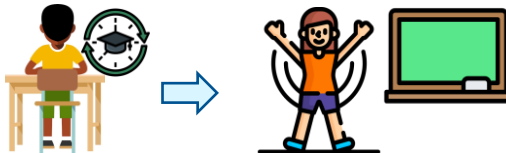


Effectiveness of a multicomponent intervention to promote physical activity levels during the school day: MOVESCHOOL study



Background

Increasing levels of physical activity (PA) and reducing sedentary time among adolescents during the school day is urgently needed as it will help to address the problems associated with physical inactivity (i.e. obesity and overweight).



Risk factor: Spanish secondary school students spent an average of 81% of the school day engaged in sedentary behaviors.

Objective

Examine the effects

Multicomponent school-based intervention

On

PA
Health
Education
Cognition

In adolescents

During the school day
ACTIVE BREAKS
PHYSICALLY ACTIVE LESSONS
ACTIVE RECESS

Methodology

Study Design



Quasi-experimental study

Participants

11 Schools
35 classes
840 students

Spain: Cáceres
Spain: Cadiz

Intervention

Multi-component programme
29 weeks during academic year 2023/2024

1. Physically Active Lessons

One Physically Active Lesson per week

2. Active Breaks

Two Active Breaks of 5 minutes per day

3. Active Recess

An Active Recess per day

Measures

- **Physical activity and sedentary time:** 7-days ActiGraph accelerometer. Sedentary time is also measured with YLSBQ (44).
- **Health-related physical fitness:** ALPHA Fitness Test Battery (45): *Cardiorespiratory fitness:* 20-m shuttle run; *Strength:* hand dynamometer and standing long jump. Also, BMI and waist circumference.
- **Cognition:** the executive functions using the NIH Examiner programme (47): Flanker task, Shifting task and N-Back.
- **Academic indicators:** *School engagement:* UWES-S-9 (50); *Learning perception:* questionnaire developed by Abella et al (51); *Academic performance:* reported by the schools in the 3 official evaluations; *Mathematical fluency test:* test number 6 of the Woodcock protocol (52).
- **Psychological health:** *Health status:* EQ-5D-Y-3L questionnaire (53).
- **Motivational variables:** *Novelty:* NNSS (55); *Enjoyment and boredom:* the Spanish version of SSI (56); *School Climate:* PACE-33 (57).
- **Teachers' and students' perception about the suitability and the development of multicomponent program:** using individual interviews and focus groups.
- **Dietary patterns:** KIDMED 2.0 (60).
- **Sociodemographic:** sex, age, birth date, and socioeconomic status: FAS III (59).

Design and procedure



Work Plan

Study Coordination

Design Intervention

School Recruitment

Inform Consent

Initial Training

Baseline

School-Based Intervention (29 weeks)

Experimental Group
School-based Intervention

Control Group
No Intervention

Post Intervention

Quasi-experimental study

Impact

This study will provide:

- Valuable and innovative guidance for the education community to promote the adoption of methods and strategies to increase physical activity levels.
- A set of innovative resources that are freely available, evidence-based, easy to implement and context-appropriate.