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Effectiveness of front-of-pack labelling in influencing consumer understanding and food choices in Uganda: a randomized controlled trial

Submission date
09/04/2026

Recruitment status
No longer recruiting

Registration date
10/04/2026

Overall study status
Completed

Last Edited
14/05/2026

Condition category
Nutritional, Metabolic, Endocrine

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

Plain English summary of protocol

Background and study aims
Uganda is experiencing a shift towards increased consumption of packaged and ultra-processed foods, contributing to a rise in diet-related non-communicable diseases (NCDs). However, many consumers struggle to understand existing nutrition labels. This study aims to assess how different front-of-pack labelling (FOPL) formats are perceived and understood and how they influence purchasing decisions among Ugandan consumers. The findings will support the development of effective national food labelling regulations, guidelines and policies.

Who can participate?
Adults aged 18 years and above, irrespective of gender, who regularly purchase packaged foods and are key decision-makers in their households. Participants will be drawn from diverse socio-economic backgrounds in urban and peri-urban areas. Individuals working in health, food, or advertising sectors will be excluded.

What does the study involve?
The study involves two phases:
1. Qualitative phase: participation in Focus Group Discussions (FGDs) to share views on food labels.
2. Quantitative phase: participation in a survey and a randomized controlled trial (RCT), where participants will view food products with different label formats and respond to questions about understanding, preferences, and purchase intentions.

What are the possible benefits and risks of participating?
Participants will contribute to research that informs national policies aimed at improving public health and nutrition.
Minimal risk is expected, though participants may feel it is time-consuming if they are in a hurry since it's a 30-minute interview.

Where is the study run from?
The study is conducted across selected urban and peri-urban areas in Uganda, including

Kampala, Entebbe, Masaka, Mutukula Border, Wakiso, Mubende, Mukono, Iganga, Jinja, Malaba Border, Tororo, Mbale, Soroti, Moroto, Lira, Gulu, Adjumani, Arua, Hoima, Fortportal, Kasese, Kyanika Border, Mbarara and Kabale.

When is the study starting and how long is it expected to run for?
The study has already begun with preparatory activities such as ethical approval and tool development. Training and data collection are expected to start on 13th April 2026 up to May 4th 2026 with project closure in November, 2026.

Who is funding the study?
1. African Population and Health Research Center (Kenya)
2. United Nations Children's Fund (UNICEF) Uganda

Who is the main contact?
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Study information

Scientific Title
Effectiveness of front-of-pack labelling in influencing consumer understanding and food choices in Uganda: a randomized controlled trial

Study objectives
1. Explore consumer perceptions of FOPL symbols, including visibility, memorability, and impact on purchasing habits.
2. Identify barriers and facilitators to consumer adoption of FOPL
3. Evaluate the effectiveness of different FOPL formats in helping consumers correctly identify unhealthy foods
4. Assess the impact of FOPL on purchase intentions for unhealthy food products
5. Compare within-subject and between-subject effects of different FOPL formats

Ethics approval required
Ethics approval required

Ethics approval(s)
Approved 30/05/2025, Uganda National Council for Science and Technology (Plot 6 Kimera Road, Ntinda, Kampala, PO Box 6884, Uganda; +256 (0)777875529; info@uncst.go.ug), ref: LOCORG/22

Primary study design
Interventional

Allocation
Randomized controlled trial

Masking
Open (masking not used)

Control
Placebo

Assignment
Sequential

Purpose
Device feasibility

Study type(s)

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

Interventions
1. Warning label
2. Guideline daily amount (GDA) coloured
3. GDA non-coloured

The three-arm randomised controlled trial (RCT) will assess both within-subject and between-subject effects. The within-subject effect will measure the difference between a product without FOPL and the same product with FOPL. The between-subject effect will compare the differences among the three different FOPL labels (Label 1: warning system; Label 2: colour-coded Guideline Daily Amount (GDA) system; and Label 3: Guideline Daily Amount (GDA) system – no colour).

Given that randomisation will occur immediately during the face-to-face interview, this methodology is what we call a central randomised system. This will ensure that balance is strictly maintained within each arm. That is, participants will be randomized to one of three FOPL systems (Label 1: warning system; Label 2: colour-coded Guideline Daily Amount (GDA) system; and Label 3: Guideline Daily Amount (GDA) system – no colour) to examine whether the FOPL system influenced their ability to correctly identify the healthiness of food products (used as a marker of understanding) and whether the labels would influence their future intention to purchase unhealthy foods (used as a marker for potential effectiveness).

A manual process using an Excel sheet will be used to randomly allocate study participants to one of three FOPLs. Randomisation to the label type will be done before participants are enrolled in the study. Both the participants and field interviewers will be unaware of the labels assigned to them. The initial randomisation step will use the sample allocation districts to ensure an equal distribution of labels among participants within those districts. Participants will

then be randomly assigned labels based on their unique IDs. This process will then be imported into the data-collection tablets, and random symbols will appear for each participant ID during interviews.

At each time point, each participant will be exposed to both the control (images without FOPL labels) and experimental (images with FOPL labels) phases on the same day, with the aim of assessing within- and between-subject effects. During the control phase, all participants will view product images on mock packages without any FOPL and respond to a set of questions. In the experimental phase, the same participants will be randomly assigned to one of the three label conditions (intervention). They will view the same product images as in the control phase, but this time they will be presented with an FOPL (the intervention), and they will be asked to respond to an identical set of questions as in the control phase. In other words, the baseline and endline will occur at once.

Intervention Type
Behavioural

Primary outcome(s)
1. The healthiness of the food product measured using the FOPL Study - Randomised Control Trial (RCT) Tool (questionnaire) at two timepoints (control phase and experimental phase)

Key secondary outcome(s)
1. Intention to purchase measured using the FOPL Study - Randomised Control Trial (RCT) Tool (questionnaire) at two timepoints (control phase and experimental phase)

Completion date
04/05/2026

Eligibility

Key inclusion criteria
1. Adults (aged 18+ years) who purchase packaged foods
2. Represent diverse socio-economic backgrounds (low, mid-high socioeconomic status)
3. No industry conflicts (e.g., food industry, advertising professionals)

Healthy volunteers allowed
Yes

Age group
Mixed

Lower age limit
18 Years

Upper age limit
100 Years

Sex
All

Total final enrolment
2888

Key exclusion criteria
1. Health professionals or food industry employees to avoid bias
2. Individuals lacking capacity to provide informed consent

Date of first enrolment
13/04/2026

Date of final enrolment
04/05/2026

Locations

Countries of recruitment
Uganda

Sponsor information

Organisation
African Population and Health Research Center

ROR
https://ror.org/032ztsj35

Organisation
United Nations Children's Fund

ROR
https://ror.org/02dg0pv02

Funder(s)

Funder type

Funder Name
African Population and Health Research Center

Alternative Name(s)
APHRC

Funding Body Type

Private sector organisation

Funding Body Subtype
Other non-profit organizations

Location
Kenya

Funder Name
UNICEF

Alternative Name(s)
United Nations Children's Fund, United Nations Children's Emergency Fund, United Nations International Children's Emergency Fund, Fonds des Nations Unies pour l'enfance, Fondo de las Naciones Unidas para la Infancia, ,

Funding Body Type
Government organisation

Funding Body Subtype
International organizations

Location
United States of America

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary
Not expected to be made available