Headache Medicine 2026, Supplement ▪ p-ISSN 2178-7468, e-ISSN 2763-6178

Headache Medicine

ID: 38

Burnout and headache chronification: the impact of occupational stress on migraine among healthcare professionals

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Introduction
Headache disorders are among the most prevalent and disabling neurological conditions worldwide, imposing substantial functional, emotional, and occupational burden. Healthcare professionals exposed to chronic occupational stress, sleep deprivation, and excessive workloads appear to be at increased risk for migraine and recurrent headache disorders.

Objective
To investigate the association between professional burnout and headache disorders, particularly migraine, among healthcare workers.

Methods
A systematic literature review was conducted using studies retrieved from the PubMed database through the following search strategy: ("Burnout, Professional" OR burnout) AND ("headache" [Title/Abstract] OR "Migraine Disorders" [Title/Abstract]) AND ("doctors" OR "nurses" OR "healthcare workers"), yielding 14 initial articles. The research question was structured according to the PICO framework, considering: population (healthcare professionals), exposure (occupational burnout), comparison (professionals without burnout), and outcomes (headache and migraine occurrence or worsening). Studies published between 2021 and 2026, available in full text and written in English, were included, while duplicate studies were excluded. After eligibility assessment, 7 studies were selected for full-text analysis.

Results
The analyzed studies demonstrated a significant association between professional burnout, occupational fatigue, and increased frequency of headache disorders among healthcare workers. Excessive workloads, sleep deprivation, and multiple employment relationships were consistently associated with higher levels of emotional exhaustion and somatic symptoms, particularly headache and insomnia. A cross-sectional study involving nurses identified a significant association between employment at multiple institutions and headache occurrence (p=0.038), in addition to higher burnout and fatigue levels among professionals exposed to prolonged work shifts. Intensive care unit professionals also exhibited moderate to high levels of burnout, secondary traumatic stress, and alarm fatigue, factors associated with poorer professional quality of life and greater psychological distress. Furthermore, chronic stress-related neurobiological alterations, including persistent cortisol elevation and nociceptive pathway sensitization, were identified as potential mechanisms contributing to migraine chronification and functional impairment.

Conclusion
Professional burnout is strongly associated with increased frequency and worsening of headache disorders, particularly migraine, potentially acting as both a triggering and perpetuating factor. Extended work shifts, chronic fatigue, sleep deprivation, and emotional stress may contribute to central sensitization and reduced quality of life. Early identification of burnout and implementation of mental health promotion strategies may help prevent headache chronification and mitigate its functional impact.

Keywords:
Migraine disorders
Headache
Burnout professional
Healthcare workers

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