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On the way to and from school (OWS): active mobility interventions for the promotion of physical activity and mental well-being in adolescents in Bogotá, Colombia and Maputo, Mozambique

Submission date	**Recruitment status**	[X] Prospectively registered
15/01/2024	No longer recruiting	[_] Protocol
Registration date	**Overall study status**	[_] Statistical analysis plan
29/01/2024	Ongoing	[_] Results
Last Edited	**Condition category**	[_] Individual participant data
30/06/2026	Other	[X] Record updated in last year

Plain English summary of protocol

Background and study aims

This three-year implementation research project will assess the acceptability and impact of active mobility to and from school interventions (AMTS) for promoting healthy lifestyle practices and mental well-being among secondary school adolescents, aged 8 to 16 years old. The project focuses on healthy lifestyle practices such as walking and cycling regularly to and from school as catalysts for the reduction of risks of non-communicable diseases (NCD). In doing so, the project will adopt a life course approach to implementation research underpinned by principles of diversity, inclusive stakeholder participation, and health equity. Such an approach will be instrumental in highlighting the health impact of active mobility policies targeting this critical life stage in different urban contexts in low and middle-income countries. This project focuses on two contrasting case studies in different global regions (Africa and Latin America), to shed light on the complexities and opportunities of the implementation, adaptation, and scalability of active mobility interventions, and the applicability of such interventions in a different social, cultural, economic, and governance context.

Who can participate?

Adolescents aged from 8 to 16 years old attending one of the selected schools

What does the study involve?

Firstly, the study will assess specific implementation outcomes of two novel existing AMTS interventions in Bogotá, Colombia: (i) Al colegio en bici (Cycling) and (ii) Ciempiés Caminos Seguros1 (Walking). Secondly, innovative citizen science methods will be used to assess the impact of cycling and walking interventions on physical activity and mental well-being outcomes. Thirdly, the feasibility of a pilot implementation of a similar active mobility intervention will be tested among adolescents in disadvantaged urban communities in low-income and low-resourced contexts in Maputo, Mozambique, where despite a large share of children and

adolescents walking to school, there are no explicit policies or programmes to support such practices. Fourth, building on diverse research and implementation partnerships, the project will establish equitable collaborations across sectors for capacity building and facilitating an international dialogue and knowledge exchange around implementation research, policy adaptation and effectiveness, and the reduction of NCD risks through the promotion of physical activity and mental well-being in active mobility interventions. The project is structured around four work packages (WP) addressing the above guiding objectives.

What are the possible benefits and risks of participating?
The benefits of participating will be for stakeholders to share their perspectives of a local program in a safe and confidential environment and become part of a multisectoral and multinational research and collaborative network. A selected group of stakeholders will participate in some capacity-building activities that will benefit them with new skills and knowledge. The children will be able to share their perspectives and ideas for improvement with local and international stakeholders regarding AMTS programs and participate in tailored advocacy and empowerment training.

We do not foresee any risks for participants of the study. All data will be anonymized before the analyses, and we developed protocols for guarding sensitive data.

Where is the study run from?
University College London

When is the study starting and how long is it expected to run for?
June 2022 to June 2027.

Who is funding the study?
1. Global Alliance for Chronic Diseases (GACD)
2. Medical Research Council

Who is the main contact?
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Contact information

Type(s)
Public, Scientific, Principal investigator

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Additional identifiers

Protocol serial number
OWS001, Grant Ref: MR/Y012313/1

Study information

Scientific Title
Effect of Active Mobility Interventions to and from School on Physical Activity and Mental Well-being in Adolescents (8-16 y/o) in Bogotá, Colombia, and Maputo, Mozambique: A Multicultural Evaluation

Acronym
OWS project

Study objectives
Our research hypothesises that, despite not having been envisioned as public health policies, AMTS interventions contribute to enhancing healthy lifestyle practices and mental well-being among secondary-school adolescents, and help reduce common non-communicable disease (NCD) risk factors, especially in underserved urban communities in low and middle-income countries. This is the case of programmes such as 'Al colegio en bici' and 'Ciempiés Caminos Seguros' implemented in Bogotá, Colombia.

