Annual Report: Unlocking and accelerating physical activity opportunities for vulnerable children in Brazil: A path towards the sustainable adoption of a school-based policy.

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This annual report outlines the first year of the project titled "Unlocking and accelerating physical activity opportunities for vulnerable children in Brazil: A path towards the sustainable adoption of a school-based policy", recently granted by the Lemann Center for Brazilian Studies.

Introduction and Aims:

Given the benefits of physical activity on life domains (i.e., health, social, and economic), promoting regular opportunities from an early age is considered a vital investment for sustainable societies. Unfortunately, global South countries have limited capacity and resources to respond to the global call for promoting physical activity. Following the COVID-19 pandemic, vulnerable children are only accumulating 15 minutes of physical activity during school hours. The main goal is addressing the critical issue of physical inactivity among vulnerable children in Brazil and support the adoption and implementation of a school-based physical activity policy within the educational system of Arapiraca city, located in one of Brazil's least developed states. By partnering with local stakeholders and utilizing evidence-based frameworks, the project seeks to bridge the gap between research evidence and real-world practice in promoting physical activity. The scientific aims are: (1) To evaluate the association between school organizational characteristics and physical activity and, (2) To identify the barriers and facilitators for policy adoption through the lens of the policymakers and school representatives. We hypothesized that children's physical activity is associated with the characteristics of school physical elements (i.e., number and quality of facilities), the curricular and extracurricular activities; and the school routine in terms of what is planned and executed.

Methods and future directions

The project employs a comprehensive approach, integrating policy development, implementation science, and qualitative research methods. Following the establishment of a partnership between the principal investigator and the educational secretary, a committee was formed to develop the school-based physical activity policy. Drawing upon the whole-of-school approach and the theory of expanded, extended, and enhanced opportunities for physical activity, the policy was designed to address the complex factors influencing physical activity among children. To facilitate the translation of policy into practice, the project follows the Practical, Robust Implementation and Sustainability Model. This framework considers how implementation and sustainability infrastructure impact the context and influence policy acceptance. There are two

phases that will be developed during the Fall 2023 (scientific aim 1) and Spring 2024 (scientific aim 2).

Anticipated outcomes include:

- Insights into the association between school context and physical activity levels among children.
- Identification of tipping points for policy acceleration through the identification of barriers and facilitators for policy adoption and implementation.
- Recommendations for enhancing the school environment, curriculum, and routine to promote physical activity among vulnerable children.
- Contribution to the evidence base on effective strategies for promoting physical activity in low-income settings, with implications for policy and practice.

We expected present the initial results by the end of the second semester of 2024-2025 academic year.