INTRODUCTION

Overweight among children has increased dramatically in the last few years and various environmental, genetic and social factors have been associated with weight gain. Promoting fruit and vegetable consumption among children might be a useful strategy for weight management in children. However, evidence for the association between fruit and vegetable consumption and being overweight in childhood is inconsistently published. The present study aims to publish a COSI Portuguese study and examine whether low consumption of FAV is associated with obesity in a sample of Portuguese school-age children.

METHODOLOGY

Sample

A total of 3765 school-age children (181 primary schools) were included in the analyses. The sample included children aged 6-12 years from schools in the seven geographical regions of Portugal (North, Centre, Madeira, Lisbon, Alentejo, Algarve, and Azores). The sample was representative of the school-age children within the COSI Portuguese study and examined whether low consumption of FAV is associated with obesity in a sample of Portuguese school-age children.

Data collection

Height and weight were measured according to international standards, and BMI was calculated. The children's dietary intake was assessed using a semi-quantitative food frequency questionnaire completed by the parents. Data on parental educational level and income per household were collected.

Data analysis

Descriptive analysis of nutritional status and food frequency were calculated. To determine the magnitude of the association between FAV consumption and overweight, crude odds ratios (ORs) were computed using unconditional logistic regression.

RESULTS

A total of 3765 school-age children were included in the analyses (1816 boys and 1949 girls) with a mean age of 7.0 years (±SD: 1.2). 21.6% of children were overweight, 9.7% were obese, and 4.9% were identified as having a high risk of obesity. According to children's BMI, 1.1% of children were overweight, 0.5% were obese, and 0.1% were identified as having a high risk of obesity. The intake of FAV consumption among boys and girls, except for the soup consumption that was higher in girls (p=0.01). However, no differences between FAV consumption among age groups. Normal weight children and FAV were frequently consumed (≥4 times/week) than overweight and obese children, but these differences were not statistically significant.

Fruit and vegetable consumption and overweight among school-age children were analyzed (Figure 2). No differences between boys and girls were found for fruit and vegetable consumption (≥4 times/week: ≤95% CI = 0.72-1.17). Vegetables ≥1 time/week: 0.81, 95% CI = 0.62-1.08). The intake of FAV was not associated with increasing risk of obesity in Portuguese school-age children.