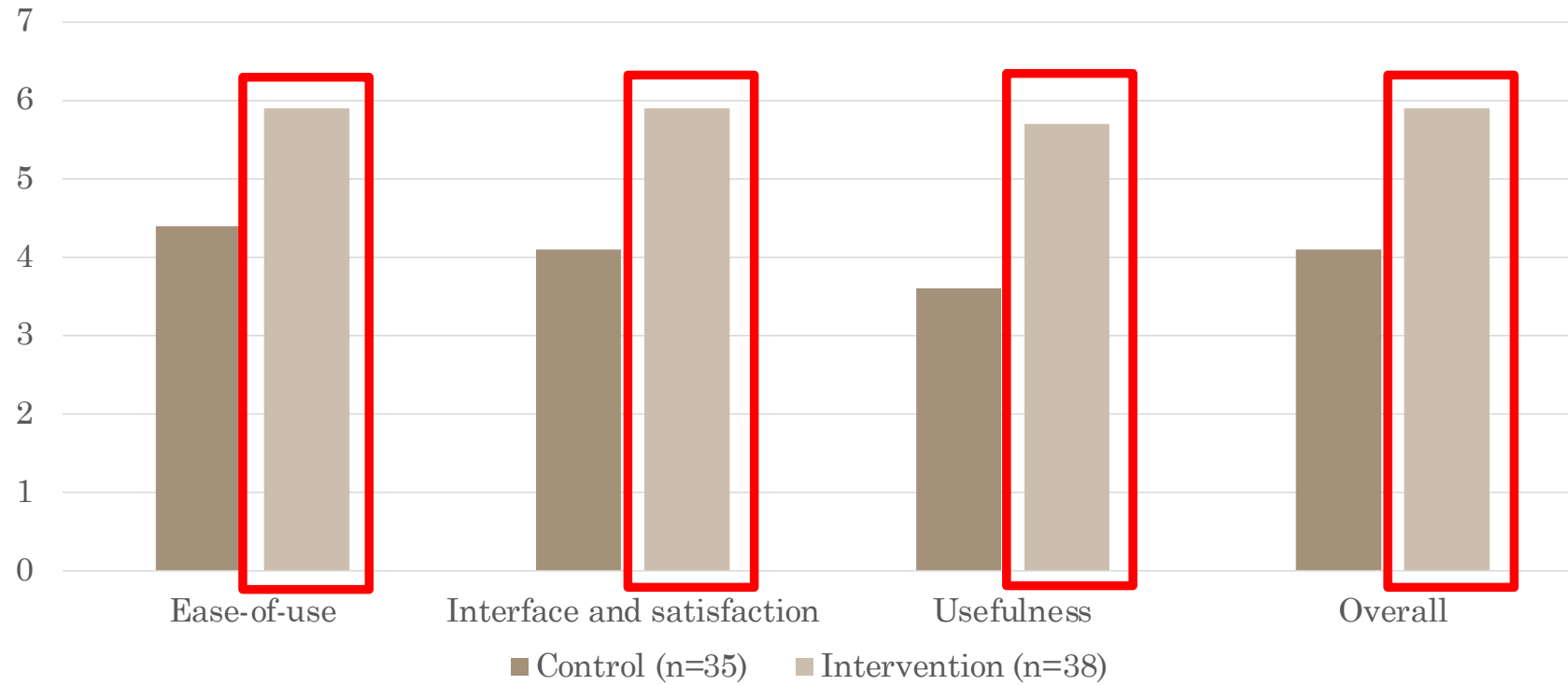
Mixed models. Adjusted for age, sex and predictors of missingness





Does  
DrinksRation  
reduce self-  
reported  
AUDIT score?





