

Commentary on

“Injustice at work and incidence of psychiatric morbidity: the Whitehall II study”.

Prepared for Occupational Environmental Medicine

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Organizational justice has emerged in recent years as a determinant of workers' health, joining the growing list of other psychosocial aspects of the work environment, including job strain, effort-reward imbalance, and job insecurity. In a series of studies carried out mainly among Finnish workers, perceptions of organizational justice have been linked to poor self-rated health, minor psychiatric disorders, and sickness absences.<sup>1,2</sup> In the current issue of the journal, Ferrie and colleagues provide an independent test of low organizational justice as a predictor of psychiatric morbidity within a well established cohort, the British Whitehall II study. What do these studies add to the literature on the psychosocial work environment, and do we have sufficient evidence to implicate organizational justice as a causal influence on workers' health?

Initial studies in this area were cross-sectional and involved self-reported outcomes, so that reverse causation and common method bias could not be ruled out. In a longitudinal follow-up of Finnish hospital workers, Kivimäki and colleagues<sup>2</sup> checked for the possibility of reverse causation by comparing the changes in perceptions of justice between initially healthy employees versus those with baseline health problems. Although the interaction term between time and baseline health was reported to be statistically non-significant, it was also evident that workers with health problems reported lower perceptions of justice compared to healthy co-workers at both the baseline and at the follow-up.<sup>2</sup> The new study by Ferrie *et al* examined the effects of change in relational justice over time in relation to the onset of psychiatric morbidity. A favorable change in perceptions of justice was associated with a reduction in psychiatric morbidity, whereas an adverse change increased the risk. These results bolster the case that reverse causation is not the major explanation for the observed associations. Nevertheless, if

health declines and changes in perceptions of justice are contemporaneous, it is difficult to completely rule out reverse causation, even with longitudinal change analysis. As Ferrie *et al* acknowledge, controlled experiments in the work setting would help, although it is not clear exactly what “treatment” should be designed to increase perceptions of justice.

Common method variance is a cause for concern when both the exposure and outcome variables are self-reported. Future studies of organizational justice and health would be strengthened by incorporating biomarkers and other endpoints that are not perceived or self-reported. Alternatively, common method variance could be addressed by aggregating individual responses to questions about organizational justice up to the work group or firm level. It makes theoretical sense to conceptualize and measure justice as an organization-level characteristic, as opposed to individual-level perceptions. Following this logic, investigators should focus on the contextual influence of organizational justice on workers’ health within a multi-level analytical framework, i.e. “exposure” to aggregated perceptions of justice assigned to individual workers nested within different workplaces. (A parallel argument could be made about investigating the health effects of other work environment characteristics, such as job strain and effort-reward imbalance).

A further noteworthy finding from existing studies of organizational justice and health is that the associations with endpoints tend to be attenuated (in several instances to statistical non-significance) after controlling for other psychosocial aspects of the work environment, including decision authority, effort-reward imbalance and social support. That is, the concept of organizational justice may be redundant to some degree with other

psychosocial aspects of work. As originally conceptualized by Moorman,<sup>3</sup> organizational justice encompasses two domains: distributive justice and procedural justice. Because the definition of distributive justice (“the degree to which a worker believes that she is fairly rewarded in the basis of effort and performance”) essentially overlaps with Siegrist’s concept of effort-reward imbalance, subsequent research in the health field has focused on the procedural component of justice. According to Moorman, procedural justice, in turn, encompasses two dimensions: the existence of formal procedures in the workplace (i.e. the extent to which decision-making processes include input from affected parties, are fair and consistent, and provide useful feedback as well as the possibility of appeal), and interactional justice (the extent to which supervisors treat subordinates with respect, transparency, and fairness).<sup>3</sup> In the public health field, the former dimension has been relabeled as “procedural justice”, while the latter is referred to as “relational justice”. However, as noted in an earlier commentary by Thoerell,<sup>4</sup> the individual items in the procedural justice index overlap with the existing construct of decision authority, while the relational justice scale overlaps with the construct of supervisor support at work. Moreover, the correlation between the two components of organizational justice (procedural and relational) is only moderate (Pearson’s  $r$  about 0.3), while both constructs are also correlated to about the same degree with decision authority and workload.<sup>1,2</sup> The new study by Ferrie *et al* was only able to examine the relational component of justice, although prior Finnish studies suggest that health (including psychiatric morbidity) is more strongly related to procedural justice than relational justice.<sup>1,2</sup> Not surprisingly, because the 5-item scale of relational justice in the Whitehall II study was created by borrowing items from existing scales measuring effort-reward

imbalance and social support, the authors found that the biggest attenuations in odds ratios for psychiatric morbidity occurred after controlling for social support at work (among women), and effort-reward imbalance (among men). In summary, notwithstanding the finding that organizational justice is a statistically and empirically “independent” risk factor for workers’ health, greater clarity is called for in drawing out the theoretical distinctions as well as inter-relationships between justice and other established constructs in the psychosocial work environment.

A final point to note about studies of organizational justice is that employees with higher income levels have been reported to perceive lower levels of procedural justice,<sup>1</sup> so that differences in perceived organizational justice – in contrast to job control or effort-reward imbalance – is unlikely to explain the fundamental relationship between occupational status and workers’ health. Indeed, procedural justice has been reported to be a stronger predictor of sickness absence among high income hospital employees (rate ratio 1.17, 95% CI: 1.5 to 1.31) than among low income employees (RR = 0.95, 95% CI: 0.85 to 1.05), leading Kivimäki and colleagues to the somewhat counter-intuitive speculation that “procedural justice may have more salient meanings for members of highly ranked occupations close to management than for employees in lower ranking occupations”.<sup>2, p. 31</sup> In the Whitehall II study, little association was found between relational justice scores and employment grade. Improving perceptions of procedural and relational justice is hence unlikely to contribute to reducing the social class gradient in psychiatric morbidity and other health problems. That is not to argue against attempting to intervene on perceptions of justice to improve workers’ health, but we must look

elsewhere to achieve “justice” (in its broader sense) in the distribution of work-related health outcomes.

## References

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