



ORIGINAL ARTICLE

## Medication use among children 0-14 years old: population baseline study<sup>☆</sup>



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Children;  
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### Abstract

**Objective:** Determine the prevalence of medication use in children and adolescents in 20 municipalities of Vale do Jequitinhonha, Minas Gerais-Brazil, showing the main groups and variables that may have influenced use.

**Methods:** Descriptive population-based survey sample of 555 interviews, selected by simple random cluster sampling of 137 census tracts. Inclusion criteria were age  $\leq 14$  years, mandatory interview with the legal guardians, and regardless of having received medications. Regarding the usage pattern, participants were divided into two groups: consumption and non-consumption of drugs. A descriptive analysis of the variables and tests of association were performed.

**Results:** The prevalence of drug consumption was 56.57%, and 42.43% showed no consumption. The use of medicinal plants was 72.9% for drug users and 74.3% for non-users. The health conditions for consumption were cough, common cold, flu, nasal congestion or bronchospasm (49.7%), fever (5.4%), headache (5.4%), diarrhea, indigestion, and abdominal colic (6.7%). In cases of self-medication, 30.57% of the drugs were given by the mother, and 69.42% were prescription drugs. Self-medication was prevalent using paracetamol (30.2%), dipyron (20.8%), and cold medicine (18.8%). There was increased use of analgesics/antipyretics, followed by respiratory medications, systemic antibiotics, histamine H1 antagonists, and vitamins/antianemics.

**Conclusions:** The prevalence of drugs use in children was high, indicating the need for formulating educational programs aiming at the awareness of caregivers regarding rational use.

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**PALAVRAS-CHAVE**

Crianças;  
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medicamentos;  
Automedicação;  
Farmacoepidemiologia;  
Enfermagem

**Uso de medicamentos entre crianças de 0-14 anos: estudo de base populacional****Resumo**

**Objetivo:** Determinar a prevalência do consumo de medicamento em crianças e adolescentes de 20 municípios do Vale do Jequitinhonha, Minas Gerais-Brasil, mostrando os principais grupos e variáveis que possam ter influenciado o uso.

**Métodos:** Estudo descritivo tipo inquérito populacional domiciliar, amostra constituída por 555 entrevistas selecionadas de maneira aleatória simples por meio de amostragem por conglomerado de 137 setores censitários. Os critérios de inclusão foram idade  $\leq 14$  anos, entrevista obrigatória com os responsáveis legais, independente de terem consumido medicamento. Quanto ao padrão de uso os participantes foram divididos em dois grupos consomem e não consomem medicamentos. Realizada análise descritiva das variáveis e aplicados testes de associação.

**Resultados:** A prevalência de consumo de medicamentos foi 56,57% e o não consumo 42,43%. O uso de plantas medicinais foi de 72,9% para o consumo de medicamento e 74,3% para o não consumo. As situações de saúde para o consumo foram tosse, resfriado comum, gripe, congestão nasal ou broncospasmo (49,7%); febre (5,4%); cefaléia (5,4%); diarreia, "má digestão" e cólica abdominal (6,7%). Na automedicação, 30,57% dos medicamentos foram indicados pela mãe, e 69,42% de prescrições médicas. Destaca-se na automedicação o uso de paracetamol (30,2%), dipirona (20,8%) e antigripais (18,8%). E um maior uso de analgésicos/antipiréticos, seguido do aparelho respiratório, antibióticos sistêmicos, antagonistas H1 da histamina e vitaminas/antianêmicos.

**Conclusões:** A prevalência do consumo de medicamentos na população infantil foi alta, indicando a necessidade de formulação de programas educativos visando principalmente à conscientização dos cuidadores sobre o uso racional.

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**Introduction**

The main users of health services in developing countries are children, and their pattern of illness is reflected in medication use.<sup>1</sup> This use, in turn, can be excessive due to self-medication, a widespread practice in Brazil, induced by the media and performed without indication and medical prescription. In Brazil, approximately 80 million people practice self-medication, and the risk of this practice is correlated with the level of education and information about drugs, as well as the accessibility of medications in the health system.<sup>2</sup>

In this sense, some authors recommend special attention to the medications used by children, considering the reservations regarding their efficacy and safety caused by lack of clinical trials due to ethical, legal, and economic reasons, and limited knowledge about the effects of the medication on the body.<sup>3,4</sup> In the case of children, the practice of medication use is based primarily on extrapolation and adaptations of the use in adults, on the information obtained from rare observational studies, and on expert consensuses.<sup>5</sup>

Although scarce in developing countries, population-based studies are required to evaluate the use of medications in children.<sup>6,7</sup> A study conducted in Brazil demonstrated a prevalence of 56%, which indicates a high consumption by children, indicating a significant use of medications with indication and age restrictions, especially in children younger than 2 years.<sup>8</sup> Considering these facts, it is advisable to establish a specific list of essential medications

according to the needs of children, aiming to promote their rational use.<sup>9</sup>

In order to contribute to this area, a population-based epidemiological study was conducted in children aged 0-14 years living in urban areas of Vale do Jequitinhonha, located in the northern region of the state of Minas Gerais, Brazil. The objective was to identify the prevalence and pattern of medication use, with or without prescription, demonstrating the main groups and types of drugs used, as well as variables that may have influenced this use.

**Methods**

This descriptive, exploratory, cross-sectional, population-based household-survey study was carried out from April 10 to July 20, 2013. Inclusion criteria were age  $\leq 14$  years old, mandatory interview with the legal guardians, regardless of having received medications. All guardians who were not present at the time of the interview or who refused to participate were excluded from the study, as well as when the selected household was a commercial property, or did not have residents aged  $\leq 14$  years.

After estimating a population proportion of 41.4% of self-medication in children,<sup>10</sup> the number calculated for sample selection was estimated as 672 household interviews for the urban areas of each city (acceptable error of 5.0% for an infinite sample). To calculate this value, data from the Brazilian Institute of Geography and Statistics (Instituto Brasileiro de Geografia e Estatística - IBGE)<sup>11</sup> census were

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