

Does organisational justice protect from sickness absence following a major life event? A Finnish public sector study

M Elovainio,^{1,2} M Kivimäki,² A Linna,^{3,4} J Brockner,⁵ K van den Bos,⁶ J Greenberg,⁷ J Pentti,⁴ M Virtanen,⁴ J Vahtera^{3,4}

¹National Institute for Health and Welfare, Helsinki, Finland

²University College London, London, UK

³Department of Public Health, University of Turku, and Turku University Hospital, Turku, Finland

⁴FIOH, Helsinki, Finland

⁵Columbia University, New York, New York, USA

⁶Utrecht University, Utrecht, The Netherlands

⁷Jerald Greenberg, National University of Singapore, Singapore

Correspondence to

Dr Marko Elovainio, National Institute for Health and Welfare, PO Box 30, FIN-00271 Helsinki, Finland; marko.elovainio@thl.fi

Accepted 1 July 2009

ABSTRACT

Background It has been shown that fairness perceptions have a strong impact on health, especially under conditions of great work stress. The aim of this study was to extend previous research in studying whether working in high justice workplace would protect from health effects following environmental stressors outside work.

Methods Using a prospective longitudinal design, the relationships between organisational justice and sickness-related absences both before and after a major life event among 25 459 public sector employees working in 2551 work units were studied. Sickness absences covered the period from 36 months before the event until 30 months after the event.

Results The increase in sickness absences after the event was larger and stayed at a higher level even 30 months after the event, among those who perceived the management practices in their work unit to be relatively unfair. Similar patterns were found for each of the distributive, procedural and interactional dimensions of organisational justice.

Conclusions Fair organisational and managerial procedures may buffer the negative health effects of psychosocial health risks outside work.

$\alpha=0.92$) and (2) interpersonal justice (six items, $\alpha=0.95$). The items were rated on a 5-point Likert scale, ranging from 1 (I totally *disagree*) to 5 (I totally *agree*), in which higher values indicate higher justice.

As for the stressful life event, participants were asked about the onset of severe illness for their spouse or for other family members (two different questions). They were asked whether the event had occurred during the current year (yes/no) and, if yes, the date (month) of the occurrence. If both had occurred, then the time of the first one was used in the analyses.

We used the participants' personal identification numbers (unique to each Finnish citizen) to access electronic records of sickness absence kept by their employers. For the respondents who reported an event, we calculated the number of sick days during each month, beginning with 36 months before the event and ending at 30 months after the event (67 measurement points, including the month during which the event transpired). For those without an event, we randomly selected a non-event month and linked their sickness absence records to the data as we had done for those with an event. The month was selected using weights that corresponded to the likelihood that the events occurred in each month in the group that experienced the event. The procedures for recording sick leave in the Finnish public sector have been reported previously.^{11 12} Other variables were sex, age and education (middle school, high school or more).

To take into account the hierarchical data structure and correlation between sickness absence days within subjects, we performed a multilevel generalised estimating equations estimation with Poisson distribution (SAS V.9.1).¹³ We calculated adjusted means of monthly sickness absence figures and 95% confidence intervals for six time periods (13–36 and 1–12 months before the event, the month that the event occurred, and 1–6, 7–18 and 19–30 months after the event). Participants were classified as low or high on the various dimensions of organisational justice on the basis of a tertile split. The average turnover rate in the work units in the study was <10%.

RESULTS

The participants logged 1,693,773 sickness absence days, 1,591,505 person months (maternity leaves and other absences excluded) and 1360 (5%) experiencing severe illness in the family. There were no associations between any of the fairness dimensions and the occurrence of life event. In the

Organisational justice, the extent to which employees perceive their supervisor considers their viewpoints, shares information concerning decision-making and treats individuals fairly,¹ is being linked to employee health outcomes.^{2–7} It has also been shown, that justice perceptions have a stronger impact on health under conditions of greater work stress.⁸ This study extends previous research in studying whether working in high justice workplace would protect from health effects following environmental stressors outside work.⁹

METHODS

Evaluations of organisational justice and occurrence of stressful life events were measured through a self-report survey in 2000. Sickness absence data were obtained from employers' records. Complete data were obtained from 25 459 employees working in 2551 work units.

