Title: Return-to-school after covid-19: the key roles of family, school and communities on children growth and motor development.

Acronym: RUSH

Project leader: José Maia

Host organization: Universidade do Porto

Main purposes of the project: To examine children growth and motor development, and to follow their developmental trajectories during 12 months after the COVID-19 pandemic using a novel technological device during their physical education (PE) classes.

Design/methodology/approach: The sample comprises 1,000 Portuguese primary school children aged 6 to 10 years. Data will be collected on children, families, school and community environments. Further, we will use the Educativo® platform, an innovative technological tool to assist PE teachers monitoring children motor development during 12 months, with episodic assessments made every six months. Multilevel statistical models will be used to account for the data structure, i.e. children nested within families and schools which are nested within communities.

Potential results: Outcomes are expected to have significant impacts in several domains. The project will describe the post-pandemic course of children's growth and motor development, healthy behaviors and fitness, and will also provide PE teachers with a useful and innovative device to help them in their education programs. The results will help reduce inequalities and improve the quality of education (goals 4 & 10 of the UN 2030 Agenda) by increasing our understanding of the entwined relationships between children's growth, motor development and behaviors within the environments in which they live after the COVID-19 crisis.

Social relevance of the research: RUSH social relevance is expected to drive a significant threefold impact: (1) the generation of a unique data set in Portugal devoted to children's growth, motor development, healthy behaviors, physical fitness, overweight and obesity within the context of their families, schools and communities laboring after the current COVID-19 pandemic crisis; (2) a prime cooperation with the educational community since they will further explore and use an innovative technological tool linked to a more efficient PE teaching and monitoring in the primary school years; (3) a systematic and far-reaching partnership connecting researchers, policy makers, and PE teachers towards the development and promotion of long-term intervention programs related to children's physical growth and motor development within their multifaceted contexts.

Originality/value of the project: Questions on how children's motor development unfolds within the joint novel effects of their school contexts, familial ambiance and environmental settings remain to be fully answered. There are apparently no extensive studies examining the afterwards of the impact of COVID-19 on children's growth and motor development multivariate facets. Potential changes in health behaviors during COVID-19 may negatively impact their normal physical growth and motor development. The proposed RUSH project is embedded in Bronfenbrenner's bio-ecological holistic theory of human development.