

UNRAVELING THE ROLE OF NUTRITIONAL STATUS ON REAL AND PERCEIVED MOTOR COMPETENCE AND PHYSICAL ACTIVITY

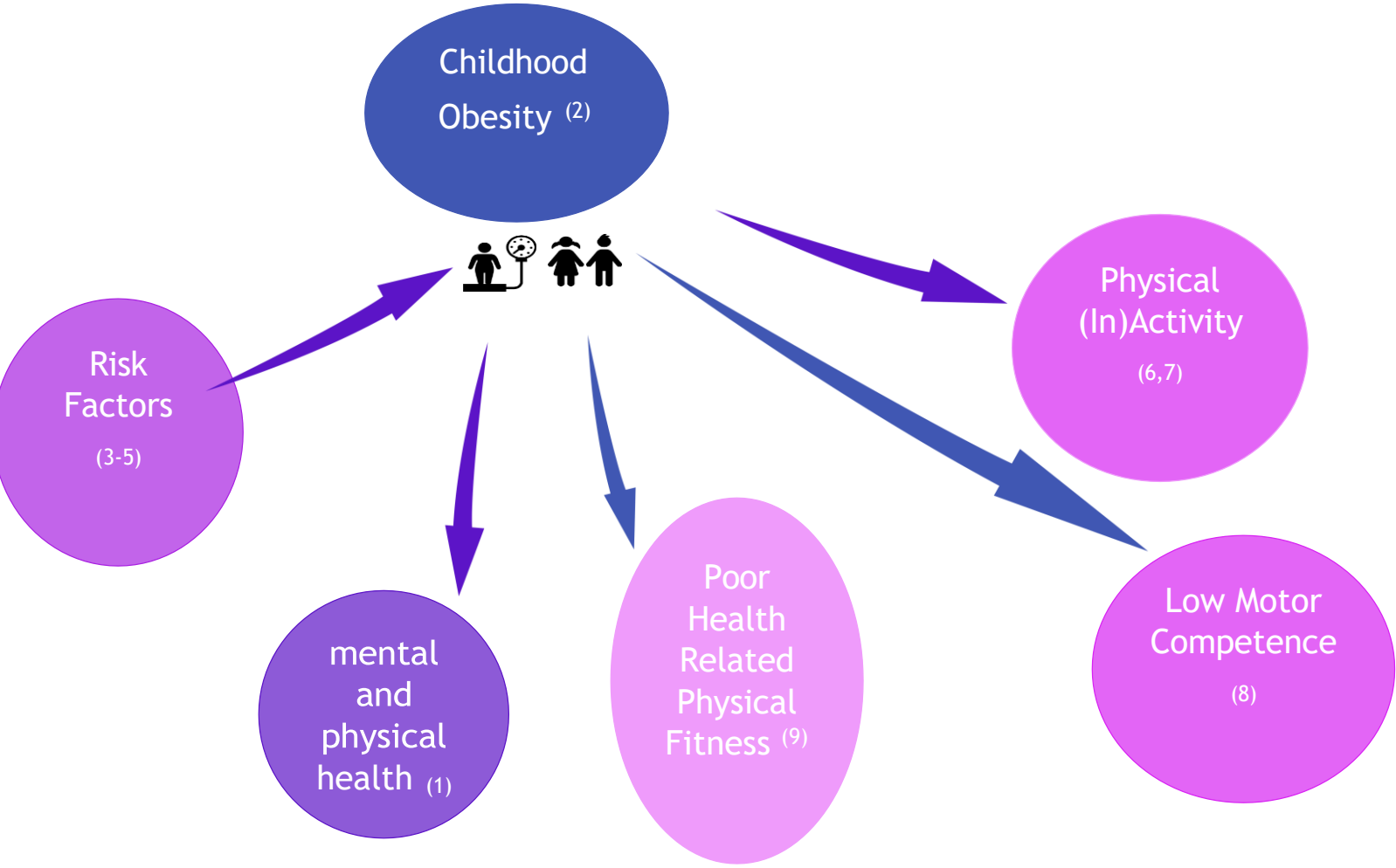
AMONG PORTUGUESE CHILDREN: AN INTERDISCIPLINARITY CROSS-SECTIONAL STUDY

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Background




Aim

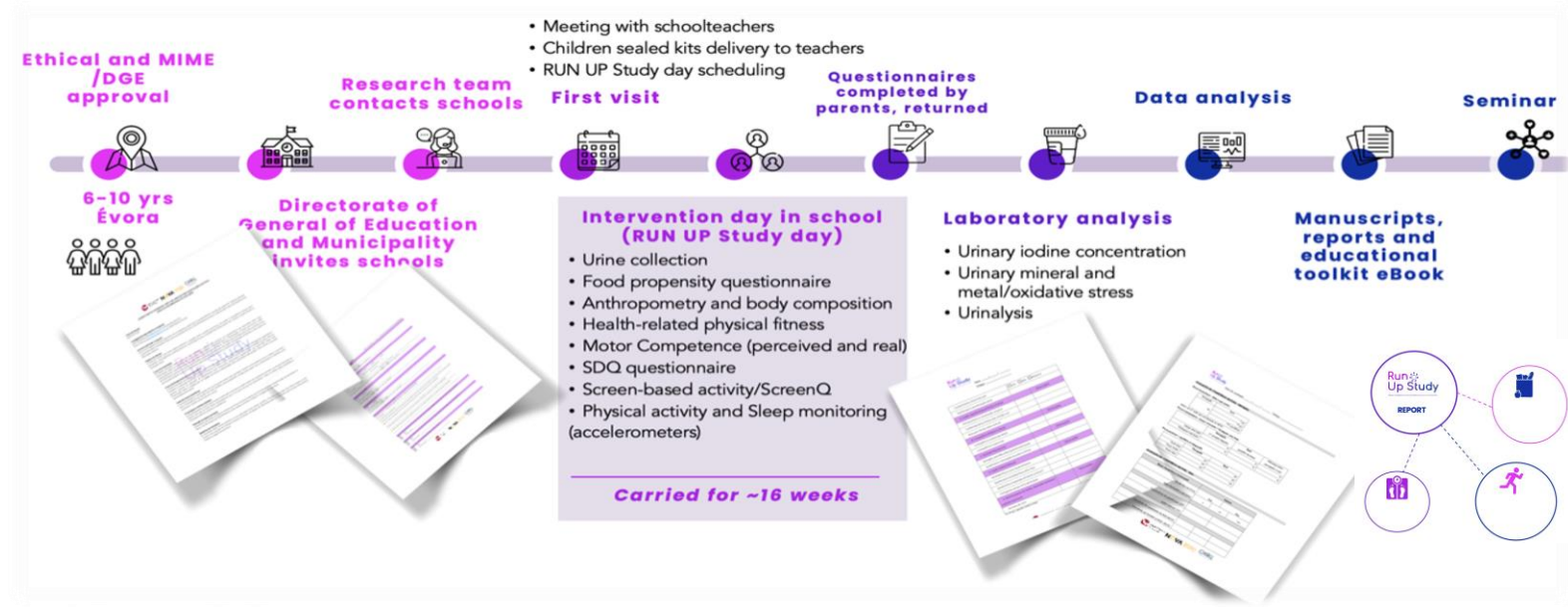
To assess children’s **motor competence** and **health-related physical fitness** levels and their combined relationship with psychosocial factors, health-related behaviors, health biomarkers, and **nutritional status**.

For that, we join a multi- and interdisciplinarity team from University of Évora and NOVA Medical School with experienced researchers in the fields of human kinetics, nutrition, medicine, and nursing, dedicated to childhood, that worked together to develop strategies to change behaviors in schools and community contexts concerning healthy eating habits, motor competence, health-related physical fitness and physical activity.

