ANALYSIS OF DISABILITY AND IMPACT RELATED TO MIGRAINE IN WOMEN

Helena Cysneiros, Taciana Maciel, Anna Araújo, Davi Almeida, Jaqueline Santos, Izabela Cruz, Tiago Sousa, Pedro Sampaio Rocha-Filho, Marcelo Moraes Valença, Daniella Araújo de Oliveira

Federal University of Pernambuco, Brazil

Introduction

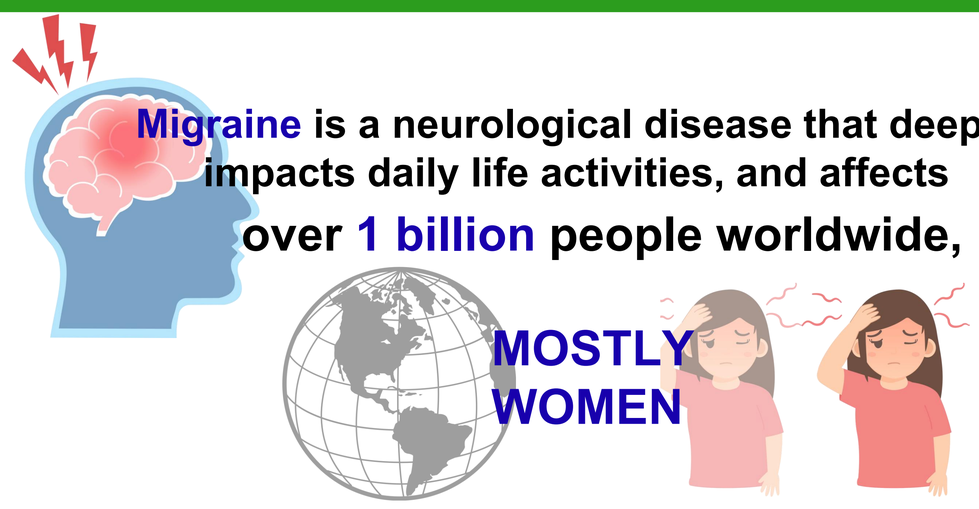

Figure 1. Migraine: A Neurological Disease with Worldwide Burden

Objective

To analyze the relationship between disability and predictive variables with the impact of migraine in women.

Methods

A cross-sectional study was conducted between May 2023 and December 2024 with 138 women (mean age 31 ± 9.1 years) diagnosed with migraine according to the criteria of the 3rd edition of the International Classification of Headache Disorders. The Migraine Disability Assessment and the Headache Impact Test-6 were administered. A multiple linear regression analysis was performed, considering migraine impact as the dependent variable and disability, medication use, pain intensity, frequency, and duration as independent variables.

