Headache Medicine

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Screen time impact on migraine incidence and academic disability among medical students: a cross-sectional study

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Introduction
Migraine is a leading cause of disability worldwide, disproportionately affecting young adults. Medical students face well-established triggers—academic stress, irregular sleep, and prolonged screen use—yet data on migraine burden and its academic impact in this population remain scarce in Brazil.

Objective
To estimate the prevalence of probable migraine among medical students and examine its association with daily screen time and academic disability.

Methods
Cross-sectional study conducted in May 2026 with medical students from two institutions in Sergipe, Brazil (UNIT and UFS). Frequent headache was screened over the previous three months. Probable migraine was classified using ICHD-3-based criteria: at least two of four features (unilateral pain, pulsating quality, moderate-to-severe intensity, worsening with exertion) plus nausea, photophobia, or phonophobia. Academic impact was assessed with three items adapted from the HIT-6, rated on a five-point frequency scale. Screen time was categorized as high (≥6 h/day) or low (<6 h/day). Descriptive statistics were used.

Results
Forty-eight students participated; 64.6% were female and 93.8% in the preclinical cycle. Screen time distribution: 41.7% reported 3–6 h/day, 39.6% 6–9 h, 12.5% >9 h, and 6.2% <3 h. Frequent headache was reported by 45.8% (n=22). Probable migraine was identified in 20.8% of the total sample (n=10), representing 45.5% of those with frequent headache. Prevalence was higher in women (29.0%) than men (5.9%). By screen time group, probable migraine occurred in 30.0% (3–6 h), 16.7% (>9 h), 15.8% (6–9 h), and 0% (<3 h). Among students with frequent headache, 72.7% reported high academic impact; 36.4% frequently or always had difficulty concentrating, and 45.4% frequently or always felt too fatigued to study.

Conclusion
Probable migraine affected one in five students, with markedly higher prevalence among women. Academic impact was substantial, reinforcing that migraine extends beyond clinical management into educational performance. A linear association with screen time was not detected, which may reflect sex-related confounding and, notably, the predominantly academic nature of device use in this group—a pattern potentially distinct from recreational screen time, which has been more consistently linked to headache. These findings are exploratory and warrant replication in larger cohorts with validated instruments.

Keywords:
Migraine
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Screen time
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