Organisational justice evaluations were assessed with three scales. The distributive justice scale (Cronbach's α (α)=0.62), consisted of four items measuring such things as how much one is getting in return from work in terms of income and benefits. The other two scales developed by Moorman¹⁰ consisted of (1) procedural justice (seven items,

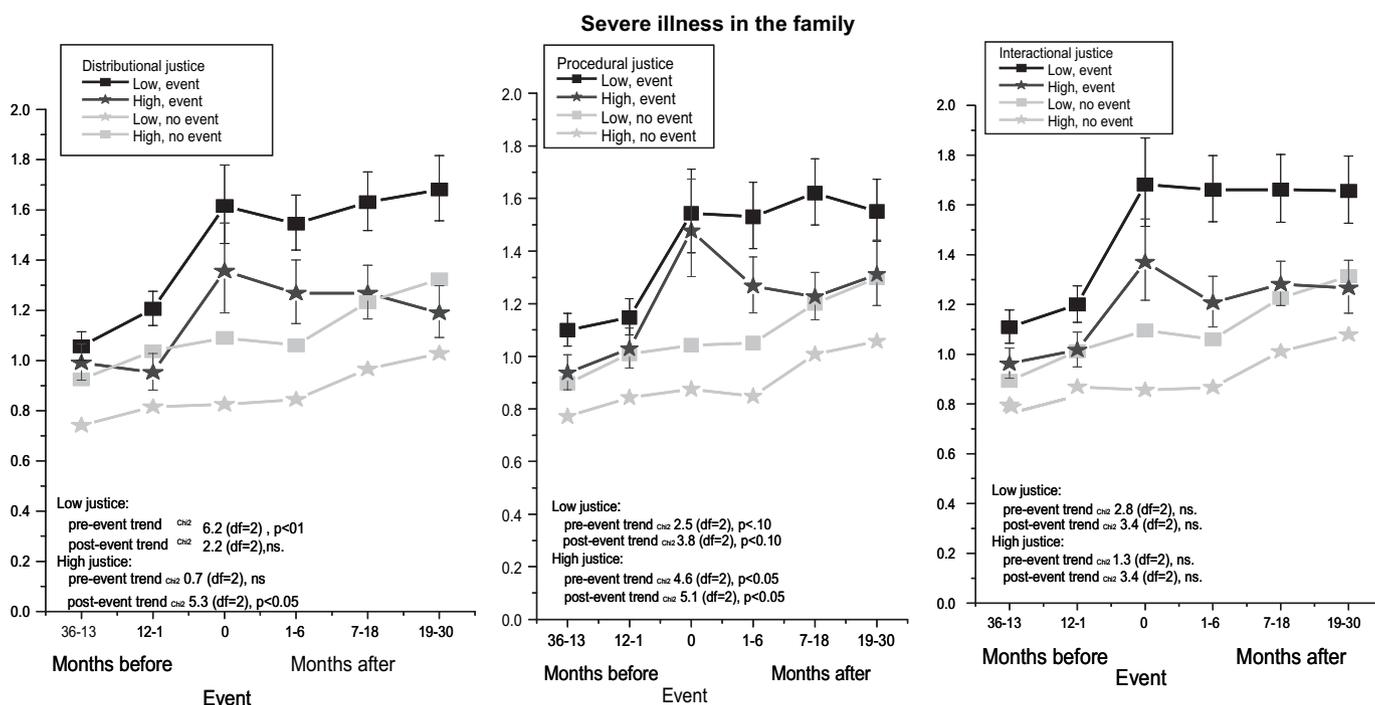


Figure 1 Time-dependent relationships between negative life events and sickness absence (days per month) in the low and high justice groups (distributive: left pane; procedural: middle pane; interactive: right pane).

generalised estimating equations models, controlling for age, sex and education, distributive ($\chi^2(1)=100.68$, $p < 0.001$), procedural ($\chi^2(1)=71.39$, $p < 0.001$) and interactional ($\chi^2(1)=87.82$, $p < 0.001$) justice variables were all significantly related to sickness absence days during the follow-up period. Figure 1 shows the mean number of sickness absence days per month as a function of the experienced stressful life event, the level of justice dimensions and time. The interactions (event-justice variable \times time) in each justice dimensions were distributive ($\chi^2(15)=25.47$, $p < 0.05$), procedural ($\chi^2(15)=22.76$, $p < 0.05$) and interactional ($\chi^2(15)=32.34$, $p < 0.01$).

Before the event, no differences in average absence days were found as a function of justice. In the month right after the event occurred, the average sickness absences increased in all groups but more steeply in low than high distributive and interactional justice groups. During the 30 months after the event, the average sickness absence remained high in the all-low justice groups. In high justice groups, sickness absenteeism returned to the same level as that shown by the group of employees with no life event. In the no-event group, a steady and mildly increasing trend was found in sickness absence days over time, suggestive of an ageing effect (figure 1).

DISCUSSION

Our large-scale prospective study demonstrated a significant association between stressful life event and sickness absences, a finding consistent with previous research.^{9 14 15} More noteworthy, we showed that the higher the organisational justice, the less likely was the stressful event to have a long-term negative effect on people's health. The positive effects of high organisational justice manifested itself in the form of quicker recovery during the 2-year follow-up period after the event. There may be various explanations for the association.¹⁶ Stressful life event may, in a context of low organisational justice, exacerbate relational difficulties at work, leading to more sickness absences for a given level of health.

