

# Obesity in young boys is associated with physical activity, sport facilities close to home and mother's BMI

DANIELA RODRIGUES<sup>1,2\*</sup>, ARISTIDES M. MACHADO-RODRIGUES<sup>1,3</sup>, CRISTINA PADEZ<sup>1,2</sup>

<sup>1</sup>CIAS – Centro de Investigação em Antropologia e Saúde

<sup>2</sup>Departamento de Ciências da Vida, Faculdade de Ciências e Tecnologia, Universidade de Coimbra

<sup>3</sup>Escola Superior de Educação, Instituto Politécnico de Viseu

\* rodrigues1323@gmail.com

## INTRODUCTION

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Childhood obesity prevalence has reached epidemic proportions in Portugal during the last decades. The Socio-Ecological Model has been employed to address and understand the issues of overweight and obesity.

## OBJECTIVE

Observe behavioral, family and environmental factors associated with obesity in young boys living in central Portugal.

## METHODOLOGY

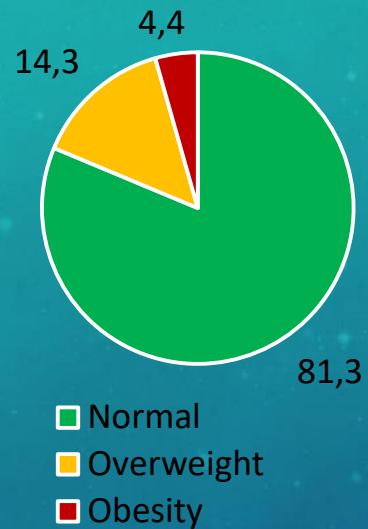
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1. The sample of this cross-sectional study comprised 385 boys aged 6–10 years;
2. Height and weight were measured and body mass index (BMI) was calculated. Obesity was defined using the IOTF cut-off points;
3. Child physical and sedentary behaviors, parents' BMI, and information about the neighborhood were collected by a parental questionnaire;
4. Data was collected between April to mid-June in 2013 and 2014;
5. The study was approved by the Portuguese Commission for Data Protection and the Direcção Geral de Inovação e Desenvolvimento Curricular. Consent was given by all the involved, including parents and children.



# RESULTS

Weight status defined by the IOTF



## Logistic Regression (cont.):

Commute to school, physical education classes, watching TV, and father's BMI were not statistically significantly associated with boys' weight.

	Factors	OR	95%CI	p-value	OR	95%CI	p-value
<b>Sport</b>							
OW	Yes (ref. No)	0,86	0,46-1,58	0,62	-	-	-
OB	Yes (ref. No)	0,29	0,11-0,79	<b>0,02</b>	-	-	-
<b>Facilities</b>							
OW	0 a 1 (Ref. ≥6)	1,59	0,73-3,48	0,25	-	-	-
	2 a 3 (Ref. ≥6)	0,79	0,35-1,80	0,57	-	-	-
	4 a 5 (Ref. ≥6)	0,97	0,41-2,31	0,95	-	-	-
OB	0 a 1 (Ref. ≥6)	10,32	1,28-18,58	<b>0,03</b>	10,87	1,05-19,25	<b>0,03</b>
	2 a 3 (Ref. ≥6)	3,15	0,35-10,77	0,31	3,15	0,37-9,78	0,32
	4 a 5 (Ref. ≥6)	3,44	0,35-13,86	0,29	3,14	0,21-15,30	0,31
<b>Mother's BMI</b>							
OW	Normal (Ref. OB)	0,36	0,12-1,09	<b>0,07</b>	-	-	-
	OW (Ref. OB)	0,55	0,17-1,82	0,33	-	-	-
OB	Normal (Ref. OB)	0,06	0,02-0,20	<b>&lt;0,001</b>	0,05	0,01-0,27	<b>&lt;0,001</b>
	OW (Ref. OB)	0,1	0,02-0,45	<b>0,00</b>	0,08	0,01-0,46	<b>0,01</b>
<b>SES</b>							
OW	Low (Ref. High)	0,83	0,38-1,81	0,64	-	-	-
	Medium (Ref. High)	1,99	1,00-3,94	<b>&lt;0,05</b>	-	-	-
OB	Low (Ref. High)	2,64	0,75-9,26	0,13	-	-	-
	Medium (Ref. High)	2,98	0,81-10,90	<b>0,09</b>	-	-	-

Reference category: Normal weight; OW=Overweight; OB=Obesity; SES=SocioEconomic Status

## DISCUSSION AND CONCLUSION

- Proximity to sports facilities is one important environmental resource that may predict participation in physical activity (PA) and limited availability or low proximity to sports facilities may discourage their usage. PA has been seen to be one of the most important factors to prevent excess weight and obesity in children, which may help to explain present findings;
- Children of heavier parents have been found to exhibit lower levels of physical activity and have greater preference for high fat foods and lower preference for healthier foods. This familial influence may be through genetic mechanisms or through the environment.

☺ In conclusion, the findings revealed that the pediatric obesity risk could be highly influenced by opportunities to engage in PA and mother's BMI. Future interventions may focus on these and other factors to prevent obesity, particularly in young boys.