Are job stress models capturing important dimensions of the psychosocial work environment?

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Are high effort-reward imbalance and organisational injustice complementary risk factors?

Many studies have documented the effect of adverse work organisation factors on the health of employees. Karasek's job demand-control model¹ and Siegrist's effort-reward imbalance model² identify psychosocial factors in the work environment whose effects on physical and mental health have been the most frequently documented. Poor social support at work from colleagues and supervisors is another adverse factor identified by Johnson³ extending the job demand-control model. According to this model, the highest risk of illness is assumed to be related to iso-strain jobs, characterised by high demands, low job control and low social support. Studies suggest that both models have a complementary contribution to the identification of adverse work organisation factors. Furthermore, a meta-analysis of high-quality prospective studies of workers' perception of their work environment provides robust consistent evidence that combinations of high demands and low decision latitude, and high efforts and low rewards, are prospective risk factors for common mental health disorders.⁴

The study of organisational justice is a recent attempt to identify a third model of psychosocial determinants of employees' health; it refers to problems with procedural and relational justice. Relational justice concerns the way supervisors treat their employees with respect and fairness whereas procedural justice involves the fairness of formal decision-making procedures. Several epidemiological studies have reported an association between procedural and/or relational injustice and adverse health. In addition, the extent to which people are treated in workplaces seems to predict their health independently of established stressors at work (high demands, low control, low social support and effort-reward imbalance).⁵

In this issue of the journal, Kivimäki *et al* examined whether procedural injustice

and relational injustice are associated with employee health in addition to, and in combination with, effort-reward imbalance (see page 659).⁶ They show that high effort-reward imbalance and organisational injustice (a combination of procedural and relational injustice) are independently associated with health, and the combination of both constraints is related to a greater health risk than high effort-reward imbalance or injustice alone.

A major preoccupation with Kivimäki *et al*'s paper relates to the number of items and the non-uniformity in the use of scales to measure psychosocial factors. In this paper, there is an incomplete assessment of the constructs of effort and reward. The question is: Do the items really measure all or most of the dimensions of the original effort and reward scales? Only one question is used for effort and it is not clear whether this question measures intrinsic or extrinsic effort, or both. Moreover, the three questions measuring rewards (income and job benefits, recognition and prestige and personal satisfaction) do not capture all the dimensions of the original scale which measured esteem, respect, job status, income and career opportunities. However, in one of our studies, a change in the number of items used to measure an exposure variable (effort or reward) resulted in a change in the exposure status of study subjects—that is, the employees exposed were not the same if more or fewer items for a given scale were used (unpublished data). This can result in an under- or overestimation of associations with health outcomes. Further investigation is needed regarding the construct validity of the scales and the consequences of using only parts of validated scales.

Moreover, in this paper, the authors did not examine whether organisational justice was redundant with the job demand-control model. However, there seems to be overlap with procedural justice as defined by the authors and job control

in the job demand-control model which measures the use and development of skills, and control over one's work which implies latitude at work and participation in decisions.

Another preoccupation relates to the conceptual basis of the job stress models. The job demand-control and the effort-reward imbalance models both include dimensions which concern the individual employee. In the proposed model on organisational justice, procedural injustice refers to management practices that allow employees to participate to the decision process. Being at the organisational level, these procedures cannot directly be related to individual employees' health. Indeed even if the organisation allows participation of the employees in the decision process (procedures), it does not necessarily mean that they use this prerogative, nor feel that they have control over their job. The pathway through which these organisational procedures are supposed to be linked to the health of employees is not clear, as opposed to the job control component of the job strain model which addresses the control perceived by employees over their job and can thus have an impact on their health.

It is nevertheless important to measure the notion of equity in relation to health because inequity may deeply hurt individuals. Although this notion of equity was present in the original scale of reward in the effort-reward imbalance model ("I am treated unfairly at work"), it is not captured by the items included in the shorter version of reward often used in studies, nor by the three items of the scale measured in this paper.

RESEARCH AGENDA

This paper is useful and stimulating in its attempt to enlarge the existing stress models and test new conceptual ideas. However, the acknowledgment that the job demand-control and effort-reward imbalance models do not include all dimensions of work organisation likely to affect the health of employees should not prevent action on those dimensions that are documented. From now on, there is a need to go "from knowledge to action"—a need to plan interventions in the work environment that will test whether modifying work-related stressors leads to better mental health in working populations, which is ultimately the goal of this body of research.⁴ Interventions based on documented existing models should not impede the identification by employees of other important sources of stress; preventive action can be taken on all at the same time. The existing documented stress models thus propose a general basic profile from which a more

detailed risk assessment can be performed in order to inspire tailor-made changes for stress prevention and job redesign.

It is interesting to enlarge the existing models, and Kivimäki *et al* contribute in an important way to the field of psychosocial factors and health. The mechanism and pathway to explain by which means psychosocial exposures affect the health of employees, and the psychosocial pathways that might mediate the effect of these exposures, should be the object of more theorisation and testing in the future.

It is also important to recognise that work life is under continual change and this process causes variation in the relative importance of existing stressors and the possibility of new ones emerging. Conceptual reference to essential human needs allows to better support the social debate around new organisational practices both at and outside of work. The accomplishment of social roles, and specifically of the work role, constitutes an opportunity to meet important human

needs—in particular the need for successful self-regulation, which includes at least three important dimensions: self esteem, self-efficacy and belonging.⁷ With the existing stress models, self-esteem can be measured by rewards and fairness, self-efficacy (which necessitates a certain margin of freedom) can be captured by job control, and belonging by social support and social network. It also appears important to measure relational justice or equity, which relates to employees' moral values. The notion of relational justice as it is now defined has still to be examined more thoroughly on a conceptual basis so as not to overlap the already documented models. It should be distinguished from the notion of procedural justice, which concerns workers being able to participate in decision-making in their job and which seems to be sufficiently captured by the actual concept of job control.

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