Participants

 940 school-aged children (54% boys)  
M<sub>age</sub>=8.46 yrs (min. 6.31; max. 11.44)  
Municipality of Évora and Viana do Alentejo

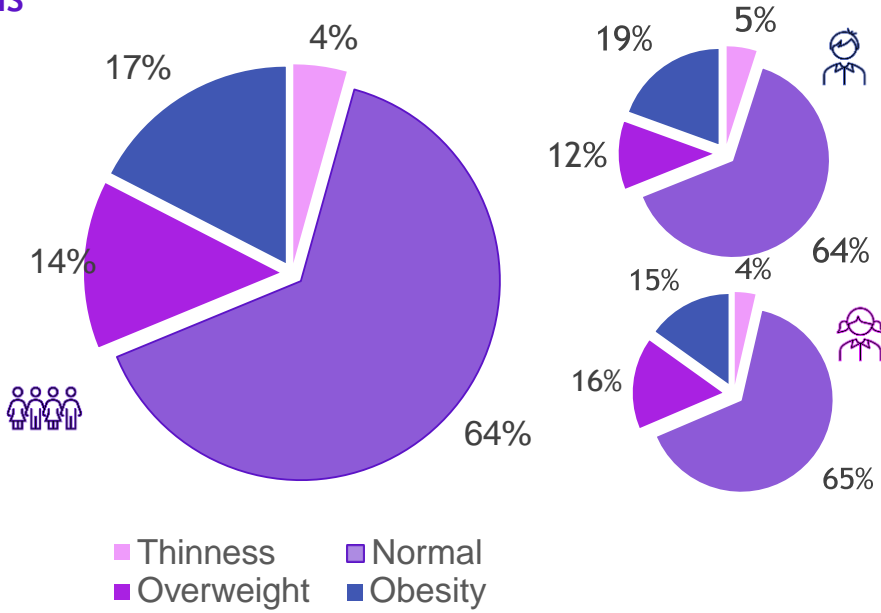
Procedures and Measure



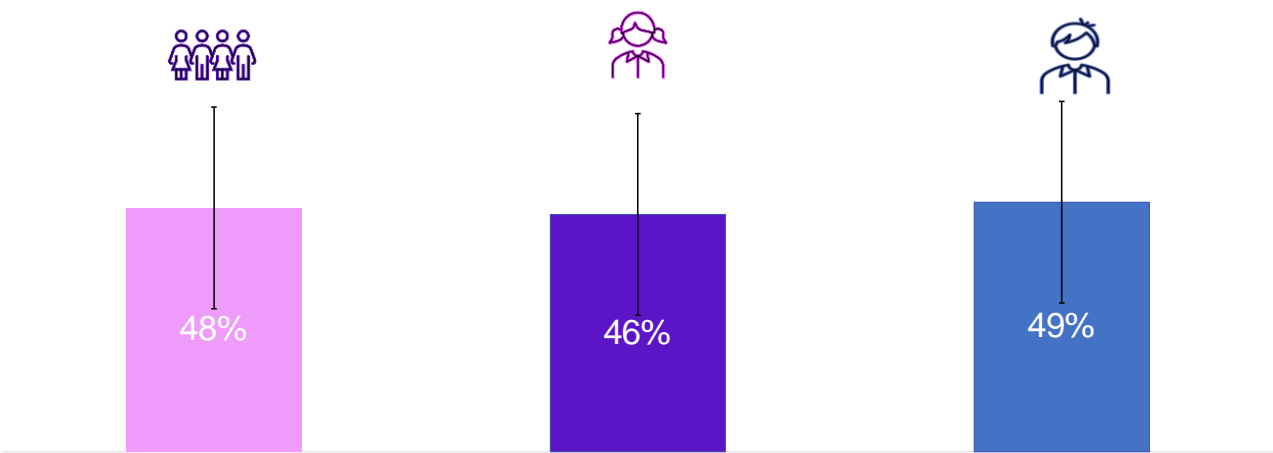
Dimensions of analysis	Variables/Instruments
Health-related physical fitness	i) Anthropometry and Body Composition (height, weight, waist circumference, and hip circumference) ii) Cardiorespiratory fitness/20-meter shuttle run test iii) Muscular Fitness/vertical jump test
Motor competence	i) MC/Motor Competence Assessment instrument ii) Perceived MC/ four motor tasks
Psychosocial	i) Behavioral indicators/ Strengths and Difficulties Questionnaire
Health-related behavior	i) Physical Activity and sleep monitoring/ ActiGraph wGT3X-BT accelerometers ii) Food propensity iii) Screen-based activity/ ScreenQ
Health biomarkers, environmental exposure and nutritional status	i) urinary iodine and other minerals and metals/oxidative stress/ urinalysis

