

Family Income, Education and Occupation Are these risk factors for children's overweight and obesity in Portugal? MUN-SI Program – Portugal A pilot study for the EU project – OPEN

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Introduction

Childhood obesity is one of the most serious Public Health problems in Portugal¹. Increasing evidence suggests that nutritional status of children can be influenced by family income and this condition may be associated with development of obesity². Based on the rationale that local governments exert an important and decisive role on counteracting childhood obesity, MUN-SI program (www.mun-si.com) was developed in Portugal. MUN-SI is an on-going community-based program (CBP) at local level which aims to promote lifestyles changes in the long-term, which along with other 12 European programs, is a partner in the EU project "OPEN" (<http://openprogram.eu>), an innovative project to scale up efforts to prevent childhood obesity across Europe, particularly in children from low SE status (SES). In order to fully contribute to the design of local actions to promote active living and healthier behaviours, a detailed children's nutritional status assessment, evaluation and association of its multivariable factors socio-economic variables, including families income, education and occupation was needed to support following interventions. The aim of this study is to address the association between socioeconomic (SE) indicators and children's nutritional status (NS) of the two rounds of the MUN-SI program in 5 Portuguese cities (Oeiras, Seixal, Montijo, Fundão and Viana do Castelo).

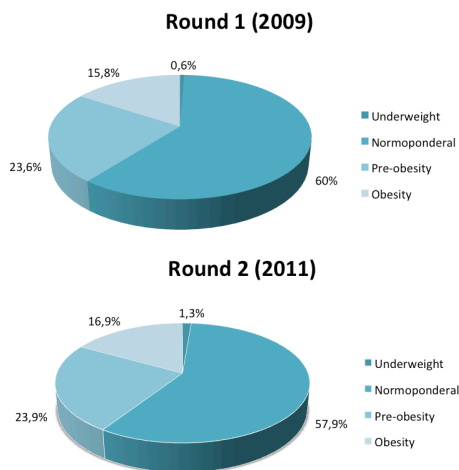
Methodology

An observational cross-sectional study was performed in 2726 children (round 1 (R1) = 1126; round 2 (R2)= 1600) aged between 6-12 years old from 5 Portuguese cities (Oeiras, Seixal, Montijo, Fundão and Viana do Castelo).

- **Socio-Economic Status:** Socio Economic characteristics were obtained by a self-response MUN-SI Questionnaire, according to 3 criteria: family income, parents occupation and education level.
- **Nutritional Status:** was assessed by anthropometric measures (weight and height) considering the WHO Criteria⁴. Children's anthropometric data was obtained by trained examiners.

Results

Children's nutritional status (WHO Criteria³)
MUN-SI project



In R1 (2009), the prevalence of overweight was 39.4% (n = 444), of which 15.8% (n = 178) were obese. In R2 (2011) similar prevalence was obtained (40.8% of overweight, in which 16.9% obese). In R1, a family monthly income lower than 1500 € was associated with higher obesity prevalence (OR = 2,37; IC95%: 1,11-5,02). In R2, no significant association between obesity prevalence and low family income (p=0.494) was observed. Although in R2, no significant associations were found, in Round 1, families where the parents had a unqualified or semi-qualified occupation had a higher probability (mother - OR ≥ 3.4; father - OR ≥ 2.7) to have children with obesity. Low education level of the parents was also proved to be associated with higher childhood obesity prevalence.

	Round 1 (2009)		Round 2 (2011)	
	Obesity n (%)	OR (95% CI)	Obesity n (%)	OR (95% CI)
Family Income (€/month)				
<1500	122 (55.0)	2,37 (1.11-5.02)	155 (68.3)	0,85 (0.53-1.36)
Occupation level (Unqualified or semiqualified)				
Mother	93 (63.3)	3,4 (1.24-9.82)	106 (46.9)	0,97 (0.72-1.29)
Father	105 (67.3)	2,7 (1.23-7.99)	104 (47.9)	0,86 (0.64-1.15)

Conclusion

Overweight prevalence was similar and relevant (>35%) in all municipalities, between rounds and concordant with national trends
Low Socio-economic status proved to be an important risk factor to the development of childhood obesity in Portuguese population.
This study support that further intervention is needed on low socio-economic families and thus constituted an important support to the activities of the OPEN project in Portugal.

References

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