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Top Tips habit-based weight loss app study

Submission date
25/02/2019

Recruitment status
No longer recruiting

Registration date
08/03/2019

Overall study status
Completed

Last Edited
16/03/2020

Condition category
Nutritional, Metabolic, Endocrine

[_] Prospectively registered
[_] Protocol
[_] Statistical analysis plan
[X] Results
[_] Individual participant data

Plain English summary of protocol

Background and study aims:
TOP TIPS is a simple and effective weight loss approach which was converted into an Android app. The study tested two versions of TOP TIPS that were accessed through participants' smartphone. The apps aimed to help people develop healthy habits and lose weight.

Who can participate:
To be eligible to take part in this research people had to: be 18 years or over; speak English fluently; live in the UK; have Body Mass Index 25kg/m2 or over and own an android smartphone.

What does the study involve:
Taking part in the study involved using the TOP TIPS weight loss app for 3 months. Some participants were able to start straight away while others were asked to wait for three months to get access to the app. Taking part required no more than 10 minutes per day of participants' time, and they could use the app a time that suits them. The Top Tips apps advised users to make context-specific plans to turn each tip into a habit and adjust these whenever needed. The app also asked users to track their weight in kg and adherence to the tips each day. The apps provided automatic updates of how many times each tip was achieved per week, as well as daily reminders to promote engagement with the app.

What are the possible benefits and risks of participating:
Potential benefits included weight loss and improvements in participants' diet and activity behaviours. No risk was foreseen from taking part in this research.

Where is the study run from:
The intervention was run entirely online.

When is the study starting and how long is it expected to run for?
The study started in January 2017 and was expected to run for 3 months.

Who is funding the study:
The app development was partially funded by the charity Weight Concern and partially funded by White October, a web design and development company. Researchers involved in this study were supported by CRUK, YCR, and CAPES/Brazil.

Who is the main contact:
For more information about the study, please e-mail Nathalie.kliemann.13@ucl.ac.uk or access the study website: http://weightconcern.wixsite.com/toptips

Contact information

Type(s)
Scientific

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Additional identifiers

Protocol serial number
5766/003

Study information

Scientific Title
Development of the Top Tips habit-based weight loss app and preliminary indications of its usage, effectiveness and acceptability: a mixed methods pilot study

Study objectives
Participants would engage with the apps and find them useful. Both Top Tips habit-based apps would promote greater eating self-regulatory skills, weight loss and healthy behaviours among adults with overweight or obesity compared to the control group. The 'Top Tips plus app' would promote greater absolute decreases in sweet snacks and sugar sweetened drinks intake compared to the 'Top Tips only app'.

Ethics approval required
Old ethics approval format

Ethics approval(s)

Approved 16/09/2016, UCL Research Ethics Committee (Research Ethics Co-ordinator, Office of the Vice-Provost (Research), University College London, 2 Taviton St, London, WC1E 6BT; 020 7679 8717; ethics@ucl.ac.uk), ref: 5766/003.

Primary study design
Interventional

Study design
Mixed methods pilot study

Study type(s)
Treatment

Health condition(s) or problem(s) studied
Overweight or obesity

Interventions
Participants were individually randomised to one of the three group conditions:
i) Top Tips 'only' app;
ii) Top Tips 'plus' app (including an additional tip on dealing with tempting foods) or
iii) no intervention control group (waiting list).
The active intervention period was 3 months and follow-up data were collected at the end of this period. Both the content and format of the Top Tips apps were developed based on:
i) the 10 Top Tips leaflet;
ii) the principles of Habit Theory;
iii) empirical evidence from the field of weight loss and behavioural nutrition and;
iv) the experience of the developers in designing health apps for behaviour change.
They were designed for android devices. The Top Tips apps advised users to make context specific plans to turn each tip into a habit and adjust these whenever needed. The app also asked users to track their weight in kg and adherence to the tips each day. The apps provided automatic updates of how many times each tip was achieved per week, as well as daily reminders to promote engagement with the app. A total of 9 notifications were designed related to different functions of the app,easy to add to past days. A random notification was sent each day in the evenings as it was anticipated that this would be the most likely time people would log their adherence to the target behaviours and review their plans. However, participants could turn this function off if they wanted.
The Top Tips 'plus' app included an additional tip targeting self-regulatory strategies to resist tempting food. This new tip was developed based on the current evidence for reducing unhealthy food cravings and avoiding lapses. The tip promoted visual imagery and distraction strategies to avoid cues that elicit urges to eat unhealthy foods, which may increase the likelihood of resisting tempting food. The additional tip also provided examples of forming coping plans using these strategies. In line with the other tips, users were required to make their own coping plans to resist unhealthy food and monitor their progress every day, assessing whether they experienced food cravings and whether they could resist them.
After randomisation, participants randomised to one of the 2 app groups received an email with instructions about the intervention and a passcode to access the app. Participants were instructed to use the app every day for 3 months, which is the period usually required to form habits. Participants randomised to the control condition received an email explaining that they had been allocated to the waiting list group and that they would receive access to the weight loss app in 3 months' time. Prior to randomisation and at 3-month follow-up all participants were

