

Acti-Study: Assessment of physical activity levels in children in Trás-os-Montes region

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Background

The World Health Organization (WHO) recommends that children engage in at least 60 minutes per day of moderate to vigorous physical activity (MVPA) for children and adolescents. However, there are few children who follow these recommendations. In Portugal, some data suggest that only 7% of young people comply with it. To date, in the country, most studies on physical activity (PA) have been in urban areas, so we still know relatively little about how active young people are in rural areas.

Aims

The Acti-study aims to evaluate the levels of PA in children and adolescents (age 10-16), and associated factors, in a rural area of the Bragança district.

1. The primary outcome is to determine:

- % of participants who meet international PA guidelines.

2. Secondary outcomes are:

- to assess the average daily: number of MVPA minutes (accelerometer-based and parent-reported), percentage spent in MVPA (accelerometer-based), number of steps (accelerometer-based);
- to identify factors associated with PA levels, such as sociodemographic variables and anthropometric indicators.

Methodology

The project contemplates two phases:

- (1) Implementation of sociodemographic questionnaire to obtain general information about the target population;
- (2) An intervention phase through the assessment of the PA levels using accelerometry (ActiGraph®) and body composition by anthropometric measures.

In this first phase of data collection, questionnaires will be applied for sociodemographic characterization to student's guardians, in order to study the determinants for the practice of PA and, in a second phase, daily data will be collected for 7 consecutive days through accelerometry, in order to be possible to characterize the levels of PA of the children.

