



ORIGINAL ARTICLE

# Influence of the *Bolsa Família* program on nutritional status and food frequency of schoolchildren<sup>☆</sup>



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## KEYWORDS

Food consumption;  
Anthropometry;  
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## Abstract

**Objective:** To evaluate the food frequency and nutritional status among students according to participation in the *Bolsa Família* program funded by the government.

**Methods:** Cross-sectional study carried out with students from the fourth grade of elementary school in the municipal capital of the southeastern region of Brazil. Food consumption and anthropometry were investigated by a questionnaire administered in school, while participation in the *Bolsa Família* program and other socio-economic information was obtained through a protocol applied to mothers/guardians. Statistical analysis included the Mann-Whitney test, the chi-squared test, and Poisson regression with robust variance, and the 5% significance level was adopted.

**Results:** There were 319 children evaluated; 56.4% were male, with a median of 9.4 (8.6–11.9) years, and 37.0% were beneficiaries of *Bolsa Família* program. Between the two groups, there was high prevalence of regular soda consumption (34.3%), artificial juice (49.5%), and sweets (40.3%), while only 54.3% and 51.7% consumed fruits and vegetables regularly, respectively. Among participants of *Bolsa Família* program, a prevalence 1.24 times higher in the regular consumption of soft drinks (95% CI: 1.10–1.39) was identified compared to non-beneficiaries. The prevalence of overweight was higher in the sample (32.9%), with no difference according to participation in the program.

**Conclusion:** The study found increased consumption of soft drinks among BFP participants. The high rate of overweight and poor eating habits denote the need to develop actions to promote healthy eating, especially for the beneficiaries of the *Bolsa Família* program, to promote improvements in nutritional status and prevent chronic diseases throughout life.

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**PALAVRAS-CHAVE**

Consumo alimentar;  
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governamentais

**Influência do programa Bolsa Família no estado nutricional e frequência alimentar de escolares****Resumo**

**Objetivo:** Avaliar a frequência alimentar e estado nutricional entre escolares segundo a participação no programa governamental Bolsa Família (PBF).

**Metodologia:** Estudo de delineamento transversal realizado com alunos do 4º ano do ensino fundamental da rede municipal de uma capital da região sudeste do Brasil. O consumo alimentar e antropometria foram investigados mediante formulário aplicado com os escolares, enquanto a participação no PBF e outras informações socioeconômicas foram obtidas por meio de protocolo aplicado às mães/responsáveis. A análise estatística contemplou os testes Mann-Whitney, Qui-quadrado e Regressão de Poisson com variância robusta, sendo adotado o valor de significância de 5%.

**Resultados:** Foram avaliadas 319 crianças, 56,4% do sexo masculino, com mediana de 9,4 (8,6–11,9) anos, sendo 37,0% beneficiários do PBF. Entre os dois grupos avaliados (participantes e não-participantes do PBF), observou-se elevada prevalência de consumo regular de refrigerante (34,3%), suco artificial (49,5%), e guloseimas (40,3%), enquanto apenas 54,3% e 51,7% consumiram frutas e hortaliças regularmente, respectivamente. Entre os participantes do PBF, identificou-se prevalência de 1,24 vezes maior no consumo regular de refrigerantes (IC 95%: 1,10–1,39), comparado aos não beneficiários. A prevalência de excesso de peso foi elevada na amostra (32,9%), sem diferença segundo a participação no programa.

**Conclusão:** O estudo revelou maior consumo de refrigerantes entre participantes do PBF. A alta taxa de excesso de peso e hábitos alimentares inadequados denota a necessidade de desenvolver ações de promoção da alimentação saudável, em especial com os beneficiários do PBF, a fim de promover melhorias nas condições nutricionais e prevenir doenças crônicas ao longo da vida.

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**Introduction**

In Brazil, the right to food as a human right is a recent achievement. In 2010, a legal determination that ensures food as a right to the entire population was added to the Brazilian Constitution through Constitutional Amendment No. 64.<sup>1</sup>

The Human Right to Adequate Food (HRAF) must be guaranteed through public policies of Food and Nutrition Security (FNS).<sup>2</sup> The *Bolsa Família* Program (BFP) is inserted in this context, which, in addition to providing income transfer, aims to guarantee access to basic social rights. This program was established by Law No. 10.836 of 2004<sup>3</sup> and consists of the monthly payment of cash benefits to enrolled families, aiming to benefit those in situations of food deprivation and extreme poverty. The BFP is part of the “Brazil without Poverty Plan” and benefits approximately 14 million families in all Brazilian municipalities.<sup>4</sup>

In this program, the monitoring of the conditions, which are commitments made by the families and by the government, occurs in three areas: education, social security, and health. The latter includes the monitoring of children’s immunization schedule and nutritional status.<sup>5</sup> To achieve the objectives proposed by the program, it must be integrated with other types of governmental interventions and be carried out intersectorally.<sup>2</sup> These practices aim to empower families regarding the use of the money received from the government by providing access to food in a safe and healthy manner, considering that this access

should be sanitary, nutritional, culturally appropriate and sustainable.<sup>2</sup>

Although the income transfer programs include disputes as to how families use the resources, there is evidence that the income transfer is used primarily for the acquisition of foods<sup>6</sup> that are not always adequate. A study conducted with BFP beneficiaries from Maceio (State of Alagoas) showed that most of the purchased food consisted of processed items, at the expense of fruits, vegetables, and dairy products, which may have a negative impact on the children’s food intake and nutritional status.<sup>6</sup>

In this sense, it is important to assess the influence of participating in this program on schoolchildren’s food intake and nutritional status.<sup>7</sup> There are still few studies in Brazil on this issue; many of them were not carried out with a representative sample and did not adjust their analyses for confounding factors.<sup>7</sup>

Given the above, this study aimed to evaluate the food frequency and nutritional status of schoolchildren according to participation in a government assistance program.

**Methods****Study design**

This was a cross-sectional study conducted with students in the fourth grade of municipal elementary schools of Belo Horizonte, state of Minas Gerais, Brazil. The research uses

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