requested to complete an online questionnaire. To promote completion of the post-intervention assessment all participants had the chance to enter a draw to win one of three £20 high street vouchers. However, they were only informed about the prize draw at the end of the intervention, to ensure only participants who were motivated to lose weight and to improve their diet were recruited to the study. Participants from the Top Tips apps conditions were also invited to answer qualitative questions at the end of the online follow-up questionnaire to further explore their experience of using the apps.
The randomisation was performed by the principal investigator using Minimpy software. Randomisation was stratified by gender, age and BMI classification to prevent imbalances between the treatment groups that could influence the effect of the intervention.

Intervention Type
Behavioural

Primary outcome(s)
Usage pattern and users' feedback were the primary variables of interest. Automated data from Top Tips 'only' and Top Tips 'plus' users were collected over the 3-month intervention period to assess usage patterns (number of log-ins; pages viewed; plans made; total time spent on the app in minutes and the number of times weight was logged and each tip was achieved).

To assess acceptability of the Top Tips apps, eight open questions relating to users' experience of using the apps were included in the online follow-up questionnaire at 3 months.

Key secondary outcome(s)
1. Weight and height were self-reported using an online questionnaire at baseline and 3-month follow-up
2. Overall frequency of the target behaviours was measured online using a 16-item questionnaire (developed previously for the 10 Top Tips intervention on a 5-point Likert scale) at baseline and 3-month follow-up
3. Dietary intake was measured online using validated food frequency questionnaires (assessing fruit and vegetable; sweet snack and sugar-sweetened drinks intake on a 7-point Likert scale) at baseline and 3-month follow-up.
4. Fat intake was measured online using the dietary fat scale from the validated Dietary Instrument for Nutrition Education (DINE) at baseline and 3-month follow-up.

Completion date
01/03/2017

Eligibility

Key inclusion criteria
1. Adults (18 years or over) from the UK
2. Owned an android smartphone
3. Read English fluently
4. Overweight or obese (BMI ≥ 25 kg/m2)

Healthy volunteers allowed
No

Age group
Adult

Lower age limit
18 Years

Sex
All

Total final enrolment
81

Key exclusion criteria
1. Unable to provide informed consent
2. Pregnant or breastfeeding
3. Expecting to have bariatric surgery in the following 3 months or were recovering from bariatric surgery
4. On a strict weight loss treatment, such as meal replacements

Date of first enrolment
01/01/2017

Date of final enrolment
01/03/2017

Locations

Countries of recruitment
United Kingdom

England

Study participating centre
Department of Behavioural Science and Health
University College London
2nd and 3rd floor
1-19 Torrington Place
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W1CE 7HB

Sponsor information

Organisation
Weight Concern

ROR

https://ror.org/04zhncz06

Organisation
White October

Funder(s)

Funder type
Charity

Funder Name
Cancer Research UK

Alternative Name(s)
CR_UK, Cancer Research UK - London, Cancer Research UK (CRUK), CRUK

Funding Body Type
Private sector organisation

Funding Body Subtype
Other non-profit organizations

Location
United Kingdom

Funder Name
Yorkshire Cancer Research

Alternative Name(s)
YCR

Funding Body Type
Government organisation

Funding Body Subtype
Trusts, charities, foundations (both public and private)

Location
United Kingdom

Funder Name

Coordenação de Aperfeiçoamento de Pessoal de Nível Superior

Alternative Name(s)
Brazilian Federal Agency for the Support and Evaluation of Graduate Education, Coordination for the Improvement of Higher Education Personnel, CAPES Foundation, Capes - Ministério da Educação, Coordinación de la formación del personal de nivel superior (Brasil), CAPES

Funding Body Type
Government organisation

Funding Body Subtype
National government

Location
Brazil

Results and Publications

Individual participant data (IPD) sharing plan
The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request

IPD sharing plan summary
Available on request

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article	results	10/05/2019	17/05/2019	Yes	No
Study website	Study website	11/11/2025	11/11/2025	No	Yes