

A novel mobile app assistant for weight control

| | | |
|--|--|--|
| Submission date 10/11/2022 | Recruitment status No longer recruiting | <input type="checkbox"/> Prospectively registered |
| Registration date 11/11/2022 | Overall study status Completed | <input type="checkbox"/> Protocol |
| Last Edited 27/04/2023 | Condition category Nutritional, Metabolic, Endocrine | <input type="checkbox"/> Statistical analysis plan |
| | | <input checked="" type="checkbox"/> Results |
| | | <input type="checkbox"/> Individual participant data |

Plain English summary of protocol

Background and study aims

Obesity has become a public health issue worldwide. This pilot study aims to investigate the effect of a mobile app to assist weight management.

Who can participate?

Adults aged 30-60 years old who are overweight

What does the study involve?

Participants are randomly allocated to the control-first group or the intervention-first group. In period 1 (up to day 30), the control-first group continues with their regular life and the intervention-first group undergoes the app intervention; in period 2 (up to day 60), the groups cross over. The app provides a digital program to help users identify unhealthy eating behaviours and make positive behavioural changes. Body composition and psychological /behavioural questionnaires will be collected at the start of the study and at the end of period 1 (day 30), and at the end of period 2 (day 60).

What are the possible benefits and risks of participating?

Participants could improve their own eating behaviours and live healthier lifestyles. There are no potential risks.

Where is the study run from?

Kaohsiung University Hospital (Taiwan)

When is the study starting and how long is it expected to run for?

January 2021 to August 2021

Who is funding the study?

Ministry of Science and Technology (Taiwan)

Who is the main contact?

Dr Jia-In Lee, u9400039@gmail.com

Contact information

Type(s)

Principal investigator

Contact name

Dr Jia-In Lee

ORCID ID

<https://orcid.org/0000-0002-0679-6471>

Contact details

No.100 , Tzyou 1st Road Kaohsiung 807

Kaohsiung

Taiwan

807

+886 (0)7 3121101 ext 6822

1050644@kmuh.org.tw

Additional identifiers**Clinical Trials Information System (CTIS)**

Nil known

Protocol serial number

C012022

Study information**Scientific Title**

Effect of a novel telehealth device for dietary cognitive behavioral intervention in overweight or obesity care

Acronym

CogniAI

Study objectives

This pilot study was aimed to investigate the effect of telehealth assisted intervention on weight reduction, mood status, and eating behavior change under a smartphone application (app) with novel 3D food picture recognition and incorporated with cognitive behavioral training programs.

Ethics approval required

Old ethics approval format

Ethics approval(s)

Approved 13/04/2021, the Institutional Review Board at Kaohsiung Medical University Hospital (No. 100, Tzyou 1st Road Kaohsiung 807, Taiwan; +886 (0)7 3121101 ext 6646; irb-training@kmuh.org.tw), ref: KMUHIRB-E[I]-20210067

Study design

Single-center randomized cross over trial

Primary study design

Interventional

Study type(s)

Quality of life

Health condition(s) or problem(s) studied

Management of body weight in patients with overweight or obesity

Interventions

Adults aged 30-60 years old with overweight will be recruited and randomly assigned (1:1) to the control-first group or the intervention-first group according to their order of entry into the study. In period 1 (up to day 30), the control-first group continues with their regular life and the intervention-first group undergoes the app intervention; in period 2 (up to day 60), the groups cross over. The app provides a digital program to help users identify unhealthy eating behaviors and make positive behavioral changes. Body composition and psychological/behavioral questionnaires will be collected at baseline, end of period 1 (day 30), and end of period 2 (day 60).

Intervention Type

Device

Phase

Not Applicable

Primary outcome(s)

Body composition is measured using InBody 770 (InBodyUSA, Cerritos, CA) at baseline, end of period 1 (day 30), and end of period 2 (day 60)

Key secondary outcome(s)

1. Eating behaviors measured using the Dietary Behavior Questionnaire (DBQ) and Mindful Eating Behavior Scale (MEBS) at baseline, end of period 1 (day 30), and end of period 2 (day 60)
2. Mood measured using the five-item Brief Symptom Rating Scale (BSRS-5) and Chinese version of the Beck Depression Inventory II at baseline, end of period 1 (day 30), and end of period 2 (day 60)
3. Quality of life measured via the WHO Quality-of-Life scale (WHOQOL-BREF)- Taiwan version at baseline, end of period 1 (day 30), and end of period 2 (day 60)
4. Physical activity measured using the Taiwan version of the International Physical Activity Questionnaire Short Form (IPAQ-SF) at baseline, end of period 1 (day 30), and end of period 2 (day 60)
5. Sleep quality measured using the Pittsburgh Sleep Quality Index (PSQI) at baseline, end of period 1 (day 30), and end of period 2 (day 60)

Completion date

26/08/2021

Eligibility

Key inclusion criteria

1. Adults aged between 30 and 60 years
2. Body mass index (BMI) ≥ 25 kg/m²

Participant type(s)

Patient

Healthy volunteers allowed

No

Age group

Adult

Sex

All

Total final enrolment

20

Key exclusion criteria

Major neuropsychiatric comorbidities, for example, schizophrenia, major depressive disorders, stroke, epilepsy, and Parkinson's disease

Date of first enrolment

02/06/2021

Date of final enrolment

07/06/2021

Locations**Countries of recruitment**

Taiwan

Study participating centre

Kaohsiung Medical University Hospital

No.100 , Tzyou 1st Road Kaohsiung 807

Kaohsiung

Taiwan

807

Sponsor information**Organisation**

Kaohsiung Medical University Chung-Ho Memorial Hospital

ROR

<https://ror.org/02xmkec90>

Funder(s)

Funder type

Government

Funder Name

Ministry of Science and Technology, Taiwan

Alternative Name(s)

Ministry of Science and Technology, R.O.C. (Taiwan), Ministry of Science and Technology of Taiwan, MOST

Funding Body Type

Government organisation

Funding Body Subtype

National government

Location

Taiwan

Results and Publications

Individual participant data (IPD) sharing plan

The main data supporting the findings of this study are available within the paper and its supplementary information files. Extra data are available from the corresponding author upon request: Dr Jia-In Lee (1050644@kmuh.org.tw).

The type of data that will be shared: all the raw data.

Timing for availability: after being published.

Whether consent from participants was required and obtained.

Comments on data anonymization: all personal data are de-identification and replaced with study ID.

Any ethical or legal restrictions: requested data are only used for research.

IPD sharing plan summary

Available on request, Published as a supplement to the results publication

Study outputs

| Output type | Details | Date created | Date added | Peer reviewed? | Patient-facing? |
|---------------------------------|---------|--------------|------------|----------------|-----------------|
| Results article | results | 20/04/2023 | 27/04/2023 | Yes | No |