ELSEVIER

Social Science & Medicine 61 (2005) 111–122

SOCIAL SCIENCE & MEDICINE

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Psychosocial work characteristics and incidence of newly diagnosed depression: a prospective cohort study of three different models

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Available online 11 January 2005

Abstract

This study explored the association between psychosocial work characteristics and incidence of depression as indicated in three complementary models (the Job Strain Model, the Team Climate Model, and the Procedural Justice Model). Participants were 4815 Finnish hospital personnel (4278 women and 537 men) free from diagnosed depression at entry into the study. A baseline survey in 1998 measured psychosocial work characteristics, health-related behaviours, psychological distress, and doctor-diagnosed depression. The factor analysis of pooled questionnaire items on psychosocial work characteristics supported a five-factor solution with the following distinct dimensions: team climate, relational justice, procedural justice, job control, and job demands. Items in these dimensions were used as scales and job strain was modelled as a combination of job demands and job control. A follow-up survey in 2000 identified 225 incident cases of depression. After adjustment for age, sex and income, poor team climate, low procedural justice, and low relational justice were associated with a higher risk of new depression, the odds ratios (ORs) 1.58 (95% confidence interval (CI) 1.11–2.24), 1.45 (95% CI 1.03–2.04), and 1.39 (95% CI 1.00–1.96), respectively. After additional adjustment for lifestyle factors and exclusion of those with psychological distress at baseline, there was still an association between poor team climate and risk of depression (ORs 1.55 and 1.75, respectively). Job control, work demands, and job strain did not predict the 2-year incidence of depression, and the effects of all psychosocial work characteristics were attenuated when entered simultaneously in the model. In conclusion, work unit social factors seem to be predictive of subsequent doctor-diagnosed depression, but other aspects of psychosocial work environment may also be important.

Keywords: Depression; Psychosocial work characteristics; Team climate; Organizational justice; Hospital staff; Finland

Introduction

Depression is the most prevalent mental disorder and is expected to account for 15% of the disease burden in the world by 2020 (Murray & Lopez, 1997). Depression

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doi:10.1016/j.socscimed.2004.11.038

has large detrimental effects on individuals' quality of life and functioning (Wells et al., 1989) and is likely to lower productivity, cause absenteeism, and increase substance use and accidents (Goldberg & Steury, 2001; Lecrubier, 2000).

Several studies suggest an association between job characteristics and various aspects of mental health such as depression and psychological distress (Niedhammer, Goldberg, Leclerc, Bugel, & David, 1998; Wall et al., 1997; Weinberg & Creed, 2000). Previously, at least three models defining stressful psychosocial factors affecting health problems have been tested: the Job Strain Model, the Team Climate Model, and the Organizational Justice Model. These models have all gained some empirical support in predicting health problems and they can be understood as complementary models concentrating on different aspects of work environment. The Job Strain model focuses on situational factors of work and arrangements, the Team Climate model on the quality of co-operation and social interaction at work, and the Organizational Justice model on decision-making procedures and managerial practices. Despite the complementary nature of the models, to our best knowledge, no previous study on depression has compared these models within a single study population.

The Job Strain Model (Karasek, 1979; Karasek & Theorell, 1990), also known as the *Demand–Control Model*, has been one of the most widely tested models in research on the relation between work and health. The model states that employees working under high strain (a combination of high work demands and low job control) have a higher risk of health problems than those with no such strain. Indeed, previous evidence, which is mainly cross-sectional, suggests that high job strain, high demand or low control are associated with depression, poor mental health, and psychological distress (Karasek, 1979; Karasek & Theorell, 1990; Landsbergis, 1988; Mausner-Dorsch & Eaton, 2001; Stansfeld, Fuhrer, Head, Ferrie, & Shipley, 1997; Williams et al., 1997, for review, see Van der Doef, & Maes, 1999; de Lange, Taris, Kompier, Houtman, & Bonger, 2003). However, findings on the demand–control interaction are inconsistent, and there are null findings for the strain hypothesis (Mullarkey, Jackson, Wall, Wilson, & Grey-Taylor, 1997), in particular, in the few longitudinal studies (Carayon, 1993; Kawakami, Haratani, & Araki, 1992; de Lange et al., 2003).

Organizational climate and team climate refer to the employees' shared perceptions and interpretations of the organizational environment, especially factors related to co-operation (James, James, & Ashe, 1990; Schneider, 1990). Although most occupational research examines the effects of organizational climate on employees' attitudes and behaviours, job involvement, work performance, and innovativeness (e.g. Pirola-Merlo, Härtel, Mann, & Hirst, 2002), health implications have been studied within *the Team Climate Model*. Team climate is conceptualized as having four major dimensions, namely vision, participation safety, task orientation, and support for innovation (Anderson & West, 1998; West, 1990). Cross-sectional evidence suggests unfavourable team and organizational climate are associated with high stress (Länsisalmi & Kivimäki, 1999), work-related symptoms, and elevated rates of sickness absence (Kivimäki et al., 2001). An association between a tense and prejudiced climate and higher risks for work-related symptoms and sickness absence have been reported (Piirainen, Räsänen, & Kivimäki, 2003). Previous research has also indicated that interpersonal conflicts at work are connected with an increased risk of psychiatric morbidity (Romanov, Appelberg, Honkasalo, & Koskenvuo, 1996). However, little is known about predictive associations between team climate and the development of clinical depression.

The term "organizational justice" refers to the extent to which employees are treated with justice at their workplace (for a review see Cropanzano, Byrne, Bobocel, & Rupp, 2001). Organizational justice has been shown to predict organizational attitudes, such as commitment and involvement, as well as the feelings and behaviour of employees (Lind & Tyler, 1988). There is also a rapidly growing body of evidence supporting the link from unfair treatment to experienced strain and various health problems following prolonged stress (Elovainio, Kivimäki, & Helkama, 2001; Elovainio, Kivimäki & Vahtera, 2002; Kivimäki, Elovainio, Vahtera, & Ferrie, 2003a; Kivimäki et al., 2004).

The initial interest in the area of organizational justice considered evaluations regarding outcome distribution (distributive justice) and perceptions of equity (e.g. Adams, 1965), but more recent research has emphasized the fairness of decision-making rules followed in organizations (Cropanzano, Byrne, Bobocel, & Rupp, 2001). The focus on fair outcomes has gained only limited empirical support in explaining justice perceptions of employees (Blader & Tyler, 2003) and concerns about outcomes have not been included among the most important issues in organizational interaction (Blader & Tyler, 2003; Mikula, Petri, & Tanzer, 1990).

The most widely tested organizational justice model includes a procedural component (the extent to which decision-making procedures include input from affected parties, suppress bias, are consistently applied, accurate, correctable, and ethical) and a relational component (polite, considerate, and fair treatment of individuals) (Blader & Tyler, 2003; Bies, 2001; Colquitt, Conlon, Wesson, Porter, & Ng, 2001; Elovainio et al., 2002; Kivimäki et al., 2003a). According to the results of Elovainio et al. (2002), organizational justice was associated with minor psychiatric morbidity, self-reported health, and sickness absence irrespective of