Employee adjustment during organisational change: Differences between occupational groups in a hospital environment

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Abstract

The present study investigated occupational differences in levels of adjustment during organisational change. A diagnostic survey of 744 hospital employees undergoing a large-scale program of change was conducted. Occupational differences in employee adjustment, change appraisal and perceptions of organisational climate were assessed using indicators developed from exploratory interviews and an empirically validated theoretical model of employee adjustment to change (Martin, Jones and Callan, 1999). The results revealed some differences between occupational groups, with one group in particular reporting poorer levels of adjustment. These differences highlight the importance of examining employee perceptions at the sub-group level when implementing change.

Keywords

Employee adjustment; organisational climate; stress; organisational change; multivariate analysis of variance.

Introduction

The impact of organisational change on individual employees’ self-esteem and psychological well being has been an important area of research. Employees often report a sense of uncertainty and anxiety in response to organisational change (Ashford, 1988; Kanter, 1983; Schweiger & Ivancevich, 1985). In their early work on life stress, Holmes and Rahe (1967) identified the experience of change as a defining feature of potentially stressful events. Roney and Cooper (1997) argue that stress at work is primarily caused by what they term “the fundamentals of change” such as increased pressures to perform, lack of job certainty/security, lack of control and constant change in work patterns or management approaches. It is also important to note that reduced employee well-being can have consequences for organisational effectiveness in terms of the organisation-individual relationship, direct and indirect costs and other aspects of organisational health (Quick, Quick, Nelson, & Hurrell, 1997).

The application of a stress and coping perspective to the investigation of employee adjustment during organisational change has provided us with some understanding of the way in which key psycho-social factors interact in predicting adjustment. Terry, Callan and Sartori (1996) tested a model of employee adjustment to change, based on Lazarus and Folkman’s (1984) theory of stress and coping. They found support for this model, but urged researchers to continue to examine the role of organisational factors as well as individual responses to change. Following on from this work, Martin, Jones and Callan (1999) found empirical support for a model that included measures of organisational climate as well as measures of individual appraisals of change and individual differences (e.g. negative affect). In their test of the above model, Martin et al (1999) found that organisational climate was the most influential factor, with strong main effects, and a mediational effect (through change appraisal processes), on adjustment criteria (job satisfaction and psychological well being).

Organisational climate is concerned with the reciprocal interaction of the environment and the person (Schneider and Reichers, 1983). Central to this construct are perceptions about organisational communication such as management style, inter-group and interpersonal relations. An organisation’s core values and strategic objectives also impact on employees’ perceptions of their environment. Michela, Lukaszewski and Allegrante, (1995) argued that aspects of workers’ experiences included within the concept of organisational climate are potential stressors and can serve to broaden the range of variables or conditions examined for their stressful effects.

Situational appraisals reflect the person’s cognitive evaluation regarding how a situation or event will affect his or her level of well being (Lazarus & Folkman, 1984). In other words, how much the person predicts the event will be stressful for them. Terry et al (1991; 1994; 1995) argued that appraisal...
also includes situational self-efficacy expectations. Martin et al (1999) found evidence that judgements about openness (or in reverse, resistance) to change are also part of the appraisal process.

The applied value of these models can be improved by linking them to diagnostic processes that examine the unique climate of each organisation. Such a process needs to include the examination of sub-cultural or occupational group differences, rather than treating employees as a homogeneous group. Overall, this approach would ensure organisation-specific stress management programs are implemented rather than the application of generic models of stress management (Hart & Wearing, 1995; Dewe & O’Driscoll, 1999).

**Aim**

The present study aimed to examine differences between occupational groups in perceptions of climate, psychological appraisal of change and levels of adjustment during organisational change. The results may then be used to identify specific groups that would benefit from interventions designed to facilitate a more positive adjustment process.

**Method**

**Participants and procedure**

Participants were 744 employees at a large public hospital who were experiencing the commencement of a major program of organisational change coinciding with the redevelopment of the hospital site. The change program also aimed to implement significant structural and cultural change, including the introduction of multi-disciplinary teams and co-location of associated specialities.

The sample consisted of 70% women and 30% men. 62% of respondents were aged 20 to 40 years and 38% were aged 41 and over. The occupational categories represented in the sample were Clinical Managers, Non-Clinical Managers and Supervisors, Doctors, Nurses, Allied Health Professionals and Operational, Administrative, Technical and Trade Officers. These represent the major occupational categories working within the hospital. The sample was representative of the employee population on these characteristics.

