Predictors Of Job Strain Experienced By Employees In An Australian Local Government Organisation

ANDREW NOBLET¹, and JOHN RODWELL²

School of Health Sciences, Deakin University, anoblet@deakin.edu.au¹
Macquarie Graduate School of Management, Macquarie University, john.rodwell@gsm.mq.edu.au²

ABSTRACT

The aim of this study was to identify the work characteristics that contribute to the strain experienced by employees in a public sector organisation. The data obtained from a survey of the employees in a local government organisation was analysed to investigate variables that would be significant predictors of employee wellbeing. Work-based support, job control and time-related pressures were identified as three work characteristics that offer valuable opportunities for boosting the health-promoting value of this organization.

INTRODUCTION

Chronic occupational stress is regarded as both a serious public health concern and a major impediment to organisational success (Levi, 1996). The situational approach to health promotion offers valuable opportunities for developing comprehensive strategies to prevent and reduce job stress (Chu et al., 1997). In general terms, a situation-based stress prevention program would aim to eliminate/reduce the sources of job strain, while at the same time, equipping workers with the knowledge, skills and supportive resources to better cope with demanding and sometimes stressful working conditions. However, there is evidence that many workplace health promotion programs adopt traditional, lifestyle-oriented strategies when dealing with occupational stress (e.g., relaxation programs, fitness training, and cognitive-behavioural skill development) and ignore organizational-based interventions that are designed to eliminate or reduce the sources of job stress (Giga et al., In press). The aim of the present study was to address one of the key barriers preventing workplace health promotion planners from adopting the situational approach to addressing occupational stress; namely, the lack of information on how psycho-social work characteristics can influence health (Shain, 1995), within a public sector organisation.

A comprehensive occupational stress audit involving qualitative and quantitative research methods was undertaken in an Australian local government organisation. This investigation was guided by the generic variables contained within the Job Strain Model (i.e., job demand, job control and social support) (Karasek and Theorell, 1990) and stressors that were specific to the organisation under investigation. For the organization involved in the present study, the overall aim of this audit was to identify the work characteristics that were predictive of the job strain (i.e., dissatisfaction and reduced psychological wellbeing) experienced by employees. The results of this investigation would then be used to develop strategies that can reduce the organizational sources of job stress. Beyond the organization, it is hoped that the present study will provide health promotion practitioners with useful insights into the work-strain relationship.

RESEARCH METHODOLOGY
Sample
The participants in this study were staff from a medium-sized local government organisation located in the outer suburbs of a large Australian city. The organisation employed 306 employees, the vast majority of whom worked in professional, administrative and clerical positions. A traditional workplace health promotion program had been in operation within the organisation for over five years and generally included activities such as healthy eating workshops, lunch-time exercise groups, yoga and other relaxation activities. Although the workplace health promotion program was generally well received by staff, organizers felt that it failed to address the impact that social and organisational factors (e.g., communication systems and workload) were having on the health of employees. Anecdotal evidence also suggested that stress levels among employees were high and this was having an adverse effect on absenteeism, staff retention rates and general work performance. The organisation contacted the authors and sought their assistance in undertaking an occupational stress audit. This audit would consist of a staff survey that was informed by a small qualitative study and the results would be used to help create work situations that protect and promote employee wellbeing. Out of 306 employees, 210 (69%) staff members completed and returned their survey questionnaires.

Measures
The questionnaire used in the present study was designed to measure two dependent variables (psychological health and job satisfaction) and four independent variables (job demand, job control, social support and organization-specific stressors). Self-perceived psychological health was measured using the GHQ-12 (Goldberg and Williams, 1988). The 15-item scale developed by Warr et al. (1979) was used to measure job satisfaction. Participant perceptions of the amount of control they experienced at work were measured using the nine-item decision latitude scale developed by Karasek (1985); the Quantitative Workload scale (Caplan et al., 1980) was used to measure job demands, and; support from colleagues and supervisors was measured by using the work-based component of the social support scale developed by Etzion (1984). The job-specific stressors scale was based on the results of a small qualitative study involving a cross-section of staff members. In this study, two semi-structured focus groups were undertaken to identify the sources of stress experienced by participants. Twenty-three occupational health and safety representatives, who collectively represented sixteen different departments, took part in these focus groups. The results revealed 20 separate stressors that were experienced by participants. Member validation checks and comparisons with the occupational stress literature (e.g., Cox and Cox, 1993) indicated that the overall analysis had satisfactory levels of internal and external validity.

RESULTS
All statistical analyses were undertaken using SPSS 8.0 for Windows (SPSS Inc., 1998). Pre-analysis screening identified no patterns in the missing data and the missing data was treated using listwise deletion (Roth, 1994). Initially, bi-variate correlations were conducted to highlight the pattern of relationships between six job-specific stressors and the generic conditions represented in the JSM (i.e., job demand, job control and work-based support). The six job-specific stressors used in the bi-variate correlations were selected by taking those stressors that were rated by at least 40 percent of respondents as being a moderate, large or major source of stress (i.e., a score of three, four or five on the five-point scale). The bi-variate correlations revealed a large number of significant correlations between the dependent and independent variables. All the components of the JSM and the job-specific stressors were correlated with psychological health. Similarly, all but one of the independent variables were
significantly correlated with job dissatisfaction. From these correlations alone it is not possible to determine the relative importance of the generic and job-specific stressors. Multiple regression was therefore used to clarify the predictive capacity of the JSM and the job-specific stressors.

