



The prevalence of migraine and anxiety

Background

Migraine and other headache disorders are among the most prevalent conditions worldwide.¹ Migraine is a multifactorial neurological disorder, that is associated with genetic, hormonal, environmental, dietary and psychological factors. There are two main types of migraine; one with aura, and one without.^{1,2}

The findings of a review in Europe showed that migraine prevalence to be around 14.7% with almost twice as many females (17.6%) as males (8%).³ The association of migraine and anxiety has been proposed in several published studies.^{1,2,3} For example, individuals with migraine showed a higher prevalence of generalised anxiety disorder even after adjusting for age, gender and pain conditions including arthritis and back pain. Recent systematic reviews published present the most up to date data on this association to evaluate this association.^{4,5}

This evidence summary presents the results of these systematic reviews which are considered the highest level of evidence.

Characteristics of the studies

The systematic reviews in this summary included all types of quantitative studies (both experimental and observational studies). The participants were all 16 years and older with a clear diagnosis of migraine by a medical practitioner or a recorded medical history or diagnosis based on specific clinical criteria. Studies including patients who experienced at least one migraine episode monthly or more severe conditions, and a comparison group of non-migraineurs were included.^{6,7}

Quality of the studies

The studies included in this review varied in terms of quality due to small sample size, not including valid methods for identifying the condition and varying methods of data analysis.

Results

- The review included a total of eight studies with more than 40,000 participants. Their age ranged between 19 and 70 years old. Migraine and anxiety assessments were undertaken using a variety of tools. Patients were recruited from a variety of settings including primary care clinics, outpatient clinics and tertiary centres.
- The results of the systematic review showed a strong and consistent positive relationship between migraine and anxiety from the various study designs included. Our studies found that incidence of occurrence is almost four times higher compared to non-migraineurs.
- Other studies showed that more than a third of their participants who were diagnosed with migraine reported positive reduction in their migraine attacks because of receiving treatment for their anxiety including antidepressants.⁵

- Regarding gender differences, our results showed that the prevalence of migraine in females is higher than the males, which is consistent with the current literature. However, when the relationship between the coexistence of anxiety and migraine was examined, we found that the coexistence of these conditions was more prevalent in males than females i.e. males suffer from migraine when they are also diagnosed with anxiety more than females).

Conclusion

The current evidence suggests that there is a strong association between migraine and anxiety and that the prevalence of migraine and anxiety was more prominent in males than females. When anxiety is detected for migraine patients, treatment options for anxiety should be considered. This will result in improving the management of both conditions.

Implications for practice and research

The results highlight the need for concurrent assessment of migraineurs for both neurological symptoms of migraine and psychiatric symptoms associated with potential anxiety and depression. Secondly, in order to understand the causation of this association better, future studies should seek more information regarding the relationship between anxiety and migraine and what the exact triggers are for people with migraine experiencing anxiety.

References

1. Bakshi N, Ross D, Krishnamurti L. Presence of pain on three or more days of the week is associated with worse patient reported outcomes in adults with sickle cell disease. *Journal of Pain Research*. 2018 Feb 9:313-8.
2. Merikangas KR, Stevens DE. Comorbidity of migraine and psychiatric disorders. *Neurologic clinics*. 1997 Feb 1;15(1):115-23.
3. Karimi L, Hoppe D, Burdick C, Buultjens M, Wijeratne T, Crewther SG. Recent evidence regarding the association between migraine and suicidal behaviors: a systematic review. *Frontiers in Neurology*. 2020 Jun 23;11:490.
4. Natoli JL, Manack A, Dean B, Butler Q, Turkel CC, Stovner L, Lipton RB. Global prevalence of chronic migraine: a systematic review. *Cephalalgia*. 2010 May;30(5):599-609.
5. Karimi L, Wijeratne T, Crewther SG, Evans AE, Ebaid D, Khalil H. The migraine-anxiety comorbidity among migraineurs: A systematic review. *Frontiers in Neurology*. 2021 Jan 18;11:613372.
6. Karimi L, Crewther SG, Wijeratne T, Evans AE, Afshari L, Khalil H. The prevalence of migraine with anxiety among genders. *Frontiers in neurology*. 2020 Oct 26;11:569405.