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## Socioeconomic factors on school aged children's overweight and obesity in the context of a community based program - MUN-SI, Portugal. A contribution for the EU project OPEN

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Portugal is one of the countries within the WHO European Region with higher prevalence of childhood overweight (over 30%) and obesity but not all children are affected equally by the burden of obesity and poor health. Children in families that do not have adequate resources are more likely to be obese and face a greater burden of ill health than children who grow up in families that are better off. Based on the rationale that local governments exert an important and decisive role in counteracting childhood obesity, MUN-SI program ([www.mun-si.com](http://www.mun-si.com)) was developed in Portugal. MUN-SI is an on-going community-based program at local level which aims to promote lifestyles changes in the long-term, and it is also a member of the EPODE International Network. Along with other 11 European programs, MUN-SI is a partner in the EU project "OPEN", an innovative project to scale up efforts to prevent childhood obesity across Europe. In order to fully contribute to the design of local actions to promote active living and healthier dietary behaviours, and detailed children's nutritional status assessment, evaluation and association of its multivariable factors including socio-economic was needed to support following interventions. The objective of this study was to address the association between socioeconomic indicators and children's nutritional status (NS) of the two rounds of the MUN-SI NS surveys (2009 and 2011). It was performed an observational cross-sectional study of elementary school children from five cities. A total of 2726 children (round 1 (R1) = 1126; round 2 (R2) = 1600) aged between 6-12 years old were evaluated. The Childhood overweight and obesity prevalence was assessed according to WHO criteria, adopted by the Ministry of Health of Portugal. Low socioeconomic status was defined according to three criteria: family income, parents occupation and education level. These socioeconomic characteristics were obtained by a self response questionnaire developed within the MUNSI program. In R1 (2009), the prevalence of overweight was 39.4% (n = 444), of which 15.8% (n = 178) were obese. In the second round (2011) similar prevalence were obtained (40.8% of overweight, in which 16.9% obese). In both rounds, 69% of the families had a low income (<1500 €). Mother's education level was mainly up to 12th grade (79%) and more than 50% of fathers had an education level up to 9th grade. Parents occupation were mainly (>45%) unqualified or semi-qualified. In R1, a family income of 0-1500 € 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. Families where the parents had a non-qualified 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. This study observed that low socioeconomic status is an important risk factor to development of childhood obesity in Portuguese population. These results support that further intervention is needed on low socio-economic families.

### Biography

Ana Rito is the Director of the Research Centre on Health & Nutrition CEIDSS. She graduated in Nutritional Sciences (Portugal), obtained a Master Degree in Medical Sciences (UK) and her PhD in Public Health (Brazil). From 2008 she undertook 2 Post-Doc at the National Institute of Health Doutor Ricardo Jorge - Portugal, one in the EU project EConDA- Economics of Chronic Diseases" led by the UK Health Forum. Former Vice President of Scientific Committee of the Platform Against Obesity (Ministry of Health) and the Head of the Bachelor Degree in Nutritional Sciences - University Atlântica, she is currently the Principal Investigator (PI) of Projects based on the development of creative answers to tackle childhood obesity of a municipality-level (POZ and MUN-SI [www.mun-si.com](http://www.mun-si.com)). She is the PI for Portugal, of the EU project "OPEN" and of the study COSI of the WHO/Europe and a member of its Executive Committee. She is also a member of European Networks and recent collaborations include the Copenhagen Business School and Metropolitan University College (DK).

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