

Nutritional intake adequacy in fourth grade children of Porto municipality –socioeconomic and anthropometric influences

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Introduction: An adequate nutritional intake in children and adolescents has been associated with a lower risk of developing obesity in child and adulthood, as well as health problems at long term. At the same time, lower socioeconomic level has been associated with nutritional intake inadequacy, as well as high prevalence of overweight.

Objective: Evaluate nutritional intake adequacy in fourth grade children of Porto municipality and the relation with socioeconomics and anthropometrics influences.

Methods: A stratified clustered sample was selected and all fourth grade children attending to 21 public primary schools in the municipality of Porto were involved. A 24-hour recall questionnaire was applied to children to evaluate nutritional intake. Sociodemographic (age, sex, level of social support and parents education) and anthropometric (weight, height, z-score for the body mass index) information were also collected. Nutritional composition was analyzed by *The Food Processor SQL*® program.

Results: 48,6% of the children were male and 42,3% were overweight or obese. Energy, proteins and sugar intakes were above recommendations for the aged group, only 12,7% of children met the recommendations for proteins and 3,8% for sugar. The breakfast and the lunch were the only meals that met the energy recommendations. It was observed higher energy and sugar intake through the day for children with financial support for school lunch and whose parents had a lower level of education. On the other hand, children with overweight and obesity reveled a lower energy intake.

Conclusion: Our findings suggested a nutritional inadequacy of children's diet during the day. It was found an association between high energy and sugar intake and a lower socioeconomic level. Nevertheless, there was not found any significative association with anthropometric factors.