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### INTRODUCTION

WHO/Europe Childhood Obesity Surveillance Initiative (COSI)<sup>1</sup> is an ongoing, systematic process of collection, analysis, interpretation and dissemination of descriptive information for monitoring excess body weight in the WHO European Region. The system aims to measure trends in overweight and obesity in children aged 6-8 year-olds, every three years. Among 36 participating European countries, Portugal has been collecting data since 2008 (1st round). Here it is presented the nutritional status of Portuguese children of the COSI study, and explored changes in overweight and obesity between 2008 and 2013.

### KEY METHODS

Nutritional Status of children aged 6-8 years old, from a national representative sample in Portugal, was evaluated according to the WHO/Europe COSI study protocol in rounds 1 (2008; n=3765); round 2 (2010; n= 4064) and round 3 (2013; n= 5935). Height and weight were directly measured by trained fieldworkers. Overweight (including obesity) and obesity prevalence were calculated using the international body mass index cut-offs according to WHO criteria.



### RESULTS

During the 5 year period of the last 3 COSI rounds, prevalence of childhood overweight and obesity significantly decreased by 6,3% and by 1,4% (p< 0,05), respectively (Fig.1). In 2008 overweight and obesity was higher in boys than in girls (p>0,05), which was inversely seen in 2013, where girls showed higher prevalence obesity and overweight (Table 1), however it was only significantly higher for girls aged 7 years old (p<0,05). Except for obese girls in 2008, overweight and obesity, increased with age and peaked in 8 year old (boys and girls) in all 3 rounds (Fig.2)

Fig. 1 - Children's Nutritional Status aged 6-8 years old, according to WHO Criteria. COSI Portugal 2008-2013

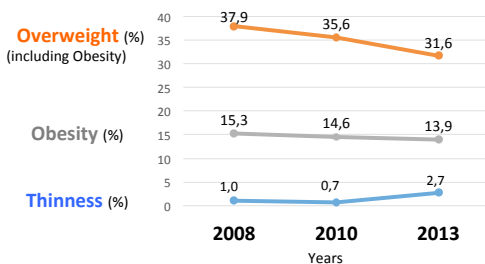


Table 1 – Prevalence of thinness, overweight and obesity, by sex and age, according to WHO Criteria. COSI Portugal 2008-2013

|       |             | Thinness (%) |      |      | Overweight (including obesity) (%) |      |      | Obesity (%) |      |      |
|-------|-------------|--------------|------|------|------------------------------------|------|------|-------------|------|------|
|       |             | 2008         | 2010 | 2013 | 2008                               | 2010 | 2013 | 2008        | 2010 | 2013 |
| BOYS  | 6-year-olds | 1,8          | 0,5  | 2,8  | 35,1                               | 32,7 | 28,2 | 16,0        | 15,8 | 7,8  |
|       | 7-year-olds | 0,7          | 0,8  | 2,1  | 40,7                               | 32,2 | 28,3 | 17,2        | 14,3 | 13,2 |
|       | 8-year-olds | 1,5          | 0,2  | 2,3  | 40,1                               | 41,5 | 34,1 | 16,7        | 20,0 | 20,2 |
| GIRLS | 6-year-olds | 0,7          | 0,4  | 2,5  | 38,9                               | 35,3 | 32,3 | 17,3        | 11,5 | 10,9 |
|       | 7-year-olds | 0,9          | 0,7  | 3,0  | 35,4                               | 36,2 | 33,4 | 13,2        | 12,8 | 15,1 |
|       | 8-year-olds | 0,7          | 1,6  | 3,8  | 36,8                               | 39,2 | 34,7 | 11,2        | 15,6 | 19,6 |

### CONCLUSION

Trends in overweight and obesity in national representative samples of Portuguese children of the COSI study, have declined during the period 2008-2013. However, among countries of the WHO European Region, Portugal continues to show one of the highest prevalence of overweight and obesity in primary school aged children suggesting that programs addressing childhood obesity have to continuously be a priority on the Portuguese public health agenda.

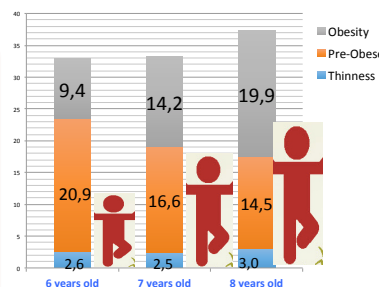


Fig. 2 –Children's nutritional status by age. COSI Portugal 2013