Against this backdrop, innovative citizen science methods can enrich current practices in implementation research, both in terms of measuring implementation outcomes and the impact on physical activity and mental well-being of interventions involving active mobility to and from school. Furthermore, by questioning these interventions from a health impact perspective and a life course approach with a focus on adolescence, we contend that it is possible to strengthen existing local governance capacities for both implementation and impact assessment related to healthy lifestyle practices and mental well-being in disadvantaged populations.

Ethics approval required
Ethics approval required

Ethics approval(s)
1. Approved 07/06/2024, UCL Research Ethics Committee (Gower Street, London, WC1E 6BT, United Kingdom; +44 (0) 20 7679 2000; ethics@ucl.ac.uk), ref: 27243/001

2. Approved 25/01/2024, Comité de Ética Facultad de Medicina +Universidad de Los Andes (Cra 1 este # 18a- 40, Bogotá, 111171, Colombia; +576 (0)13394949; eticamedicina@uniandes.edu.co), ref: 2023121234

3. Approved 30/07/2024, Comité de Ética de la Investigación de la Secretaría Distrital de Salud (Carrera 32 # 12 - 81, Bogotá, 111111, Colombia; +576 (0)3649090; comiteetica@saludcapital.gov.co), ref: 2024-EE-105261

4. Approved 08/08/2025, Comité Institutcional de Bioética em Saúde da Facultade de Medicina /Hospital Central de Maputo (Av. Salvador Allende 702, Maputo, 1111, Mozambique; +258 (0) 21428076; -), ref: CIBSFM&HCM/54/2025

Primary study design
Observational

Study design
Multicenter longitudinal observational case-control study

Study type(s)
Other, Quality of life

Health condition(s) or problem(s) studied
Improvement of physical activity levels and mental well-being in adolescents

Interventions
This study is a multicenter longitudinal observational case-control study structured using the Updated Consolidated Framework for Implementation Research that aims to evaluate the acceptability and impact of active mobility to and from school (AMTS) programs for promoting healthy lifestyle practices and mental well-being among secondary school adolescents aged 10 to 16 in Bogotá, Colombia, and Maputo, Mozambique.

In Bogotá, Colombia, the study will focus on assessing the acceptability, health and equity impacts of two AMTS programs – Al colegio en bici (cycling) and Ciempiés Caminos Seguros (walking). These two programs have been implemented in some schools throughout Bogotá and will expand to other schools. For this reason, first, we will understand the history, context, appropriateness, and acceptability of implementing the programs using semi-structured interviews and policy analysis. This assessment will be coordinated by professors in the UK and Colombia and provided by urban policy and development experts. Second, we will assess the health and equity impacts of the two programs a case-control study in Bogotá using multiple quantitative and qualitative methods. The study is designed to consider participants from three main groups for each AMTS program: an intervention group that will start with the program shortly after our baseline data gathering, a control group that will not have access to the AMTS being studied during the study time, and a second intervention group, which has been exposed to the AMTS for at least 6 months. The participants for each group belong to different schools to avoid data contamination. The objectives include measuring the impact of cycling and walking on healthy lifestyle practices and mental well-being in secondary school adolescents. New intervention groups and control groups will be measured two times: at baseline time (before the intervention) and 8 weeks after the program's implementation. Already intervened groups will be measured once in the middle of the first school semester. The qualitative and quantitative assessments will be coordinated by experts in citizen science, physical activity, transport, and mental well-being and will be provided by a team of pollsters trained specifically for the study.

In Maputo, Mozambique, the study will assess the acceptability of one AMTS pilot at a school. Baseline physical activity and mental well-being will measured as health and equity indicators. The instruments for data collection will be the same as those used in Bogotá, including both the qualitative and quantitative components. The measurement will consist of 20 children. semi-structured interviews and policy analysis will be used to assess the acceptability of the program.

