

Reliability and feasibility of a voucher-based strategy for physical activity assessment based on accelerometer in Portuguese children from a rural area

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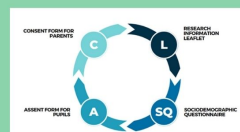
01. INTRODUCTION

Last decades, children have left the streets, the parks and the playgrounds for the physical inactive and sedentary times of watching TV, internet surfing and video gaming (Carbone et al., 2021; Kelly et al., 2005). It is therefore important to understand whether this trend covers Portuguese children from rural areas, previously characterized as presenting greater opportunities for physical activity (PA) practice (Machado-Rodrigues et al., 2012). However, the adherence to observational studies is often low and it is important to create strategies for increased participation (Shrank et al., 2011).



02. OBJECTIVE

Thus, this research aimed to assess the reliability and feasibility of voucher-based strategy for physical activity assessment based on accelerometer in Portuguese children from a rural area.



03. PRELIMINARY FINDINGS

- ✓ Only two children did not fulfill the criterion established for the use of the accelerometer, which means that the values found in the study correspond to the MVPA levels and SB time is representative in 97.8% of the selected sample.
- ✓ This means that applying voucher-based strategies for accelerometer-based physical activity assessment in Portuguese rural children is reliable and feasible, and all researchers should consider this strategy if they want to reduce research dropouts (Ginja et al., 2017, 2019).



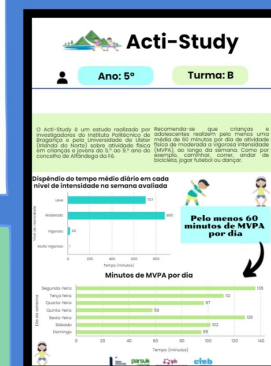
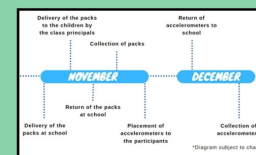
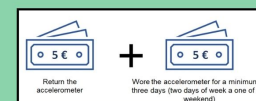
VOUCHER-BASED STRATEGY

- For applying the voucher-based strategy, children who returned the accelerometer were rewarded with a 5€ voucher, and a second one was given if they wore the accelerometer for a minimum of three days (at least 6h/day and at least one weekend) (Ginja et al., 2019). After, wore the accelerometer for a minimum of three days (two weekdays and one of the weekend) would mean receiving an extra 5€ voucher.

ACTI-STUDY MILESTONES

Next ACTI-Study milestones will be to assess:

- average daily number of MVPA minutes (accelerometer based and parent reported);
- percentage spent in MVPA (accelerometer based);
- number of steps (accelerometer based) and sedentary time bouts.



03. METHODOLOGY

An observational cross-sectional research was conducted between September 2022 and January 2023. The ACTI-Study evaluated the moderate to vigorous physical activity (MVPA) levels and sedentary behavior (SB) in students (age 10-16) from a high school in a Portuguese Northeast rural area.



The PA assessment were conducted a hip-worn accelerometer (ActiGraph®, either GT3X or GT1M), on an elastic belt, for seven consecutive days (including weekend) (Vasques et al., 2023).



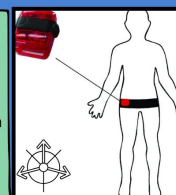
Body mass index (BMI) was computed by dividing weight (kg) by height (m²). Normal (25.0 kg/m²), overweight (25.0 to 29.9 kg/m²), and obese (30.0 kg/m²) were defined using European BMI cut-offs (Magalhães et al., 2023; Vasques et al., 2014).



Previous, a questionnaire for sample's sociodemographic and determinants of physical activity practice was applied.

ACCELEROMETER

Friedson's (2005) criteria was used to measure MVPA levels. Troiano (2007) algorithm was computed to assess compliance with the minimum of 360 minutes over three monitored days (Kakinami et al., 2018; Vanhelst et al., 2012).



ACKNOWLEDGEMENTS

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