What is already known on this subject

- ▶ Stressful life events, such as death or serious illness in the family, predict increased sickness absence risk.
- ▶ Low organisational justice has been shown to be associated with health problems, such as minor psychiatric morbidity, self-reported ill health and sickness absence.
- ▶ It has been suggested that high organisational justice may reduce and low justice may intensify the negative effects of stressful work environment.

What this study adds

- ▶ This study showed that being a member of a work unit characterised by high justice can be beneficial to people's health in the aftermath of unfavourable outcomes that people experience in other areas of their lives.
- ▶ These results challenge organisations to find ways to encourage their managers to exhibit high levels of procedural or interactional justice at work even when the health risks are not primarily work related.

Our findings appear to be independent of the person experiencing the event because of the event type (the illness of a spouse or other family member) used.^{17 18} The longitudinal nature of our study bodes well for the internal validity of the present findings, but additional research is needed. The present study extends the previous research by showing that being a member of a work unit characterised by high justice can be

beneficial to health in the aftermath of stressful events that people experience outside work.

Acknowledgements ME was supported by the Academy of Finland (project 128002) and by the WEF (project 203533) and MK and JV by the Academy of Finland (project 117604, 124322, 129262 and 124271).

Funding Other funders: Academy of Finland.

Competing interests None.

Ethics approval This study was conducted with the approval of the FIOH ethics committee.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

REFERENCES

1. **Cropanzano R**, Byrne ZS, Bobocel RD, *et al*. Moral virtues, fairness heuristics, social entities and denizens of organizational justice. *J Vocat Behav* 2001;**91**:164–209.
2. **Elovainio M**, Kivimaki M, Vahtera J. Organizational justice: evidence of a new psychosocial predictor of health. *Am J Public Health* 2002;**92**:105–8.
3. **Kivimaki M**, Elovainio M, Vahtera J, *et al*. Organisational justice and health of employees: prospective cohort study. *Occup Environ Med* 2003;**60**:27–33; discussion 4.
4. **Ferrie J**, Head J, Shipley M, *et al*. Injustice at work and incidence of psychiatric morbidity: the Whitehall II study. *Occup Environ Med* 2006;**63**:442–50.
5. **Kivimaki M**, Ferrie J, Brunner E, *et al*. Justice at work and reduced risks of coronary heart disease among employees: the Whitehall II study. *Arch Intern Med* 2005;**24**: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. **De Vogli R**, Ferrie JE, Chandola T, *et al*. Unfairness and health: evidence from the Whitehall II Study. *J Epidemiol Community Health* 2007;**61**:513–18.
8. **Van den Bos K**, Lind EA. Uncertainty management by means of fairness judgements. In: Zanna MP, ed. *Advances in experimental social psychology*. Boston: Elsevier, 2002:1–60.
9. **Levav I**, Krasnoff L, Dohrenwend BS. Israeli PERI life event scale: ratings of events by a community sample. *Isr J Med Sci* 1981;**17**:176–83.
10. **Moorman RH**. Relationship between organizational justice and organizational citizenship behaviors: do fairness perceptions influence employee citizenship? *J Appl Psychol* 1991;**76**:845–55.
11. **Vahtera J**, Virtanen P, Kivimaki M, *et al*. Workplace as an origin of health inequalities. *J Epidemiol Community Health* 1999;**53**:399–407.
12. **Vahtera J**, Kivimaki M, Pentti J, *et al*. Organisational downsizing, sickness absence, and mortality: 10-town prospective cohort study. *BMJ* 2004;**328**:555.
13. **Lipsitz S**, Kim K, Zhao L. Analysis of repeated categorical data using generalized estimating equations. *Stat Med* 1994;**13**:1146–63.
14. **Kivimaki M**, Vahtera J, Elovainio M, *et al*. Death or illness of a family member, violence, interpersonal conflict, and financial difficulties as predictors of sickness absence: longitudinal cohort study on psychological and behavioral links. *Psychosom Med* 2002;**64**:817–25.
15. **Martikainen P**, Valkonen T. Mortality after death of spouse in relation to duration of bereavement in Finland. *J Epidemiol Community Health* 1996;**50**:264–8.
16. **Aronsson G**, Gustafsson K. Sickness presenteeism: prevalence, attendance-pressure factors, and an outline of a model for research. *J Occup Environ Med* 2005;**47**:958–66.
17. **Heun R**, Muller H, Freyberger HJ, *et al*. Reliability of interview information in a family study in the elderly. *Soc Psychiatry Psychiatr Epidemiol* 1998;**33**:140–4.
18. **Kendler KS**, Gardner CO, Prescott CA. Personality and the experience of environmental adversity. *Psychol Med* 2003;**33**:1193–202.