



# OBESITY AND SOCIOECONOMIC VULNERABILITIES: EVIDENCE FROM COSI PORTUGAL SUPPORTING BETTER4U - A TAILORED APPROACH TO WEIGHT MANAGEMENT

**ceidss**  
Centro de Estudos e Investigação  
em Dinâmicas Sociais e Saúde  
Associação sem fins lucrativos



Ana Rito<sup>1,2</sup>, Maria de Fátima Martins<sup>1</sup>, Marta Gaspar<sup>1</sup>, George Dedoussis<sup>3</sup> on behalf of the BETTER4U Consortium

<sup>1</sup> Centre for Studies and Research in Social Dynamics and Health (CEIDSS), Lisbon, Portugal

<sup>2</sup> WHO Collaborating Center for Nutrition and Childhood Obesity- National Institute of Health Dr. Ricardo Jorge, Portugal  
<sup>3</sup> Department of Nutrition and Dietetics, School of Health Science and Education, Harokopio University of Athens, Greece

## INTRODUCTION

Obesity remains a critical global health challenge, contributing to the rising prevalence of non-communicable diseases and imposing substantial burdens on public health systems worldwide (1,2).

understanding the obesity determinants → essential for designing effective and inclusive interventions

Data such as those provided by the WHO European Childhood Obesity Surveillance Initiative (COSI) offer critical insights into these determinants, supporting the design of tailored interventions(3).

**Socioeconomic vulnerabilities**, in particular, have been consistently identified as key determinants of obesity, requiring targeted strategies to address their impact.

## AIM

Identify the **determinants of adult obesity** to support the design of **BETTER4U's** personalized intervention strategies, which will be implemented in 7 European countries, including Portugal.

## RESULTS

A binary logistic regression was conducted, considering a significance level of  $p < 0.05$ .

After adjusting for confounding factors, **financial difficulties emerged as a significant predictor of obesity**.

Adults facing financial challenges were **nearly twice as likely to have obesity** compared to those without such difficulties (adjusted Odds Ratio [aOR]: 1.882, 95% Confidence Interval [CI]: 1.639–2.162;  $p < 0.001$ ).

9169  
adults

12.2%  
with obesity

21.6%  
reported financial difficulties

## METHODS

The COSI study collects data on children nutritional status of children aged 6–8 years and self-reported family information, including parental nutritional status and **socioeconomic factors** (3).

**COSI Portugal**  
5th (2018/2019) and 6th (2021/2022) rounds

?  
vulnerability factors -----> adult obesity  
(cross-sectional observational analysis)

Participants were categorized into groups based on **sex** and the following **socioeconomic variables**:

<b>Educational level</b>		<b>Perceived family wealth</b>	
lower	higher	not experiencing financial difficulties	experiencing financial difficulties
<b>Residential setting</b>		<b>Occupation</b>	
urban	rural	employed/student	unemployed/sick/disabled

## CONCLUSIONS

This analysis demonstrates the critical role of **financial difficulties** in shaping obesity outcomes among adults, emphasizing the **need for inclusive, tailored interventions to address the needs of at-risk populations** and providing a robust foundation for **BETTER4U's** innovative and evidence-based strategies for weight management.

## CONTACT INFORMATION

arito@ceidss.com

## ASSOCIATION FROM A BINARY LOGISTIC REGRESSION ANALYSIS (OR):

		Adjusted OR* (95% CI)	0	1	2	3	4
Having obesity	lower perceived wealth	<b>1.882</b> (95% CI: 1.639-2.162; $p < 0.001$ )			◆		
	unemployed/sick/disabled	0.839 (95% CI: 0.670-1.049; $p = 0.123$ )		◆			
	lower education	0.974 (95% CI: 0.855-1.110; $p = 0.696$ )		◆			
	living in rural area	0.915 (95% CI: 0.762-1.099; $p = 0.342$ )		◆			

\*Adjusted for age, sex, occupation, education level and residential setting. 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.

## REFERENCES

- Newton S, Braithwaite D, Akinyemiju TF. Socio-economic status over the life course and obesity: Systematic review and meta-analysis. PLoS One. 2017;12(5):e0177151.
- Selvakumaran S, Lin CY, Hadgraft N, Chandrabose M, Owen N, Sugiyama T. Area-level socioeconomic inequalities in overweight and obesity: Systematic review on moderation by built-environment attributes. Health Place. 2023;83:103101.
- Breda J, McColl K, Buoncristiano M, Williams J, Abdrakhmanova S, Abdurrahmanova Z, et al. Methodology and implementation of the WHO European Childhood Obesity Surveillance Initiative (COSI). Obes Rev. 2021;22 Suppl 6:e13215.

Conflict of Interest: None disclosed.

Funding: BETTER4U has received funding from the European Union's Horizon Europe Research and Innovation Programme under Grant Agreement n° 101080117.

Scan to know more about  
the BETTER4U Project

