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Female predominance in migraine-related hospitalizations in Brazil: a national epidemiological analysis between 2014 and 2025

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Introduction
Migraine is one of the most prevalent neurological disorders worldwide and is associated with substantial functional impairment and reduced quality of life. In addition to its clinical burden, migraine represents an important public health issue due to its impact on hospitalizations and productivity loss among affected individuals.

Objective
To analyze the epidemiological profile of hospitalizations for migraine and other headache syndromes in Brazil between 2014 and 2025, with emphasis on sex distribution.

Methods
This is a retrospective, descriptive, ecological epidemiological study based on secondary data obtained from the Hospital Information System of the Brazilian Unified Health System (SIH/SUS), available through the DATASUS platform. Hospitalizations related to migraine and other headache syndromes in Brazil between 2014 and 2025 were analyzed according to sex and year of occurrence. Data were organized and quantitatively analyzed using absolute and relative frequencies of hospital admissions.

Results
Between 2014 and 2024, a total of 108,259 hospitalizations for migraine and other headache syndromes were recorded in Brazil. A higher frequency of hospitalizations was observed among females, accounting for 71,512 cases (66.1%), whereas males represented 36,747 hospitalizations (33.9%). The highest number of hospital admissions occurred in 2019, with 12,120 recorded cases, followed by a reduction in 2020, a period associated with the COVID-19 pandemic. In subsequent years, hospitalizations progressively increased again, while female predominance remained consistent throughout the entire historical series analyzed.

Conclusion
Migraine exerts a significant epidemiological and functional burden, particularly among the economically active population, negatively affecting quality of life, productivity, and healthcare demand. In the present study, a marked predominance of hospitalizations among females was observed throughout the analyzed period, a finding widely supported by the literature. Scientific evidence suggests that this sex disparity may be associated with hormonal factors, neurobiological differences, inflammatory pathways, and genetic mechanisms involved in migraine pathophysiology. Furthermore, occupational factors such as stress, sleep deprivation, irregular work schedules, and shift work appear to contribute to the onset and worsening of migraine attacks, particularly among women. These findings reinforce the need for more individualized preventive and therapeutic strategies, as well as the expansion of public health policies focused on early diagnosis and appropriate migraine management, considering sex-related biological and occupational factors.

Keywords:
Migraine disorders
Epidemiology
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Hospitalization statistics

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