



# UNDERSTANDING THE INTERGENERATIONAL IMPACT OF OBESITY IN PORTUGAL: DATA FROM COSI TO SUPPORT BETTER4U – AN INNOVATIVE EUROPEAN PROJECT

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## INTRODUCTION

Both childhood and adult obesity have been rising worldwide, as a global health challenge, with **parental obesity identified as a key determinant of childhood obesity** through **genetic predisposition** and **shared obesogenic environments**(1). In this context, the WHO Childhood Obesity Surveillance Initiative (COSI) provides critical data on the nutritional status of children across Europe, including valuable insights into parental factors(2). These data contributes as a vital foundation for interventions like BETTER4U, guiding their design and focus.

## RESULTS

The sample included 4215 children and their parents. The prevalence of obesity was 12.9% among children and 13.7% among parents. A binary logistic regression was performed, considering a significance level of  $p < 0.05$ . After adjusting for potential confounding factors, including sex and age of both children and parents, parental education level, and perceived family wealth, parental obesity was found to be significantly associated with childhood obesity. **Children with parents with obesity were 2.65 times more likely to have obesity than children of parents without obesity** (adjusted Odds Ratio [aOR]: 2.65; 95% Confidence Interval [CI]: 2.133–3.292;  $p < 0.001$ ).

ASSOCIATION FROM A BINARY LOGISTIC REGRESSION ANALYSIS (OR):		Adjusted OR* (95% CI)
		0 1 2 3 4
Children with obesity	Parents with obesity	<b>2.650</b> (95% CI: 2.133-3.292; $p < 0.001$ )
	Lower parental education	<b>0.499</b> (95% CI: 0.403-0.617; $p < 0.001$ )
	Lower perceived family wealth	1.126 (95% CI: 0.907-1.397; $p = 0.283$ )

\*Adjusted for sex and age of both children and parents, parental education level, and perceived family wealth. In bold are the values with a p-value of less than 0.05, which are of statistical significance.  
Abbreviations: OR -Odds Ratio; CI - Confidence Interval.

## AIM

This study aims to understand the intergenerational link within the “COSI Portugal” in the context of BETTER4U project (2023–2027), a personalized lifestyle intervention that aims to **reduce obesity prevalence in adults, using artificial intelligence and evidence-based strategies**.

## METHODS

COSI systematically collects comparable data every 2–3 years on the nutritional status of children aged 6 to 9 years across Europe. This data includes anthropometric measurements of children (weight and height), which are classified using the WHO Growth Reference Charts (5–19 years)(3). Additionally, information on family and parental characteristics is gathered through self reported data, including parental nutritional status (calculated BMI, classified according to the WHO reference) and socioeconomic factors. For this analysis, a **cross-sectional observational study** was carried out based on **data from the 6th round of COSI (2021/2022) in Portugal to explore the association between parental and childhood obesity**. The aim was to **support the potential of the BETTER4U project**, which involves 7 countries, including Portugal, to address obesity not only at the individual level but also within families by disrupting intergenerational patterns of obesity.

## CONCLUSIONS

Parental obesity is a critical determinant of childhood obesity, underlining the importance of targeting parental factors in health interventions. By focusing on adult obesity, **the BETTER4U project has the potential to not only reduce obesity prevalence in adults but also create positive effects within families**.

## REFERENCES

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