

# The Impact of Migraine on Health Status

Marie-Louise Essink-Bot, MD; Leona van Royen, MSc; Paul Krabbe, MSc;  
Gouke J. Bonsel, MD, PhD; Frans FH Rutten, PhD

**Problems.**—What is the effect of migraine on health status, defined as the patient's physical, psychological, and social functioning? And, suppose that the health status of migraine sufferers appears to be impaired, to what extent is this a consequence of migraine-associated comorbidity rather than of migraine itself?

**Methods.**—A group of 846 migraineurs, selected from the general population following IHS criteria, and a control group were surveyed with the Medical Outcomes Study 36-item Short-Form Health Survey, Nottingham Health Profile, EuroQol instrument, and the COOP/WONCA charts. Questions on demographic characteristics and comorbidity were included.

**Results.**—The health status of migraineurs appeared to be significantly impaired in comparison to the control group. Because statistical significance is distinct from relevance, effect size estimators were employed. Although the direction of the differences indicated consistently a worse health status of the migraineurs, regardless of the instrument used, the sizes of the differences were small to medium. Self-reported comorbidity, especially depression, was more prevalent in the migraine group. However, this offered only a partial explanation for the impaired health status of the migraine group.

**Conclusions.**—Migraine has an independent moderately deteriorating effect on the daily functioning of individuals.

**Key words:** migraine, health status, comorbidity, SF-36, Nottingham Health Profile, EuroQol COOP/WONCA charts

**Abbreviations:** IHS International Headache Society, SF-36 Medical Outcomes Study 36-item Short-Form Health Survey, MOS-20 Medical Outcomes Study 20-item instrument, NHP Nottingham Health Profile, GHQ General Health Questionnaire, COOP/WONCA charts Dartmouth COOP Functional Health Assessment Charts/WONCA, MCA Multiple Classification Analysis

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From the Department of Public Health (Drs. Essink-Bot, Krabbe, and Bonsel) and the Institute for Medical Technology Assessment (Drs. van Royen, Bonsel, and Rutten), Erasmus University Rotterdam, The Netherlands.

Dr. Bonsel's current appointment is with the Department of Clinical Epidemiology, Academic Medical Center, Amsterdam, The Netherlands.

Address all correspondence to Dr. M.L. Essink-Bot, Department of Public Health, Erasmus University Rotterdam, PO Box 1738, 3000 DR Rotterdam, The Netherlands.

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The burden of migraine, a chronic, attack-wise, and presumably disabling disease, should not be underestimated. The reported 1-year prevalence in adults exceeds 10%, with a male to female ratio of about 1:2 to 3.<sup>1</sup> People in the age range 15 to 55 years are predominantly afflicted, ie, those in the work force. Long-term consequences of migraine may result from interference of frequent attacks with daily life, thus precluding optimal functioning. We designed a study to quantify the burden of migraine both in terms of its economic consequences and in terms of its impact on health status. The economic part of the study, published in detail elsewhere, showed that direct costs of migraine in the Netherlands accounted for 0.3% of the total health care costs in 1988, 80% of which could be attributed to "alternative" medical practice. Indirect costs, due to absence from work and reduced productivity, were estimated to amount to at least 542 million Dutch guilders per year (in 1988, \$1 = 1.9 guilders)<sup>2</sup>.

Health status, the focus of the present paper, is defined as physical, psychological, and social functioning. Osterhaus and Townsend concluded from a survey of 845 migraineurs (meeting IHS criteria<sup>3</sup>) using the Medical Outcomes Study 36-item Short-Form Health Survey (SF-36) that "although migraineurs may be physically able to function, they function behaviorally at a level well below their physical capabilities, and for some domains even worse than patients suffering from arthritis, gastrointestinal disorders or diabetes."<sup>4</sup> Solomon et al assessed the health status of 208 patients attending a headache center with the Medical Outcomes Study 20-item instrument (MOS-20). The authors conclude "that chronic headache disorders are associated with significant limitations in all measured dimensions of patient well-being and functioning when compared to patients with no chronic condition; and that patients with chronic headaches have a level of function worse than that of patients suffering from diabetes, arthritis, depression, and