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ORIGINAL ARTICLE

Ultra-processed food consumption in children from a Basic Health Unit☆

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KEYWORDS
Food intake;
Nutritional status;
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Abstract
Objectives: To evaluate the contribution of ultra-processed food (UPF) on the dietary consumption of children treated at a Basic Health Unit and the associated factors.
Methodology: Cross-sectional study carried out with a convenience sample of 204 children, aged 2–10 years old, in Southern Brazil. Children's food intake was assessed using a 24-h recall questionnaire. Food items were classified as minimally processed, processed for culinary use, and ultra-processed. A semi-structured questionnaire was applied to collect socio-demographic and anthropometric variables. Overweight in children was classified using a *Z* score >2 for children younger than 5 and *Z* score >+1 for those aged between 5 and 10 years, using the body mass index for age.
Results: Overweight frequency was 34% (95% CI: 28–41%). Mean energy consumption was 1672.3 kcal/day, with 47% (95% CI: 45–49%) coming from ultra-processed food. In the multiple linear regression model, maternal education ($r = 0.23$; $p = 0.001$) and child age ($r = 0.40$; $p < 0.001$) were factors associated with a greater percentage of UPF in the diet ($r = 0.42$; $p < 0.001$). Additionally, a statistically significant trend for higher UPF consumption was observed when data were stratified by child age and maternal educational level ($p < 0.001$).
Conclusions: The contribution of UPF is significant in children's diets and age appears to be an important factor for the consumption of such products.
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PALAVRAS-CHAVE
Consumo de alimentos;
Estado nutricional;
Crianças;
Fast-foods

Consumo de alimentos ultraprocessados entre crianças de uma Unidade Básica de Saúde

Resumo

Objetivos: Avaliar a contribuição dos alimentos ultraprocessados no consumo alimentar de crianças pertencentes à área de abrangência de uma Unidade Básica de Saúde e os fatores associados.

Metodologia: Estudo transversal com amostra de conveniência de 204 crianças, entre 2 a 10 anos de idade, no Sul do Brasil. O consumo alimentar das crianças foi obtido por meio do Recordatório Alimentar de 24 horas e, posteriormente, os alimentos foram classificados em alimentos minimamente processados, processados para culinária e ultraprocessados. Um questionário semiestruturado foi aplicado para a coleta das variáveis sociodemográficas e antropométricas. O excesso de peso das crianças foi definido por meio do escore Z > 2 para crianças menores de 5 anos e escore Z > +1 para aquelas com idade entre 5 e 10 anos segundo o Índice de Massa Corporal para idade.

Resultados: A frequência de excesso de peso foi de 34% (IC95%: 28% a 41%). O consumo médio de energia foi de 1.672,3 kcal/dia, sendo 47% (IC95%: 45% a 49%) proveniente dos ultraprocessados. No modelo de regressão linear múltipla, a escolaridade materna (r = 0,23; p = 0,001) e a idade da criança (r = 0,40; p < 0,001) foram associados à maior contribuição percentual dos ultraprocessados na alimentação (R = 0,42; p < 0,001). Adicionalmente foi observada uma tendência linear significativa para maior consumo de ultraprocessados quando os dados foram estratificados pela idade da criança e nível de escolaridade materna (p < 0,001).

Conclusões: A contribuição dos ultraprocessados é expressiva na alimentação infantil e a idade da criança mostrou- se como fator associado mais importante para o consumo destes produtos.
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Introduction

The prevalence of obesity and non-communicable chronic diseases (NCDs) associated with diet has grown at a fast pace, and rates in the pediatric population are remarkable.[1] According to the National Survey on Demographics and Health of 2006, a national overweight prevalence of 6.6% was recorded in children aged up to 5 years of age.[2] However, the results of the Household Budget Survey (HBS) showed that the overweight prevalence ranged from 25% to 40% in children aged between 5 and 9 years.[3]

Scientific evidence indicates that the increase in overweight rates and NCDs is due, among other factors, to the inversion of dietary patterns.[4] This inversion is characterized by the substitution of traditional food by highly processed and ready-to-consume foods and beverages.[5]

In general, ultra-processed foods (UPFs) have high energy density, excessive total and saturated fat, higher concentrations of sugar and/or sodium, and low fiber content.[5–7] Also, due to their composition and processing, they are characteristically hyper-palatable, less perishable, and are ready for consumption. Thus, they have a large commercial advantage when compared to fresh or minimally processed food, in addition to being lower cost.[5]

HBS data indicate that the diet of Brazilian children is deficient in fruits and vegetables. It also shows an overconsumption of cookies, cold cuts, beverages with added sugar, sandwiches, and snacks.[8]

Among the factors that are associated with the quality of food in children's diet, parental income and educational level are especially significant. Research suggests that high-quality diet is directly associated with higher educational levels and income.[9,10]

There is evidence linking the occurrence of overweight in childhood and early development of diabetes mellitus, cardiovascular disease, dyslipidemia, and hypertension in adult life.[11] Thus, childhood is a crucial period for the prevention of NCDs by encouraging and adopting healthy habits that tend to persist during adult life.[12] Parents have great influence on the development of these habits by the child, so they must provide positive examples with regard to healthy eating associated with physical exercise.[13]

Therefore, the aim of this study was to evaluate the contribution of ultra-processed food in the dietary consumption of children treated at a Basic Health Unit and its associated factors.

Methods

A descriptive, cross-sectional study was performed with a convenience sample of children aged 2–10 years, who had previously scheduled appointments and were treated at a Basic Health Unit (BHU) in the city of Porto Alegre, state of Rio Grande do Sul, Brazil.

This study is part of a larger study entitled ''Obesity and risk factors for chronic diseases in children treated at the

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