# App usability scoring

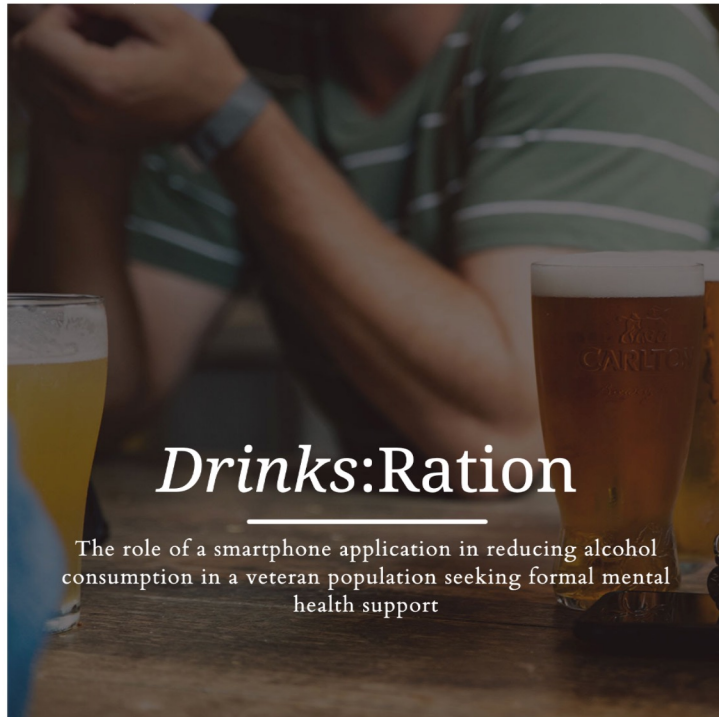
# Conclusions and implications

- Measures of engagement were encouraging across the study.
- Most users used the app primarily for self-monitoring;
  - Use of goal setting was limited.
  - Related to perceived need to change drinking.
- DrinkRation was found to be efficacious in reducing alcohol consumption in help-seeking veterans at day 84.
- Covid-19 may have had an impact on the study or drinking behaviours.
- These findings support the dissemination of DrinkRation.



**FiMT**  
FORCES IN MIND TRUST

**COMMUNITY FUND**



## *Drinks:Ration*

The role of a smartphone application in reducing alcohol consumption in a veteran population seeking formal mental health support

**KING'S**  
College  
LONDON

**KCMHR**  
KING'S CENTER FOR MILITARY HEALTH RESEARCH

Lancaster  
University



**COMBATSTRESS**  
FOR VETERANS' MENTAL HEALTH



# FiMT Funder Report

[www.kcmhr.org/pdf/2022\\_ration\\_report.pdf](http://www.kcmhr.org/pdf/2022_ration_report.pdf)



**COMBAT STRESS**  
FOR VETERANS' MENTAL HEALTH



# Combat Stress Partnership



# Armed Forces Trial

Led by Surgeon Commander Kate King





## Score Overview

Baseline Review Score:

**82%**

Data Score:

**79%**

Professional Assurance Score:

**80%**

Usability/ Accessibility Score:

**85%**

Level:

**Level 2**

ORCHA ESF Tier:

**Tier 2b**

App Categories:

**Addiction, Alcohol Awareness, Alcohol Monitoring**

## DrinksRation Download

- DrinksRation is available for **download** via iOS and Android app stores (search DrinksRation).
- ORCHA Health is a company which screens and evaluates health apps for use in a healthcare setting.

See our full reports here: [www.drinksration.app/transparency](http://www.drinksration.app/transparency)

# Thank You

## Research Team.

Dr Daniel Leightley – King's College London  
Ms Charlotte Williamson – King's College London  
Dr James Shearer – King's College London  
Dr Ewan Carr – King's College London  
Professor Roberto Rona – King's College London  
Professor Nicola T. Fear – King's College London

Dr Laura Goodwin – Lancaster University

Professor Dominic Murphy – Combat Stress

Maj Amos Simms – UK Armed Forces  
Lt Col Norman Jones – UK Armed Forces  
Surg Cdr Kate King – UK Armed Forces



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