Injustice at work and health: causation, correlation or cause for action?

Jane E Ferrie, Jenny A Head, Martin J Shipley, Jussi Vahtera, Michael G Marmot and Mika Kivimäki

Occup. Environ. Med. 2007;64;428-

PostScript

LETTER

Injustice at work and health: causation, correlation or cause for action?

We thank Kawachi[1] for a thoughtful commentary on our paper,[2] which raised a number of interesting points.

At the end of the first paragraph, Kawachi asks if we have sufficient evidence to implicate organisational justice as a causal influence on worker's health. Undoubtedly, at this point in time we do not, and relational justice, in common with any exposure that depends on the perception of the respondent, is unlikely ever to be able to fulfil all the Bradford–Hill criteria for establishing a causal link. Nonetheless, we believe that there remains much to be gained from further examination of such exposures and would like to continue discussion of the other issues raised by Kawachi: common-method variance, conceptual clarity and the social patterning of relational justice.

To date, there have been few studies of relational justice and in most studies that do exist, both the exposure and outcome have been self-reported. However, a small number of studies have documented associations with more objective measures of health, such as medically certified sickness absence,[3] risk of impaired cardiovascular regulation,[4] incidence of coronary heart disease[5] and mortality due to cardiovascular diseases.[6]

Kawachi suggests that an alternative approach to the problem of common-method variance is to aggregate individual responses to questions on organisational justice up to the work-group or firm level. We agree that small-area statistics and multilevel analyses have been underused in the occupational health field; most prior studies that have used these methods have assessed effects of the social environment in residential neighbourhoods and communities. However, the workplace is also an important social setting, as employed populations spend more waking hours in that environment than in any other. To our knowledge, three studies of organisational justice have applied the aggregate-level approach and provide evidence to indicate that it may be relevant in this field. A study of hospital personnel in 162 single-location work units measured organisational (procedural and relational) justice using work-unit mean scores as well as individual scores, and found that justice predicted subsequent mental disorders in both cases.[7] Using the same data, Elovainio *et al*[8] examined associations between organisational justice and medically certified sickness absence. In addition to individual variation, they found that justice varied considerably between work units, but that justice predicted sickness absence only at the individual level. To some extent, this is unsurprising, particularly with relational justice where the focus is on individual supervisors. A study by Wager *et al*[9] showed marked differences in blood pressure in the same group of employees on days worked under a favourably perceived supervisor compared with days worked under an unfavourably perceived supervisor. Future work may need to differentiate between supervisors if analyses at the level of the work unit are to be informative.

Another interesting point raised by Kawachi is the overlap between organisational justice and other measures of the psychosocial work environment. We cannot but agree with respect to this study in which all the items in our measure of relational justice were "borrowed" from other psychosocial constructs. However, our findings are in line with the work from Finland where most of the studies have used Moorman's original justice measures. It seems unlikely to us that it will be possible to draw clear theoretical distinctions between justice and the other more established psychosocial constructs. This may be due to a genuine overlap, in which case there might be more mileage in expanding the concept of social support at work to include a fairness dimension. Alternatively, it may be because both perceptions of relational justice and effort–reward imbalance are determined by a common perception of power relationships within the organisation.

As Kawachi points out, there is little association in our study between relational justice scores and employment grade. At phases 1 and 3, a positive gradient has been observed for both General Health Questionnaire (GHQ) Score and GHQ caseness in the Whitehall II Study (the higher the grade, the higher the GHQ Score or prevalence of caseness).[10] Thus, although we agree with Kawachi that relational justice may not be the key to justice in the broader sense of social inequalities in the distribution of work-related health outcomes, this does not mean it lacks salience overall. Our study shows that a favourable change in relational injustice was associated with a reduced risk of psychiatric morbidity, whereas an unfavourable change was associated with an increase in risk. We need much stronger evidence to fulfil the Bradford–Hill criteria, but in the meantime it seems that attempts to increase relational justice would not go amiss.

Jane E Ferrie, Jenny A Head, Martin J Shipley
Department of Epidemiology and Public Health, University College London Medical School, London, UK

Jussi Vahtera
Finnish Institute of Occupational Health, University of Helsinki, Helsinki, Finland

Michael G Marmot, Mika Kivimäki
International Institute for Society and Health, Department of Epidemiology and Public Health, University College London Medical School, London, UK

Correspondence to: Dr J E Ferrie, Department of Epidemiology and Public Health, UCL, 1–19 Torrington Place, London WC1E 6BT, UK; j.ferrie@public-health.ucl.ac.uk

References

1 **Kawachi I**. Injustice at work and health: causation or correlation? *Occup Environ Med* 2006;**63**:578–9.
2 **Ferrie JE**, Kivimäki M, Shipley M, *et al*. Injustice at work and incidence of psychiatric morbidity: the Whitehall II Study. *Occup Environ Med* 2006;**63**:443–50.
3 **Elovainio M**, Kivimaki M, Vahtera J. Organizational justice: evidence of a new psychosocial predictor of health. *Am J Public Health* 2002;**92**:105–8.
4 **Elovainio M**, Kivimaki M, Puttonen S, *et al*. Organisational injustice and impaired cardiovascular regulation among female employees. *Occup Environ Med* 2006;**63**:141–4.
5 **Kivimäki M**, Ferrie JE, Brunner E, *et al*. Justice at work decreases risk of coronary heart disease among employees: the Whitehall II Study. *Arch Intern Med* 2005;**165**:2245–51.
6 **Elovainio M**, Leino-Arjas P, Vahtera J, *et al*. Justice at work and cardiovascular mortality: a prospective cohort study. *J Psychosom Res* 2006;**61**:271–4.
7 **Kivimäki M**, Elovainio M, Vahtera J, *et al*. Association between organisational inequity and incidence of psychiatric disorders in female employees. *Psychol Med* 2003;**33**:319–26.
8 **Elovainio M**, Kivimaki M, Steen N, *et al*. Job decision latitude, organizational justice and health: multilevel covariance structure analysis. *Soc Sci Med* 2004;**59**:1659–69.
9 **Wager N**, Fieldman G, Hussey T. The effect on ambulatory blood pressure of working under favourably and unfavourably perceived supervisors. *Occup Environ Med* 2003;**60**:468–74.
10 **Ferrie JE**, Shipley MJ, Davey Smith G, *et al*. Change in health inequalities among British civil servants: the Whitehall II Study. *J Epidemiol Community Health* 2001;**56**:922–6.

CORRECTION

doi: 10.1136/oem.2005.024596corr1

Jaakkola MS, Yang L, Ieromnimon A, *et al*. Office work, SBS and respiratory and sick building syndrome symptoms. *Occup Environ Med* 2007;**64**:178–84. The title of this paper appeared incorrectly in the print journal; the correct title is: Office work exposures and respiratory and sick building syndrome symptoms. The title has already been corrected in the online journal.