Introduction: Brazil is experiencing a nutritional transition characterized by a reduction in the prevalence of nutritional deficits and an increase in overweight and obesity, not only in adults but also in children and adolescents. Objectives: This study was designed to evaluate the factors associated with overweight and obesity in Brazilian 5-year-old preschoolers. Methods: A cross-sectional study of a cohort of 232 preschoolers born in Diamantina/Minas Gerais, Brazil, was undertaken. The data, including socioeconomic status, anthropometry, diet, previous history of the preschoolers and family history, were collected between July of 2009 and July of 2010. To identify the factors associated with overweight and obesity, a logistic regression and a hierarchical model were undertaken. Results: Overweight and obesity occurred in 17.2% of the preschoolers. After adjusting for mother’s obesity, per capita income, protective food intake, weight gain at age 0-4 months and time spent playing, the factors associated with overweight and obesity that reached statistical significance were mother’s obesity [OR = 3.12 (95%CI 1.41-6.91), P = 0.01], weight gain of more than 0.85 kg/month in the first four months of life [OR = 2.16 (95%CI 1.01-4.64), P = 0.04] and lower per capita income [OR = 0.32 (95%CI 0.13-0.79), P = 0.01]. Conclusion: The results show that more weight gain during the first four months of life and being born of mothers with obesity increased the odds of overweight/obesity in the preschoolers, while lower per capita income was a protective factor.

Keywords