A two-step hierarchical regression was performed for each of the target variables: psychological health and job dissatisfaction. The JSM variables - job demand, job control, and work support - were entered in the first step so as to ascertain their main effects on the independent variables. The results of the multiple regression analyses in Table I indicate that job control, support from work sources and unrealistic deadlines were significant predictors of both psychological health and job dissatisfaction. The overall equation shown in Table I significantly explains the variance in psychological health, $\Delta R^2 = 0.371$, $F(9, 166) = 12.457$, $p < 0.001$. The overall equation was also significant for the outcome measure of job dissatisfaction, $\Delta R^2 = 0.525$, $F(9, 169) = 22.819$, $p < 0.001$. In terms of the relative contribution of the two sets of independent variables, the components of the JSM accounted for 67 percent of the explained variance in psychological health and 91 percent of the explained variance in job dissatisfaction. Swapping the order of the blocks of predictor variables achieved the same results.

DISCUSSION

The aim of this study was to identify the work characteristics that make significant contributions to the stress experienced by employees in a small-medium sized public sector organisation. The results of the regression analyses indicate that the work characteristics, job control and social support, were both closely linked to the wellbeing of employees. Both of these variables accounted for large proportions of the explained variance in psychological health and job satisfaction and suggest that control and support offer valuable opportunities for creating work situations that can enhance the health of workers.

The predictive capacity of work-based support adds weight to a growing number of studies that have shown strong associations between the advice, assistance and feedback received from colleagues and supervisors and employee wellbeing (e.g., Beehr et al., 1990, Leong et al., 1996). Supervisors and more senior personnel are a particularly valuable source of support since they are often the ones who have the authority and the knowledge to address the specific work-related needs of employees (Beehr et al., 1990). Mechanisms, such as regular feedback sessions and work unit meetings, need to be established to ensure that the workloads of employees are being monitored and that staff are receiving the informational and appraisal support they need (House, 1981). The positive relationship between job control and both measures of employee wellbeing also parallels previous research. A number of experimental and longitudinal studies have strengthened the view that control is an important causal determinant of job strain (e.g., Bosma et al., 1997, Jackson, 1983). Together this research indicates that having a say in what happens in the workplace helps employees to generate greater ownership over their work, to address or avoid stressful situations and, overall, to achieve higher levels of wellbeing.

Although job specific stressors did not account for a large percentage of the explained variance in job satisfaction, they did account for one-third of the variance in psychological health. The job-specific stressor that was found to be closely associated with both psychological health and job satisfaction was unrealistic deadlines. The unrealistic deadlines stressor is similar to another common source of stress - lack of time to do your job as well as...
you would like - and indicates that time-related pressures were strongly linked to the strain experienced by employees involved in the present study. The stress associated with excessive time pressures appears to be closely linked to another common source of stress, difficulty balancing work/non-work commitments. The difficulty balancing work/non-work stressor was predictive of psychological health. Excessive time pressures and rigid working arrangements compound the difficulty associated with meeting family and educational commitments (Pierce and Delahaye, 1996) and can place enormous strain on employees’ relationships with their partners and children (Worrall and Cooper, 1999).

The predictive capacity of both the generic components of the JSM and job-specific stressors suggests that both sets of variables need to be considered when identifying the work characteristics that contribute to employee health. In terms of the JSM, the many parallels between the results of this study and previous occupational stress research reflects the ubiquitous nature of support and control and indicates that these variables need to be assessed regardless of the specific context in which employees work. However the results of the regression analyses, particularly in relation to psychological health, support the view that the narrow scope of the JSM is a limitation of the model and that more job-specific variables should also be measured when investigating the sources of job strain (Sparks and Cooper, 1999).

The present study provides an example of how a workplace health promotion program, that focuses predominantly on lifestyle-related factors, was expanded to include a situation-based occupational stress audit. The results of this study have been presented to the planning committee involved in the present study and will be used to develop strategies that prevent and reduce the strain experienced by employees. Work-based support, job control and time-related pressures were identified as three work characteristics that offer valuable opportunities for boosting the health-promoting value of this organization. Individuals and groups involved in workplace health promotion in other workplaces, particularly in public sector organisations, can use the findings of this study to help overcome one of the key barriers to adopting the health-promoting situational approach - the lack of information on the relationship between work characteristics and employee health.

REFERENCES


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### Table 1: Summary of Hierarchical Regression Analyses for Variables Predicting Psychological Health and Job Satisfaction

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Psychological health</th>
<th>Job Satisfaction</th>
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<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE B</td>
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<tr>
<td><strong>Step 1</strong></td>
<td></td>
<td></td>
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<tr>
<td>Job demand</td>
<td>-0.03</td>
<td>0.06</td>
</tr>
<tr>
<td>Job control</td>
<td>0.21</td>
<td>0.07</td>
</tr>
<tr>
<td>Support</td>
<td>0.11</td>
<td>0.04</td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of time</td>
<td>-0.24</td>
<td>0.42</td>
</tr>
<tr>
<td>Unrealistic deadlines</td>
<td>-0.87</td>
<td>0.41</td>
</tr>
<tr>
<td>Salary not as good</td>
<td>-0.18</td>
<td>0.25</td>
</tr>
<tr>
<td>People not pulling their weight</td>
<td>-0.29</td>
<td>0.30</td>
</tr>
<tr>
<td>Dealing with difficult customers</td>
<td>-0.40</td>
<td>0.35</td>
</tr>
<tr>
<td>Difficulty balancing work/non-work</td>
<td>-0.70</td>
<td>0.32</td>
</tr>
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Note. * p < .05; ** p < .01; *** p < .001