ISRCTN45333971 https://doi.org/10.1186/ISRCTN45333971

A study on a weight loss app for Indonesian adults living with obesity

Submission date
12/06/2026

Recruitment status
No longer recruiting

Registration date
12/06/2026

Overall study status
Ongoing

Last Edited
30/07/2026

Condition category
Nutritional, Metabolic, Endocrine

[X] Prospectively registered
[X] Protocol
[_] Statistical analysis plan
[_] Results
[_] Individual participant data
[X] Record updated in last year

Plain English summary of protocol
Background and study aims
Obesity is an important and growing health concern among adults in Indonesia. Mobile phone apps may be a convenient way to support people who want to manage their weight by improving diet, physical activity, and self-monitoring. This study will test DietducateX, an evidence-based weight-loss mobile app. The main aim is to find out whether it is feasible and acceptable to use DietducateX in a future larger study. The study will also give an early indication of whether DietducateX may help with weight loss, body composition, and diet quality.

Who can participate?
Adults aged 18 years or older who live in Jember Regency, Indonesia; have a BMI of 27 kg/m² or higher; are in good general health; can read and write in Bahasa Indonesia; and own or have access to a smartphone that can run the study apps

What does the study involve?
After eligibility checks, written consent, and baseline measurements, participants will be randomly allocated to one of two groups for 12 weeks. One group will use the full DietducateX app. The other group will use a dummy app that provides health information about topics such as nutrition, physical activity, sleep, and weight management. Researchers will measure recruitment, retention, app engagement, and acceptability. They will also measure body weight, body composition, and diet quality at the start of the study and after 12 weeks. Researchers and staff who measure outcomes will be masked to group allocation; only one independent researcher who creates randomisation will know group allocation.

What are the possible benefits and risks of participating?
Participants may learn more about weight management and healthy lifestyle behaviours. Participants in the control group will be offered access to DietducateX after the pilot trial. There may be no direct personal benefit. The risks are expected to be low, but participants may experience inconvenience from attending study visits, completing questionnaires, or using the app. Body measurements may cause minor discomfort or embarrassment. People with implanted electrical devices, significant metal implants, or pregnancy are excluded because body composition measurement using bioelectrical impedance analysis may not be suitable for them.

Where is the study run from?
The study is run from the Nutrition Care Centre (NCC), Politeknik Negeri Jember, Jember, East Java, Indonesia, with sponsorship from the University of Leeds (UK).

When is the study starting and how long is it expected to run for?
June 2026 to October 2026

Who is funding the study?
The study is funded by Lembaga Pengelola Dana Pendidikan (LPDP), also known as the Indonesia Endowment Fund for Education.

Who is the main contact?
Muhammad Iqbal, fsmi@leeds.ac.uk

Contact information

Type(s)
Public, Principal investigator, Scientific

Contact name
Mr Muhammad Iqbal

ORCID ID
https://orcid.org/0000-0003-1986-5330

Contact details
University of Leeds
Woodhouse Lane
Leeds
United Kingdom
LS2 9JT
+44 (0)7776613133
fsmi@leeds.ac.uk

Additional identifiers

Study information

Scientific Title
Feasibility and acceptability of DietducateX, an evidence-based weight-loss mobile app, compared with a dummy app among Indonesian adults with obesity: a single-blind, randomised, controlled, parallel-group pilot trial

Acronym
DietducateX

Study objectives
1. To assess the feasibility of recruiting and retaining Indonesian adults with obesity in a 12-week pilot randomised controlled trial of DietducateX compared with a dummy app.
2. To assess participant engagement with DietducateX over 12 weeks, including whether

participants use the app at least twice per week on average.
3. To assess the acceptability of DietducateX at 12 weeks, including whether at least 70% of participants rate the app as acceptable.
4. To provide preliminary exploratory estimates of the effect of DietducateX compared with a dummy app on body weight, body composition, and diet quality/dietary intake at 12 weeks.

Ethics approval required
Ethics approval required

Ethics approval(s)
1. Approved 22/12/2025, Research Ethics Committee for Business, Environment, Social Sciences (BESS+ FREC), University of Leeds (Governance and Compliance, 11-14 Blenheim Terrace, University of Leeds, Leeds, LS2 9HZ, United Kingdom; +44 (0)113 2431751; ResearchEthics@leeds.ac.uk), ref: BESS+ FREC 3238

2. Approved 17/06/2025, The Ethics Committee of the State Polytechnic of Jember (Komisi Etik Penelitian Politeknik Negeri Jember) (Mastrip PO Box 164, Jember, 68101, Indonesia; +62 (0)331 333531; polije@ac.id), ref: 0755/PL17.4/PG/2025

Primary study design
Interventional

Allocation
Randomized controlled trial

Masking
Blinded (masking used)

Control
Active

Assignment
Parallel

Purpose
Treatment

Study type(s)

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

Interventions
Participants will be recruited through digital flyers shared through social media, online communities, local influencers, and the existing DietducateX user email list. Interested individuals will complete an online eligibility screening form. Those who appear eligible will be invited to attend a baseline appointment at the Nutrition Care Centre (NCC), Politeknik Negeri Jember, Jember, East Java, Indonesia. At this visit, participants will complete a second eligibility screening, provide written informed consent, and complete baseline assessments.

