

- <sup>22</sup> Papageorgiou AC, Croft PR, Ferry S, Jayson MI, Silman AJ. Estimating the prevalence of low back pain in general population. *Spine* 1995;**20**:1889–94.
- <sup>23</sup> Hüppe A, Müller K, Raspe H. Is the occurrence of back pain in Germany decreasing? Two regional postal surveys a decade apart. *Eur J Public Health* 2007;**17**:318–22.
- <sup>24</sup> Statistisches Bundesamt (ed.). Datenreport 2006. Zahlen und Fakten über die Bundesrepublik Deutschland. Mannheim (ZUMA), Available from: [http://www.gesis.org/Dauerbeobachtung/Sozialindikatoren/Publikationen/Datenreport/pdf2006/2\\_02.pdf](http://www.gesis.org/Dauerbeobachtung/Sozialindikatoren/Publikationen/Datenreport/pdf2006/2_02.pdf) (Accessed October 21, 2007).
- <sup>25</sup> Robert Koch-Institut (ed.). Gesundheit in Deutschland. Gesundheitsberichterstattung des Bundes. Berlin: Robert Koch-Institut, 2007. Available from: [http://www.rki.de/cln\\_048/nn\\_204568/DE/Content/GBE/Gesundheitsbericht\\_erstattung/GesInDtld/gesundheitsbericht.html](http://www.rki.de/cln_048/nn_204568/DE/Content/GBE/Gesundheitsbericht_erstattung/GesInDtld/gesundheitsbericht.html) (Accessed October 21, 2007).
- <sup>26</sup> Grobe TG, Schwartz FW. Arbeitslosigkeit und Gesundheit. Gesundheitsberichterstattung des Bundes Themenheft 13. Berlin: Robert Koch Institut, 2003. Available from: [http://www.rki.de/cln\\_048/nn\\_199850/DE/Content/GBE/Gesundheitsberichterstattung/GBEDownloadsT/arbeitslosigkeit\\_templateId=raw,property=publicationFile.pdf/arbeitslosigkeit.pdf](http://www.rki.de/cln_048/nn_199850/DE/Content/GBE/Gesundheitsberichterstattung/GBEDownloadsT/arbeitslosigkeit_templateId=raw,property=publicationFile.pdf/arbeitslosigkeit.pdf) (Accessed October 21, 2007).
- <sup>27</sup> Schneider L. Ost-West-Binnenwanderung. *IWH Wirtschaft im Wandel* 2005;**11**:309–14.
- <sup>28</sup> van Tulder M, Becker A, Bekkering T et al. European Guidelines for the Management of Acute Non-Specific Low Back Pain in Primary Care 2004. Available from: <http://www.backpain europe.org> (Accessed October 21, 2007).
- <sup>29</sup> Deyo RA. Low back pain. *Sci Am* 1998;**279**:29–33.
- <sup>30</sup> Goubert L, Crombez G, Bourdeaudhuij ID. Low back pain, disability and back myths in a community sample: prevalence and interrelationships. *Eur J Pain* 2004;**8**:385–94.
- <sup>31</sup> Christakis NA, Fowler JH. The spread of obesity in a large social network over 32 years. *N Engl J Med* 2007;**357**:370–79.
- <sup>32</sup> Dawkins R. *The selfish gene*. 3 edn. Oxford: Oxford University Press, 2006.
- <sup>33</sup> Blackmore S.J. *The meme machine*. Oxford: Oxford University Press, 1999.
- <sup>34</sup> Buchbinder R, Jolley D, Wyatt M. 2001 Volvo Award winner in clinical studies: effects of a media campaign on back pain reliefs and its potential influence on management of low back pain in general practice. *Spine* 2001;**26**:2535–42.
- <sup>35</sup> Buchbinder R, Jolley D. Effects of media campaign on back beliefs is sustained 3 years after its cessation. *Spine* 2005;**30**:1323–30.

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## Commentary: When East meets West—comments on ‘back pain as a communicable disease’

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With the lifetime prevalence approaching 100%, virtually all of us have at some point been affected by low back pain (LBP). Although recovery from a LBP episode is generally rapid, the risk of recurrence within 6 months has been reported to be as high as 40%.<sup>1</sup> LBP is the leading cause of work disability in many countries. The search for a specific diagnosis is

often frustrating; in 80–90% of cases it is not possible to give a precise pathoanatomical diagnosis despite advanced imaging studies.<sup>2</sup> This has led to the recognition that a simple biomechanical approach to treatment of LBP is futile. Patients’ attitudes and beliefs have been recognized as important in the development and persistence of back-related disability.<sup>3</sup> LBP is therefore best understood through the lenses of the biopsychosocial model of illness.

In this issue of the *International Journal of Epidemiology*, Raspe and colleagues report on five different health surveys from West and East Germany conducted between 1991 and 2003.<sup>4</sup> The first survey, conducted in 1991, shortly after the reunification of

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the two countries, showed a much lower prevalence of LBP in East Germany compared to West Germany (12% difference in the point prevalence of LBP, and 13% difference in report of LBP in the past 12 months). Over the subsequent years, up to 2003, the prevalence in the two countries became quite similar. The authors hypothesize that the recent increase in back pain reported in East Germany is due to a 'harmful influence of back-related beliefs and attitudes transmitted from West to East Germany via mass media and personal contacts'.

