



Epidemiological Analysis of Migraine in Brazil's Macroeconomic Regions

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Introduction

Migraine is a highly prevalent chronic neurological condition in Brazil, characterized by recurrent headache attacks often associated with photophobia, phonophobia, and nausea. This significantly impacts the quality of life of affected individuals, as it requires a well-established diagnosis and treatment to positively affect patient well-being. This information is essential for effective healthcare resource management. Additionally, it's vital to identify risk factors associated with migraine, such as family history, sedentary lifestyle, and smoking, as this analysis can contribute to effective population prevention measures. Furthermore, it is pertinent to assess the impact of migraine on the quality of life of individuals, considering factors like pain intensity, frequency, duration, the presence of aura, and how these conditions, together or separately, can impair daily life to varying degrees. In this context, it's essential to emphasize the need to evaluate patients' access to various pharmacological treatments such as analgesics, tricyclics, beta-blockers, anticonvulsants, and SSRIs, as well as non-pharmacological treatments like adopting a healthy diet to avoid fatty foods and alcohol, engaging in daily physical exercise, and undergoing cognitive-behavioral therapy to manage stress triggers for migraine attacks.

Objective

To analyze how hospitalizations and mortality due to complicated migraines have evolved over a fifteen-year period in the Brazilian macroeconomic regions within the Unified Health System (SUS).

Methods

This study is an ecological time-series analysis that utilized data from the Health Information System (TABNET), provided by the Department of Health Informatics of the Unified Health System (DATASUS). Information regarding the treatment of complicated migraines was collected from the Hospital Information System of SUS (SIH/SUS) of the Ministry of Health. The analysis covered the period from January 2008 to July 2023. The data obtained were analyzed quantitatively using the "Microsoft Excel" software. This study utilized publicly available secondary data, thus obviating the need for ethical review.

Results

The Northern region shows an increasing trend in the number of hospitalizations (IS) with an accumulation of 5,086, an average cost per hospitalization (VMP) of R\$136.9, an average length of stay (MDP) of 3.0 days, and 46 deaths (OS). The Northeast region demonstrated an increasing trend in IS with 18,626 cases, VMP of R\$147.2, MDP of 3.2 days, and 102 deaths. The Southeast region exhibited an increasing trend in IS with 33,337 cases, VMP of R\$209.7, MDP of 3.4 days, and 110 deaths. The Southern region showed an increasing trend with a total of 22,756 IS, VMP of R\$228.6, MDP of 3.3 days, and 38 deaths. Finally, the Central-West region represented an increasing trend with a total of 5,776 IS, VMP of R\$156.2, MDP of 2.5 days, and 92 deaths.

Conclusion

In light of the above, it can be inferred that the ecological time-series study, based on TABNET data provided by DATASUS, indicates that hospitalization rates due to complicated migraines are progressively increasing, as shown by the increasing trend line, resulting in considerable costs, extended lengths of stay, and deaths in all macroeconomic regions of Brazil. Regarding IS and VMP statistics, the Southern and Southeastern regions stand out with significantly higher values compared to other regions. Despite the Southeast having a larger population, both the average number of IS and VMP are still higher than in other parts of Brazil.

However, this quantity does not reflect a decrease in deaths in the Southeast, but a decrease is observed in the Southern region. Nevertheless, the Northern region showed the lowest numbers. Therefore, it is evident that there is a deficit in the treatment and approach to patients with migraines, constituting a public health issue.

Keywords: headaches; migraine; Unified Health System.