

Effectiveness of front-of-pack labels in influencing consumer food choices and their intention to purchase pre-packaged foods and non-alcoholic drinks in Tanzania

Submission date 05/03/2026	Recruitment status Recruiting	<input type="checkbox"/> Prospectively registered
Registration date 21/04/2026	Overall study status Ongoing	<input type="checkbox"/> Protocol
Last Edited 09/03/2026	Condition category Nutritional, Metabolic, Endocrine	<input type="checkbox"/> Statistical analysis plan
		<input type="checkbox"/> Results
		<input type="checkbox"/> Individual participant data
		<input checked="" type="checkbox"/> Record updated in last year

Plain English summary of protocol

Background and study aims

Non-communicable diseases such as diabetes, heart disease, and high blood pressure are increasing in Tanzania. One important reason for this rise is the growing consumption of packaged and processed foods that contain high levels of sugar, salt, and unhealthy fats. Although packaged foods usually include nutrition information, this information is often placed on the back of the package and can be difficult for many consumers to understand. Front-of-pack labels are simple symbols or warnings placed on the front of food packages to help people quickly identify unhealthy products. These labels have been used in several countries to encourage healthier food choices. However, there is limited evidence on whether such labels would work effectively in Tanzania. The aim of this study is to assess whether front-of-pack labels can improve consumers' understanding of nutritional information and influence their intention to purchase healthier packaged foods.

Who can participate?

Adults aged 18 years and above who live in the selected study areas and regularly purchase packaged foods or drinks will be eligible to participate. Participants should be the main person responsible for buying food for their household or share that responsibility. People who work in the food industry, marketing, advertising, or healthcare will not be eligible to participate because their professional knowledge may influence their responses. Individuals with conditions that make it difficult to see or understand the labels may also be excluded.

What does the study involve?

The study will use two main approaches. First, group discussions will be conducted with consumers to explore their opinions, understanding, and perceptions of different front-of-pack labels. During these discussions, participants will be shown examples of food packages with different label designs and asked to share their thoughts. Second, participants are randomly

allocated to be shown mock food products with one of three different types of front-of-pack labels. Participants will be asked questions about what they understand from the labels and whether the labels influence their intention to buy the products.

What are the possible benefits and risks of participating?

Participants may benefit from learning more about nutrition information on food packages and how to identify unhealthy foods. The findings from this study may also help policymakers develop better food labelling policies in Tanzania, which could improve public health in the future. The risks of participating are minimal. Some participants may feel uncomfortable discussing their food purchasing habits, but they will be free to skip any question or withdraw from the study at any time. All information shared during the study will be kept confidential

Where is the study run from?

The study is coordinated by researchers from the Muhimbili University of Health and Allied Sciences (MUHAS) in Tanzania. Data collection will take place in selected communities in Dar es Salaam, Mbeya, and Unguja in Zanzibar. These areas were chosen because they represent different social and economic settings and have growing access to packaged foods

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

April 2026 to June 2026

Who is funding the study?

This study is funded by the African Population Health and Research Center (APHRC), which supports research aimed at improving population health in Africa.

Who is the main contact?

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Study information

Scientific Title

Comparison of front-of-pack warning labels versus guideline daily amount in influencing consumer food choices and their intention to purchase pre-packaged foods and non-alcoholic drinks in Tanzania

Study objectives

Broad objective:

To assess the feasibility, acceptability, and effectiveness of FoPL in improving consumer understanding and influencing purchase intentions for pre-packaged foods in Tanzania

Specific objectives:

1. To explore consumer understanding and perceptions of different FoPL designs in terms of visibility, comprehension and memorability.
2. To identify the barriers and facilitators (e.g., nutrition literacy, cultural relevance etc) that influence consumer engagement with FoPLs in Tanzania.
3. To determine the extent to which FoPL enhances consumers' capability to identify foods high in sugar, salt, total fats, saturated fats, and trans fats.
4. To assess the effect of exposure to FoPL on consumers' purchase intentions for pre-packaged food products.

Ethics approval required

Ethics approval required

Ethics approval(s)

approved 21/08/2025, Muhimbili University of Health and Allied Sciences (MUHAS) Ethical Review Board (35001, Dar es Salaam, Dar es Slaam, 00000, Tanzania; +255(0)222151596; muhasreims@gmail.com), ref: MUHAS-REC-08-2025-3072

Primary study design

Interventional

Allocation

Randomized controlled trial

Masking

Open (masking not used)

Control

Uncontrolled

Assignment

Parallel

Purpose

Prevention

Study type(s)

Health condition(s) or problem(s) studied

Identification of unhealthy food among the general population using front-of-pack labels (FoPL)

Interventions

Participants will be randomly assigned to one of three study arms in a 1:1:1 allocation ratio:

1. Warning label intervention
2. Guideline daily amount (GDA)
3. Colored GDA

Randomization will be conducted using a computer-generated random allocation sequence created prior to the start of data collection. To ensure balanced allocation across the study sites (Dar es Salaam, Unguja Zanzibar and Mbeya), block randomization stratified by study site will be applied. The allocation sequence will be embedded in the electronic data collection system used on tablets. After obtaining informed consent and confirming eligibility, the enumerator will register the participant in the system, which will first expose the participant to a no-label food product (control) and automatically assign the participant to one of the three arms according to the pre-programmed random sequence. This automated assignment ensures allocation concealment and minimizes the risk of selection bias. Each participant will then be exposed only to the label condition assigned to their study arm when viewing the mock food products during the assessment.

Intervention Type

Behavioural

Primary outcome(s)

1. Consumer ability to correctly identify foods high in nutrients of concern (sugar, salt, total fat, saturated fat, and trans fats), measured using a structured nutrient identification task within a tablet-based questionnaire, where participants are shown mock food packages with different Front-of-Pack Labels (FoPLs) and are asked to identify products high in specific nutrients. Responses will be recorded as correct or incorrect classifications and summarized as the proportion of correct responses, at immediately after exposure to the assigned label condition during the study session

Key secondary outcome(s)

1. Consumer purchase intention for pre-packaged foods, measured using a self-reported purchase intention embedded in the tablet-based questionnaire, where participants indicate the likelihood of purchasing products without a displayed FOPL (pre) and with the assigned FoPL format (post). Responses will be measured using a Likert scale ranging from "very unlikely to purchase" to "very likely to purchase", at immediately after exposure to the product images with the assigned FoPL during the study session

2. Consumer perceptions of label visibility, clarity, and memorability, measured using self-reported perception questions within the structured questionnaire, using Likert-scale items evaluating ease of noticing, understanding, and remembering the labels, at immediately after exposure to the FoPL condition during the study session

Completion date

30/06/2026

Eligibility

Key inclusion criteria

1. Aged 18 years or older
2. Resident of the study area for at least 3 months
3. Regularly purchase pre-packaged food products (at least twice per week)
4. Are the main decision-makers or they have a shared responsibility for food purchases in the house

Healthy volunteers allowed

Yes

Age group

Mixed

Lower age limit

18 years

Upper age limit

70 years

Sex

All

Total final enrolment

0

Key exclusion criteria

1. Work in the food and tobacco industry, marketing, advertising, or healthcare professions due to potential knowledge or professional biases related to FoPL.
2. Have cognitive or visual impairments that may hinder their ability to understand or respond to FoPL.

Date of first enrolment

01/04/2026

Date of final enrolment

31/05/2026

Locations

Countries of recruitment

Tanzania

Sponsor information

Organisation

African Population and Health Research Center

ROR

<https://ror.org/032ztsj35>

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

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary

Not expected to be made available