Eligible participants will be randomly assigned in a 1:1 ratio to either the DietducateX group or the dummy app control group for 12 weeks. The randomisation list will be generated using sealedenvelope.com. One of the independent researchers may be aware of group allocation, but other researchers and staff measuring outcomes will remain masked to group allocation.

Intervention group:
Participants will receive full access to DietducateX, an evidence-based weight loss app. DietducateX includes progress reports, self-monitoring, reminders, weekly educational texts, gamification, and monitoring by an expert. Participants will use the app for 12 weeks.

Control group:
Participants will receive access to a dummy app that provides passive health information /messages about physical activity, nutrition, sleep, and weight management through informative articles and a BMI calculator.

All participants will complete outcome assessments at baseline (week 0) and post-intervention (week 12). The DietducateX app will be made available to control participants after the pilot trial.

Intervention Type
Behavioural

Primary outcome(s)
1. Recruitment rate measured using the number randomised divided by the target sample size of 66, multiplied by 100, at the end of recruitment

2. Retention rate measured using the percentage of randomised participants who complete the post-intervention at post-intervention (week 12)

3. Participant engagement measured using automatically recorded app usage data, summarised as average app use per participant per week, at the 12-week intervention period

4. Acceptability measured using the User Version Mobile App Rating Scale (uMARS) and the percentage of participants rating the app as acceptable at post-intervention (week 12)

Key secondary outcome(s)
1. Body weight measured using a digital weighing scale/BIA device at baseline (week 0) and post-intervention (week 12)

2. Body composition measured using bioelectrical impedance analysis (BIA), including body fat mass, percentage body fat, skeletal muscle mass, fat-free mass, fluid balance, segmental analysis, basal metabolic rate, and visceral fat level, at baseline (week 0) and post-intervention (week 12)

3. Diet quality measured using the Diet Quality Questionnaire (DQQ) at baseline (week 0) and post-intervention (week 12)

4. Dietary intake recorded measured using app-based dietary records, including energy intake, macronutrients, and micronutrients, at the 12-week intervention period

Completion date
09/10/2026

Eligibility

Key inclusion criteria
1. Adult aged 18 years or older
2. Body mass index (BMI) of 27 kg/m² or higher
3. Residing in Jember, Indonesia
4. Good general health
5. Able to read and write in bahasa Indonesia
6. Owns and has access to a smartphone capable of running the required applications

Healthy volunteers allowed
No

Age group
Mixed

Lower age limit
18 Years

Upper age limit
100 Years

Sex
All

Total final enrolment
66

Key exclusion criteria
1. Individuals with clinical dietary restrictions
2. Individuals implanted electrical devices (e.g., pacemakers, defibrillators)
3. Significant metal implants
4. Pregnancy

Date of first enrolment
25/06/2026

Date of final enrolment
06/07/2026

Locations

Countries of recruitment
Indonesia

Study participating centre
Politeknik Negeri Jember
Mastrip PO BOX 164, Jember - Jawa Timur- Indonesia;

Jember
Indonesia
68101

Sponsor information

Organisation
University of Leeds

ROR
https://ror.org/024mrxd33

Funder(s)

Funder type

Funder Name
Lembaga Pengelola Dana Pendidikan

Alternative Name(s)
Indonesia Endowment Fund for Education, Education Fund Management Institute, lpdp_ri, Lemb Pengelola Dana Pendidikan, LPDP

Funding Body Type
Government organisation

Funding Body Subtype
Universities (academic only)

Location
Indonesia

Results and Publications

Individual participant data (IPD) sharing plan
An anonymised participant-level dataset, data dictionary, and relevant analysis materials will be deposited in a suitable research data repository, such as Zenodo, Figshare, and Research Data Leeds Repository, after completion of the study and publication of the main results. Direct identifiers will be removed before sharing. Data will be retained for more than 10 years. Access and reuse will follow the consent, ethics approval, and repository requirements applicable to the study.

IPD sharing plan summary

Stored in publicly available repository

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Protocol (other)		19/06/2025	30/07/2026	No	No