Headache Medicine

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Fear-avoidance beliefs related to physical activity and work are associated with clinical characteristics of migraine and with migraine-related disability

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Introduction
Migraine is a leading cause of years lived with disability and affects more than 15% of the global population. Maladaptive beliefs, although often overlooked, are highly prevalent among individuals with migraine. Approximately 50% of individuals exhibit kinesiophobia, while 35% demonstrate pain catastrophizing. Another important factor within this domain is fear-avoidance beliefs related to physical activity and work, typically assessed using the Fear-Avoidance Beliefs Questionnaire (FABQ); however, this construct has not yet been investigated in individuals with migraine.

Objective
To determine whether fear and avoidance beliefs regarding physical activity and work, as measured by the FABQ, are associated with clinical characteristics of migraine, such as headache frequency and intensity and duration, and to assess the extent to which fear and avoidance beliefs influence headache-related disability.

Methods
A total of 113 participants diagnosed with migraine by a neurologist specialized in headache disorders were included, aged between 18 and 55 years. All participants completed a demographic and clinical questionnaire addressing headache characteristics and neck pain, administered on a single day, and also completed FABQ, the Headache Impact Test (HIT-6), and the Pain Catastrophizing Scale (PCS). A descriptive analysis of positive responses on the FABQ was conducted to characterize the sample's fear-avoidance belief profile. Spearman's correlation analysis was performed to examine the associations between FABQ scores and the other variables. In addition, a multiple linear regression analysis was conducted with FABQ as the dependent variable. Statistical significance was set at $p < 0.05$, and all analyses were performed using R statistical software (v4.3.1; R Core Team, 2023).

Results
The analysis demonstrated weak but significant positive correlations between FABQ and HIT-6 ($\rho=0.33$), as well as with headache duration in hours ($\rho=0.19$ for the FABQ work subscale; $p<0.05$) and neck pain duration ($\rho=0.22$; $p<0.05$). A significant association was also observed between the FABQ physical activity subscale and headache impact ($\rho=0.24$; $p<0.05$), as well as neck pain intensity ($\rho=0.22$; $p<0.05$). Multiple linear regression analysis revealed that total FABQ score ($B=0.073$; $p=0.020$), headache duration in hours ($B=0.047$; $p=0.037$), and pain intensity ($B=1.141$; $p=0.003$) were independent predictors of headache impact, whereas disease duration and monthly frequency were not significantly associated.

Conclusion
Fear-avoidance beliefs are associated with greater headache impact and disability in individuals with migraine, alongside attack intensity and duration. Patients may exhibit avoidant behaviors, particularly related to physical activity and work. These findings highlight the importance of addressing fear-avoidance beliefs and neck pain in migraine management, with the aim of reducing disability and improving patient self-management.

Keywords:
Migraine disorders
Health belief model
Exercise
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