

DAILY PHYSICAL ACTIVITY, RISK OF OBESITY, AND FOOD HABITS IN PORTUGUESE MALE CHILDREN



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Background

Childhood obesity prevalence has reached epidemic proportions in Portugal during last decades, and it has been considered a result of lifestyle changes. Effectiveness of interventions or prevention strategies strongly depends upon an understanding of the causes and correlates of obesity. Therefore, the present study aimed to analyze associations between daily physical activity (PA) and obesity risk in male children.

Methods

The sample comprised 2258 boys aged 7-9 years. Height and weight, and BMI were measured. PA and sedentary behavior (SB) were assessed by questionnaire as well as eating behaviors (i.e. have breakfast; consumption of soup and vegetables, and soft drinks and chocolate). Logistic regressions were used, with adjustments for age, time spent sedentary, nutritional habits, and parental education.

Results

About 70.4% of boys were categorized as normal weight, 21.9% as overweight, and 7.7% as obese, and near 30% of boys spent more than 2 hours per day in front of TV. Furthermore, about 78% of children eat soup daily, just 28% of those children eat vegetables, and more than 90% of children did not eat neither chocolate nor soft drink in a daily basis.

After controlling for sedentary behaviors, there was not any significant association between obesity risk and PA. Inspection of the final regression model, boys who spent more time in SB were 86% more likely to be classified as overweight than their counterparts who had less time devoted on SB.

Table 1. Demographic characteristics of Portuguese children aged 7-9 years.

	Males (n=2258)
Age *, mean (SD)	8.6 (0.9)
Habitual Physical Activity, min/day	30.4 (21.7)
Weight status	
Normal weight (%)	70.4 (1589)
Overweight/Obesity (%)	29.6 (669)
Screen time, daily (%)	
< 2 hours	69.5 (1569)
≥ 2 hours	30.5 (689)
Paternal Education (%)	
Low	39.0 (879)
Medium	30.0 (680)
High	31.0 (699)
Maternal Education (&)	
Low	28.2 (636)
Medium	29.2 (660)
High	42.6 (962)
Eating Soup in a daily basis	
Yes	77.9 (1760)
No	22.1 (498)
Eating Vegetables in a daily basis	
Yes	28.5 (644)
No	71.5 (1614)
Daily soft drinks	
Yes	9.7 (220)
No	90.3 (2038)
Eating chocolate in a daily basis	
Yes	7.8 (177)
No	92.2 (2081)
Breakfast at home	
Yes	98.2 (2217)
No	1.8 (41)

Table 2. The association between Physical Activity (PA) and overweight/obesity controlling for confounders (i.e. age, sedentary behaviour, nutritional habits, and parental education) in male children aged 7-9 years.

Model *	B	S.E.	Overweight/Obesity			p
			e ^B	95% C.I.		
Males n=2258	1	0.002	0.002	1.002	0.99 to 1.01	0.36
	2	0.002	0.002	1.002	0.99 to 1.01	0.31
	3	0.001	0.002	1.001	0.99 to 1.01	0.51
	4	0.001	0.002	1.001	0.99 to 1.01	0.54
	5	0.000	0.002	1.00	0.995 to 1.004	0.84

* Model 1 = unadjusted; Model 2 = model 1 + chronological age; Model 3 = model 2 + TV viewing; Model 4 = model 3 + nutritional habits; Model 5 = model 4 + parental education.

Conclusion

The present cross-sectional study revealed a positive relation between SB and child weight among Portuguese boys. However, findings also revealed that boys who were more active did not have greater likely to be classified as normal-weight in a large sample of Portuguese 7-9 years-old children. Future research should extend similar design to female children to confirm or not some of the interesting findings, and replace subjective by objective tools to assess PA. Additional surveillance is also required across all age pediatric groups to identify critical periods for intervention.

References

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