LETTER

Minor head injury: do you get what you expect?

Having read the study of Whittaker *et al*[1] concerning expectations and beliefs as predictors of recovery from minor head injury, one appreciates that this is an exciting time in the epidemiological research of these types of disorders. That is, minor head injury, whiplash injury, low back pain and related controversial disorders associated with chronic pain and disability have long been approached with a biopsychosocial model. Furthermore, although more and more studies, especially in the area of whiplash, reveal that the bio component is the least relevant, the ongoing problem has been to determine where to look for the psychosocial component. The common and fertile ground for all these disorders appears to be patient-held beliefs and, as an aspect of those beliefs, their expectations. In a longitudinal cohort study of patients with minor head injury, Whittaker *et al* found that patients who believe that their symptoms have serious negative consequences on their lives and will continue to do so are at heightened risk of experiencing significant enduring postconcussional symptoms. Notably, severity of the postconcussion symptoms in the initial postinjury period was not an independent predictor of outcome. Instead, the interpretation of their symptoms as serious and enduring is what puts patients at risk for chronic symptoms.

Parallel results have been found in other disorders. For individuals with whiplash injury, for example, in a population-based cohort of >6000 participants, after adjusting for the effect of sociodemographic characteristics, postcrash symptoms and pain, previous health status and collision-related factors, those who expected to get better soon recovered more than three times as quickly (hazard rate ratio 3.62; 95% confidence interval 2.55 to 5.13) as those who expected that they would never get better.[2] Findings were similar for resolution of pain-related limitations and resolution of neck-pain intensity. In brief, controlling for initial pain, symptoms, sex, age and numerous other baseline variables, the answer to the single question early after injury "Do you think that your injury will get better soon; get better slowly; never get better; or don't know?" is a stronger predictor of recovery rate than any psychosocial variable we have ever investigated in whiplash cohorts. Expectations and beliefs also predict the likelihood of returning to work after whiplash injury[3] and predict chronicity after low back injury.[4–8]

What is most interesting and concerning about expectations and beliefs that predict these outcomes is that these expectations and beliefs are highly prevalent in the general population, even in those who have not experienced the disorders before. It has been shown, for example, that negative beliefs about neck pain, upper extremity injury and whiplash injury, in particular, are common in a Canadian population.[9] As well, among Canadian participants who have themselves not experienced a minor head injury nor have an immediate family member who has had this injury, 50% expect that chronic symptoms should follow the injury.[10]

The relevance of this area of research is further highlighted by the observation that in countries where a minor head injury has a much better prognosis than in, say, Western countries, these expectations are uncommon or rare.[11 12] Whittaker *et al* are conducting research on minor head injury in the direction it needs to go if we are ever to build a model accurate enough to plan interventions that will prevent patients from getting what they expect.

Moreover, Whittaker *et al* provide clues to preventive interventions that may improve outcomes and considerably reduce healthcare costs in a range of disorders that are common and costly. Negative beliefs and expectations for common conditions such as minor head injury, low back pain and whiplash injury are highly prevalent and also very expensive. In Australia, approximately US$10 million was spent on a social marketing campaign designed to alter the population beliefs about low back pain. The program was effective, and it was cost-effective, with improvements in both population and healthcare provider beliefs about back pain observed after the campaign, along with dramatic reductions in work-related disability and healthcare visits.[13–16]

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CORRECTIONS

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Andersson M, Alvarez-Cermeño J, Bernardi G, *et al*. Cerebrospinal fluid in the diagnosis of multiple sclerosis: a consensus report (*J Neurol Neurosurg Psychiatry* 1994;***57***: 897–902). The last ten authors were missing from the online version of this paper. This omission has been rectified and the authors are now all credited.

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ABN Abstracts (*J Neurol Neurosurg Psychiatry* 2010;**81**:e33. doi:10.1136/jnnp.2010.226340.63), PAW35 Anti-prion protein monoclonal antibodies at low doses effectively treat prion disease in mice without side-effects. In this abstract the author order was incorrect, it should be C Carswell, R Drynda, S Martins, A Clarke, S Brandner, S Mead, J Collinge, A Khalili-Shirazi. Also the corresponding author is j.collinge@prions.ucl.ac.uk.