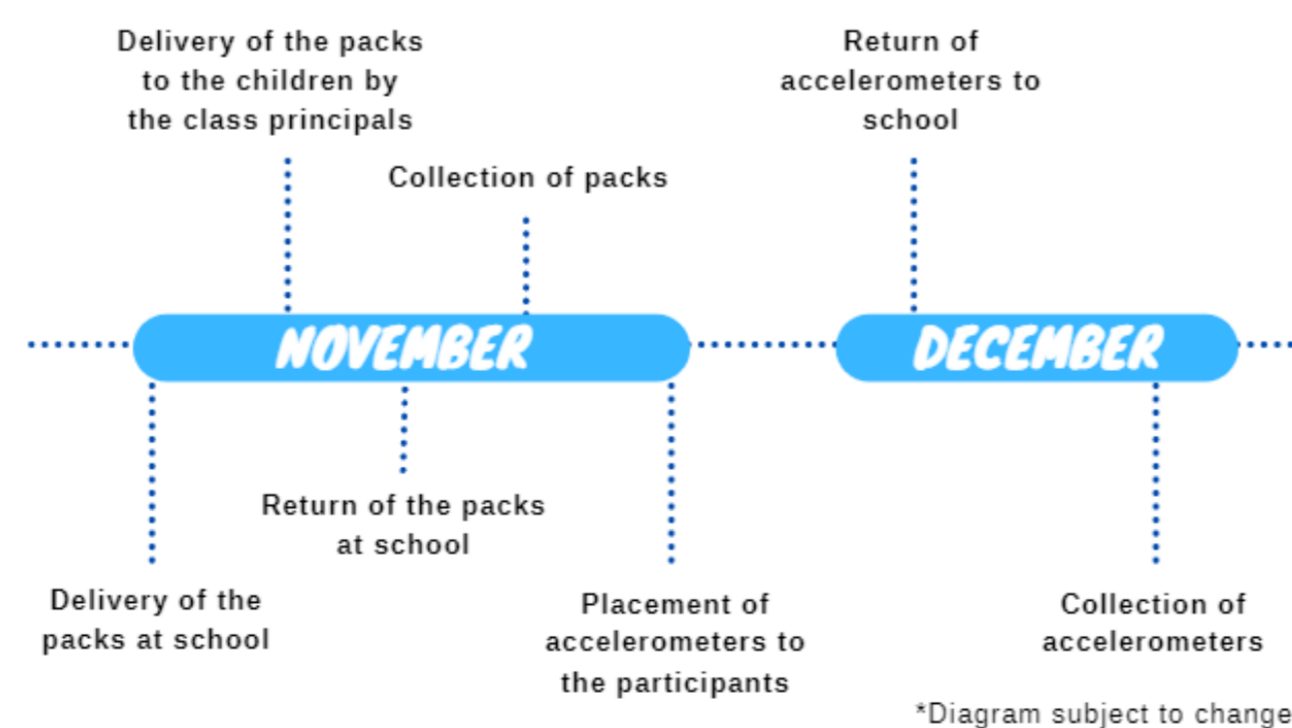


Fig.1 – Timeline Diagram of the data collection



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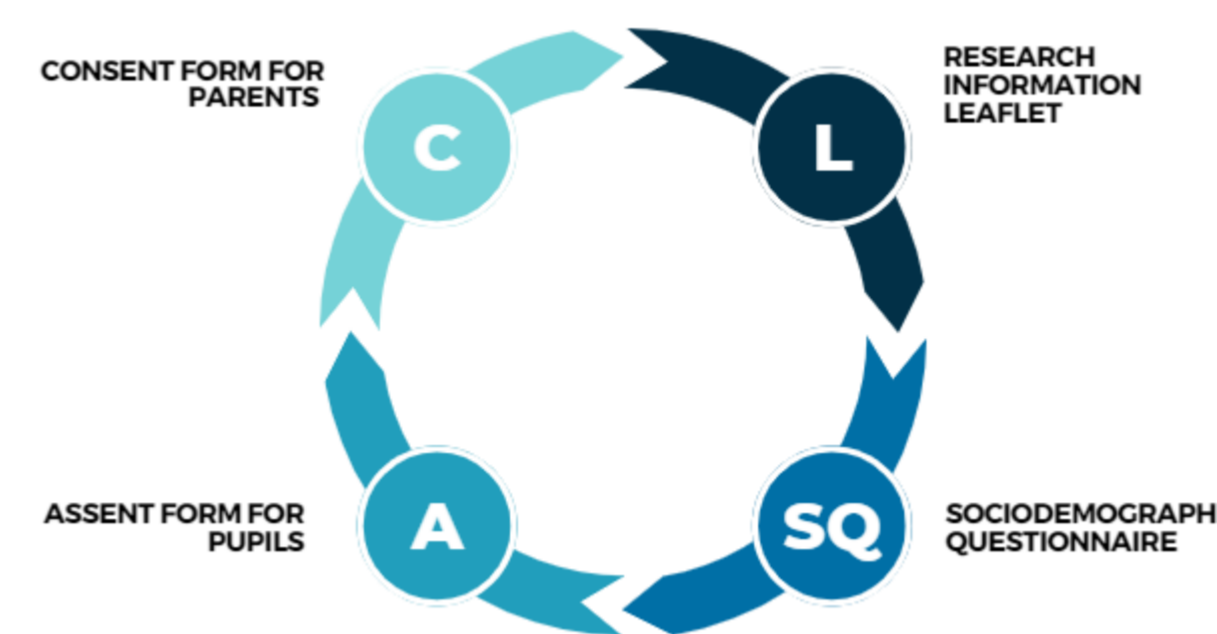


Fig.2 – Content of the pack given to the children

Each participant will be able to receive two vouchers to be used in local shops. One when the accelerometer is returned and the second when the correct use of the accelerometer is confirmed.



Fig.3 – Vouchers that children will receive

Statistical analysis

Most analysis will be descriptive: % children who meet PA Guidelines, % children with healthy Body Mass Index, % for the categorical sociodemographic variables (gender, parental education, occupation, etc.).

These percentages will be relative to the number of those who provided valid data for each outcome/variable.

Chi-squared tests will be used to investigate the relationship between: meeting PA Guidelines based on accelerometer and meeting PA Guidelines based on parental report; meeting PA Guidelines based on accelerometer and each of the sociodemographic variables, etc.

T-test will be used to look at the relationship between percentage of body fat and average minutes of MVPA per day.

Expected study outcomes

We expect that this study will allow comparison with other studies conducted in Portugal (e.g., in urban areas), and internationally. We also hope that it will raise awareness about the importance of PA and result in more PA promotion activities in the region.

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