The instruments and methodologies for assessing physical activity and mental well-being in Bogotá and Maputo are the following:
Citizen science through the Our Voice methodology to understand the barriers and facilitators

to use active mobility to and from school and the change over those key aspects once an AMTS is implemented. The Our Voice methodology can be found in the following URL (https://med.stanford.edu/ourvoice.html).

The following quantitative instruments will be used to assess the possible impact on physical activity, healthy behavior, and mental well-being after implementing each AMTS:

1. The OWS survey that contains:
1.1. GAC-PAQ and PA CO sociodemographic questions
1.2. The preference-based measure of health-related quality of life questionnaire from CHU9D; well-being questions used from the WHO well-being index and personal well-being index
1.3. Physical activity and sedentary behaviors questions gathered from the Youth Risk Behavior Surveillance System, BREQ, and ISCOLE study; Diet questionnaire from HBSC
1.4. Transport-related questions gathered from PACO study, HBSC study, PACES scale, MARA study, and self-developed questions.
2. E4 wristband biosensors for detecting stress-related built environment barriers during the trip
3. GT3X+ BT actigraph accelerometers for assessing physical activity

Intervention Type
Behavioural

Primary outcome(s)
1. Mental well-being measured using the preference-based measure of health-related quality of life questionnaire the Child Health Utility instrument (CHU9D), the WHO Well-Being Index and the Personal Well-Being Index at baseline and follow-up for all the participants
2.The built environment measured using Our Voice: citizen science participation using the Discovery Tool app developed by Stanford University and through a questionnaire at baseline and follow-up data collection time
3. Acceptability of the program measured using semi-structured interviews at baseline and follow-up.

Key secondary outcome(s)
There are no secondary outcome measures

Completion date
30/06/2027

Eligibility

Key inclusion criteria
Current inclusion criteria as of 07/06/2024:
1. Adolescents aged from 8 to 16 years old
2. Study in one of the selected schools to assess
3. Are not planning to move to another school in the next year
4. For participants in the intervention groups, participants should be part of the program to evaluate
5. Have no cognitive impairment
6. Parents allow participation on the study

Previous inclusion criteria:
1. Adolescents aged from 10 to 16 years old

2. Study in one of the selected schools to assess
3. Are not planning to move to another school in the next year
4. For participants in the intervention groups, participants should be part of the program to evaluate
5. Have no cognitive impairment
6. Parents allow participation on the study

Participant type(s)
Learner/student

Healthy volunteers allowed
No

Age group
Child

Lower age limit
8 Years

Upper age limit
16 Years

Sex
All

Total final enrolment
0

Key exclusion criteria
1. Out of age range
2. Do not study in one of the selected schools
3. Is planning to leave the school during the year
4. Parents do not allow the participation
5. Do not participate in the programs to evaluate for the intervention group

Date of first enrolment
15/03/2024

Date of final enrolment
31/07/2026

Locations

Countries of recruitment
Colombia

Mozambique

Study participating centre

Universidad de Los Andes
Cra 1 este # 18a - 40
Bogotá
Colombia
111171

Study participating centre
Architects Without Borders
285 Av. Ho Chi Min
Maputo
Mozambique
1102

Sponsor information

Organisation
University College London

ROR
https://ror.org/02jx3x895

Funder(s)

Funder type
Government

Funder Name
Global Alliance for Chronic Diseases

Alternative Name(s)
GACD

Funding Body Type
Private sector organisation

Funding Body Subtype
International organizations

Location
United Kingdom

Funder Name
Medical Research Council

Alternative Name(s)
Medical Research Council (United Kingdom), UK Medical Research Council, Medical Research Committee and Advisory Council, MRC

Funding Body Type
Government organisation

Funding Body Subtype
National government

Location
United Kingdom

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary
Not expected to be made available

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Study website	Study website	11/11/2025	11/11/2025	No	Yes