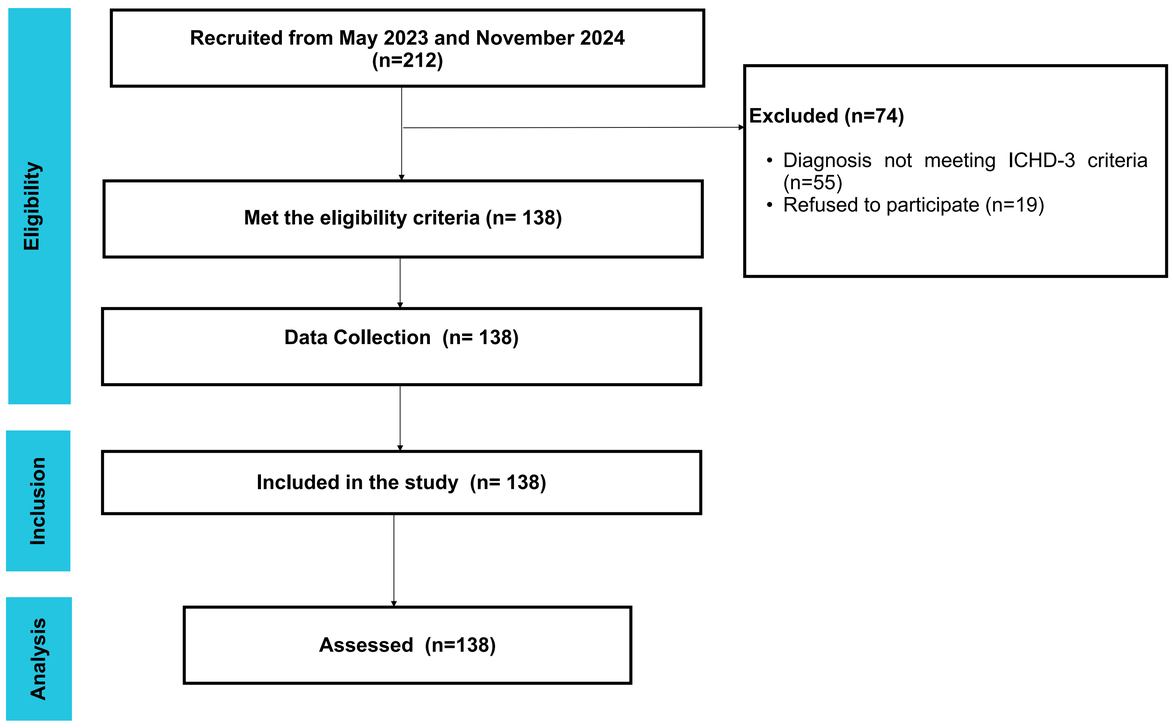

Figure 2. STROBE (Strengthening the Reporting of Observational Studies in Epidemiology) flowchart of volunteer selection.

Results

A multiple correlation coefficient (R) of 0.615 was observed, indicating a moderate to strong association between the outcome and the set of predictor variables. The coefficient of determination (R^2) was 0.378, meaning that 37.8% of the variability in migraine impact could be explained by the variables included in the model. Independence of residuals was confirmed (Durbin-Watson = 1.864), indicating model adequacy.

Table 1. Descriptive analysis of the sample (n=138)

Variables	Mean ± SD	n (%)
Age (years)	32 ± 9.5	
Headache intensity (0-10)	8 ± 1.68	
Headache frequency (days)	15 ± 19.72	
MIDAS Score (0 - 21)	19.5 ± 30.28	
HIT-6 Score (36 - 78)	63 ± 7.62	
Daily medication use		38 (27.5%)
Occasional medication use		55 (39.6%)

Continuous variables are expressed as mean ± SD; categorical variables are expressed as frequency (n=participants, %) MIDAS: Disability intensity in grades: little or none (0–5), mild (6–10), moderate (11–20), or severe (≥ 21). HIT-6=Little or no impact (49 or less), some impact (50–55), substantial impact (56–59), or severe impact (60–78).

The variables most strongly associated with impact were pain intensity (r = 0.446), disability (r = 0.435), and pain duration (r = 0.426). Daily (r = -0.164) and occasional (r = -0.115) medication use showed weak negative correlations. No evidence of multicollinearity was found among the predictors (r < 0.5).

Table 2. Results of regression analysis on the impact of migraine

Variables included in the model	Correlation Coefficient (r)
Pain intensity (0-10)	0.446
Disability (MIDAS)	0.435
Pain duration (hours)	0.426
Daily medication	-0.164
Occasional medication	-0.115
Frequency	0.418
Multiple correlation coefficient (R)	0.615
Determination coefficient (R^2)	0.378
Durbin-Watson	1.864

*Correlation coefficients (r) are from multiple linear regression analysis. Positive values indicate a direct association with migraine impact; negative values indicate an inverse association.

Conclusion

Disability, intensity, and duration were the main predictors of migraine impact in women, showing moderate to strong associations. The model explained part of the variability in impact, indicating the influence of additional factors. Medication use showed weak negative correlations, suggesting a limited contribution when considered in isolation. These findings highlight the importance of including these predictors in migraine management and underscore the need for future studies incorporating additional variables to enhance understanding of the factors associated with migraine impact.

References

Acknowledgments