The idea of back pain as a 'communicable disease' is provocative. Certainly back pain does not fulfil Koch's postulates.<sup>5</sup> But the notion that ideas of disease causation and illness behaviour can spread quickly through populations provides a useful lens through which the epidemiology of health resource utilization can be examined. There is support for the proposition that social structures can facilitate dissemination of key ideas in the work of Buchbinder *et al.*, as discussed by Raspe *et al.* at the end of the article: a multimedia campaign which ran from 1997 till 1999 in Victoria, Australia, advised patients with back pain to stay active and exercise, to avoid rest for prolonged periods, and to remain at work.<sup>6</sup> Compared with an adjacent control state, the New South Wales population that was exposed to the campaign (as well as health care providers) were more likely to view back pain to be addressed with activity, rather than inactivity. The effect persisted 4.5 years after the study's cessation.<sup>7</sup> The Buchbinder data are especially useful because they include concurrent controls and evaluation of the prevalence prior to the intervention.

The question remains as to whether the data presented by Raspe *et al.* support their provocative hypothesis of back pain being a communicable disease. Because we lack information about the difference in prevalence of LBP in West and East Germany before the reunification, the first set of data shown, recorded 1 and 2 years after the reunification, serves as a proxy for East German data before reunification. Is this approach valid? In light of the massive transformation in social structures in East Germany, many known and unknown variables (new political and economic systems, new health care and social security systems) might have influenced the first two datasets. With more than 1.4 million people leaving East Germany in 1990, the population was not stable enough to make any inference about the reasons underlying differences in LBP prevalence. Although the data presented are age- and sex-adjusted, we lack specific information about other possible confounders such as socioeconomic factors, unemployment, risk factors like physical work load, etc. Further limitations include a potentially important bias due to different response rates in the first two surveys, and the fact that the data show the trend over time for LBP point prevalence only, but not for LBP in the past 12 months.

We acknowledge the preliminary nature of the data and its formulation as a hypothesis, but to make even more thoughtful use of the data we would encourage the use of guidelines on reporting of observational data in more detail.<sup>8</sup>

We note as well that it is not uncommon to find changes in disease prevalence over time. Changes in economic incentives or disincentives for back-pain-related work compensation are especially important, as these can influence the reporting of LBP. Examples pertaining to LBP can be found in Nordic countries<sup>9</sup> and in whiplash syndrome in Canada, where the elimination of compensation was associated with a decreased incidence and improved prognosis of whiplash injury.<sup>10</sup> We lack information about the insurance system in East Germany prior to reunification, but it was clearly different from that of West Germany, and differences in prevalence could also be interpreted in this light.

We close by asking whether it is necessarily problematic to have more persons reporting back pain and taking days off. If prior to unification these individuals worked in pain and they are now able to take days off due to better social security systems, we should be careful in labelling this as a new problem. Such utilization patterns may in fact be an appropriate use of an adequate injury compensation system.

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## References

- Carey TS, Garrett JM, Jackman A, Hadler N. Recurrence and care seeking after acute back pain: results of a long-term follow-up study. North Carolina Back Pain Project. *Med Care* 1999;**37**:157–64.
- White AA, 3rd, Gordon SL. Synopsis: workshop on idiopathic low-back pain. *Spine* 1982;**7**:141–49.
- Linton S. A review of psychological risk factors in back and neck pain. In: Nachemson A, Jonsson E (eds). *Neck and Back Pain: The Scientific Evidence of Causes, Diagnosis, and Treatment*. Philadelphia: Lippincott Williams & Wilkins, 2000. pp. 57–78.
- Raspe HHA, Neuhauser H. Back pain, a communicable disease? *Int J Epidemiol* 2008;**37**:69–74.
- Brock TD. *Robert Koch, a life in medicine and bacteriology*. Washington, DC: ASM Press, 1999.
- Buchbinder R, Jolley D, Wyatt M. 2001 Volvo Award Winner in clinical studies: effects of a media campaign on back pain beliefs and its potential influence on management of low back pain in general practice. *Spine* 2001;**26**:2535–42.

- <sup>7</sup> Buchbinder R, Jolley D. Improvements in general practitioner beliefs and stated management of back pain persist 4.5 years after the cessation of a public health media campaign. *Spine* 2007;**32**:E156–62.
- <sup>8</sup> von Elm E, Altman DG, Egger M, Pocock SJ, Gotsche PC, Vandenbroucke JP. The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement: guidelines for reporting observational studies. *Ann Intern Med* 2007;**147**:573–77.
- <sup>9</sup> Ihlebaek C, Hansson TH, Laerum E *et al.* Prevalence of low back pain and sickness absence: a “borderline” study in Norway and Sweden. *Scand J Public Health* 2006;**34**:555–58.
- <sup>10</sup> Cassidy JD, Carroll LJ, Cote P, Lemstra M, Berglund A, Nygren A. Effect of eliminating compensation for pain and suffering on the outcome of insurance claims for whiplash injury. *N Engl J Med* 2000;**342**:1179–86.