

A Pilot Study on the Influence of Macronutrients towards Childhood Obesity among South Indian Population

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ABSTRACT Childhood obesity and associated comorbidities is a rapidly developing health problem in India. The aetiology of obesity is multifactorial, but is predominantly related to nutrient imbalance. Increased calorie intake and its macronutrient composition in the diet have a major contribution towards obesity. The present study aims to examine the influence of macronutrients on childhood obesity. The study included 50 obese and 50 non-obese children in the age group of 4-12 years. BMI was calculated and compared with BMI charts for age. Alpha food frequency questionnaire was used for nutritional assessment. Total calorie consumption showed a significant difference between obese and non-obese children ($p < 0.001$) with 2068.5 ± 245.5 kcal in obese children and 1819.5 ± 249.2 kcal in non-obese children. No significant difference was observed in the macronutrient proportion in the study population. The screen time between obese children (6.5 ± 3.1 hours) and non-obese children (1.7 ± 0.7 hours) showed a significant difference ($p < 0.001$). Increased total calorie consumption and screen time contribute towards childhood obesity, whereas, macronutrient proportions did not have an influence on childhood obesity among the study population.