Results

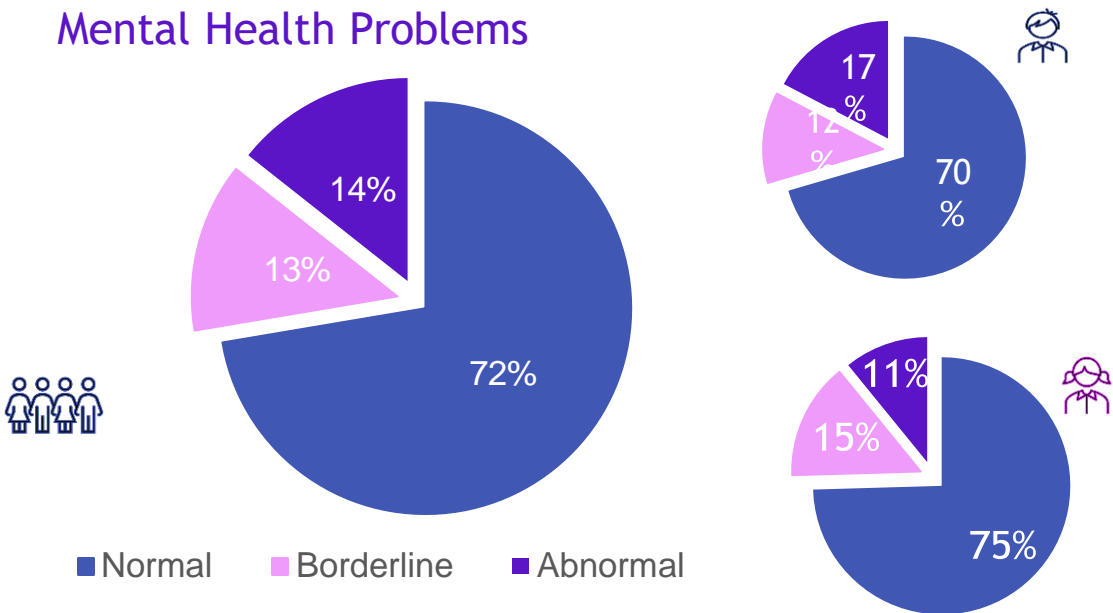
Weight Status



Motor Competence



Mental Health Problems



Health-related behavior

**61%** of children do not meet the recommended 2hours for active play  
**18%** of children do not achieve the minimum recommended hours of sleep (9-12hours per night)  
**55%** of children spend more than 1hour per day in front of screens

Conclusions

Prioritizing motor competence is essential for monitoring and intervention efforts to address the increasing prevalence of childhood obesity. With 31% of children affected by overweight and obesity and 55% spending over 1 hour per day on screens, this approach is vital as a public health strategy. Enhancing motor competence contributes to health-related physical fitness, offering policymakers evidence-based solutions to counteract obesity through school-based initiatives that promote physical activity and healthy behaviors.

Funding

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References:

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