

Fatigue and Sleep in Chronic Headache Sufferers: An Age- and Sex-Controlled Questionnaire Study

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We studied fatigue and sleep in chronic headache sufferers in comparison to age- and sex-matched controls. We determined the prevalence and intensity of fatigue as well as several sleep features. The study was conducted in a headache center through the use of a questionnaire. One hundred thirteen headache sufferers (59 men and 54 women) and 110 controls (56 men and 54 women) were included in the analysis. Fatigue was found to be equally common in the headache sufferers (70.3%) and in the controls (60.0%). However, the headache sufferers rated the intensity of their fatigue significantly higher (4.1 versus 2.8 cm on a 10-cm visual analog scale). When the sexes were considered separately, the difference in intensity of the fatigue between the two groups was significant only for the women (5.1 versus 3.0 cm). With regard to sleep, the headache sufferers slept significantly shorter (6.7 hours) than the controls (7.0 hours). It also took them longer to fall asleep (31.4 versus 21.1 minutes) and longer to fall back asleep after waking up at night (28.5 versus 14.6 minutes). When the sexes were considered separately, the differences in sleep features between the two groups were significant only for the men.

On the basis of these results, we conclude that chronic headache sufferers feel more tired, especially the women, and do not sleep as well at night, especially the men. Further study is necessary to determine the significance of these findings in relation to chronic headache suffering.

Key words: fatigue, headache, sleep

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In a study of 68 high-school students, fatigue and lack of sleep were reported as causes of headache by 67.7% and 52.9%, respectively, and were found to be correlated.¹ In a questionnaire study of 50 chronic headache patients, 30% reported lack of sleep as a cause of headache, which was almost twice as often as excessive sleep.² Sleep problems are common in chronic headache patients and tend to be chronic, complex, and severe. They also seem to be independent of headache diagnosis, with the exception of headache associated with substance abuse.³

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The above observations prompted us to study fatigue and sleep in chronic headache sufferers. We determined the prevalence and intensity of fatigue as well as several sleep features. Similarly to the above studies in chronic headache patients,^{2,3} we did not distinguish between the various headache conditions. We included a control group for comparison, as one of the studies did,³ but matched this group for age and sex with the headache group. We consider this to be important as headache is an age- and sex-dependent variable.⁴ In addition, it allowed us to look for sex-related differences between the study groups.

METHODS

For data collection, patients attending a headache center, as well as persons accompanying them, were asked to fill out a questionnaire. The latter group served as the control group for which the criterion was either no headaches at all or a headache frequency of less than once per month.⁵

The questionnaire included the following items: (1) age and sex; (2) headache occurrence and age of headache onset; (3) frequency, intensity, duration, and location of the headaches; (4) throbbing quality of the headaches; (5) association of the headaches with nausea, vomiting, sensitivity to light and to noise, and tightness of the neck muscles; (6) aggravation of the headaches by physical activity; (7) feeling tired and the intensity of the fatigue as rated on a 10-cm visual analog scale⁶; (8) estimated hours of sleep at night; (9) time it takes to fall asleep, frequency of waking up during the night, and time it takes to fall back asleep after waking up at night.

The questions concerned the 6-month period prior to the study. The headache-related questions were based, to as great an extent as possible, on the headache classification criteria of the International Headache Society.⁷

In total, 334 persons filled out the questionnaire adequately for data entry and analysis. Seventy-nine of them denied having headaches and an additional 33 reported headaches less than once per month. These two groups were combined to form the control group, generating a sample of 58 men and 54 women, with an average age of 47.2 years. The remaining 222 persons constituted the headache group, consisting of 91 men and 131 women, with an average age of 44.9 years. In matching the two groups by age and sex, first the 9 respondents at the age extremes (9, 10, 70, 72, 73, 75, 77, 78, and 78 years of age) were removed as outliers. A random selection was subsequently performed per 10-year age category, so that there