In October 1998, all employees were mailed a self-administered questionnaire with a postage-paid return envelope. The questionnaire had been pilot tested on a group of 20 employees from various departments and organisational levels. The survey was completed anonymously, however, some descriptive data was gathered.

**Measures**

**Background information**

The first section of the questionnaire gathered demographic and descriptive data such as sex, age bracket, length of service at THE HOSPITAL, length of time in current position, employment status and occupational classification.

**Climate Indicators**

Organisational climate was measured with 5 items which asked staff to rate the extent of their agreement with statements about different aspects of working at the hospital (e.g. “Open and free communication is encouraged”; 1 = strongly disagree to 6 = strongly agree). The items in this scale were developed for use in the survey on the basis of exploratory interview data (Martin et al, 1999).

Work unit functioning was measured with 9 items. These questions asked subjects to rate their work unit in relation to different characteristics of a positively functioning work unit (e.g. How much do you agree that the following are characteristics of your working unit: “Ability to deal with problems”, 1 = strongly disagree to 5 = strongly agree). These items were adapted for use in the survey from Van Kippenberg and Van Oers (1984) and Terry and Callan (1998).

Quality of patient care was measured with 5 items. The items asked staff to rate the extent of their fish agreement with positive statements about their perceptions of the quality of patient care at the hospital (e.g. “In my opinion, patients receive good quality patient care” 1 = strongly disagree to 6 = strongly agree). These items were developed for use in the survey on the basis of exploratory interview data (Martin et al, 1999).

**Change Appraisals**

Appraised stress was measured using 4 items designed to gauge an initial affective reaction to the change. These questions asked subjects to rate the change process on six point bi-polar scales (e.g. 1= “not at all stressful” and 6 = “extremely stressful”), regarding the level of stressfulness, disruption, difficulty and extent of upset. These questions were adapted for use in the survey from Terry, Callan & Sartori (1996) and Terry and Callan (1995).

Self-efficacy, or the extent to which subjects felt they could perform the behaviours required to deal with the changes, was assessed with 4 items (e.g. “I am confident in my ability to deal with the planned structural changes”, 1 = “strongly disagree” and 5 = “strongly agree”). One item was reverse scored “I have reason to believe I will not perform well in my job following the introduction of planned changes”. These items are similar to those used by Ashford (1988) and Terry, Callan and Sartori (1996).
Openness to change was assessed with 5 items that asked respondents to rate the extent of their agreement with a series of statements about their attitudes toward the changes. These attitudes were assessed using a six point likert scale (e.g. “I am looking forward to the changes in my work role at THE HOSPITAL”). The scale contained two reverse scored items (e.g. “Right now I am somewhat resistant to the changes at THE HOSPITAL.” 1 = strongly disagree to 6 = strongly agree). These questions were adapted for use in the survey from items used by Miller, Johnson and Grau (1994).

**Employee adjustment**

Job satisfaction was measured with five items adapted from those used by Caplan, Cobb, French, Van Harrison and Pinneau (1975). The scale assesses generalised levels of job satisfaction (e.g. “All things considered, how satisfied are you with your job? 1 = very dissatisfied to 5 = very satisfied).

Psychological well being was measured using the Psychological Symptoms Scale of Goldberg’s (1972) General Health Questionnaire (GHQ-12). Subjects were asked to estimate how often they experienced 12 different positive and negative psychological health symptoms, using a 4 point likert scale (e.g. “Been feeling reasonably happy all things considered”, 1 = More so than usual to 4 = Much less so than usual; and “Felt constantly under strain”, 1 = Not at all to 4 = Much more than usual).

**Results**

A total of 744 surveys were returned for analysis. Based on calculations about how many staff received the questionnaire, this number represents a 50% response rate.

All of the computed scales were of a moderate to high level of reliability assessed by Cronbach’s alpha co-efficients ranging from 0.76 to 0.95. Multivariate analysis of variance (MANOVA) was conducted to examine group differences in ratings of climate, change appraisal and adjustment indicators. Table 1 shows the means of each group for the different climate, appraisal and adjustment scales.

The first one-way MANOVA was conducted to assess differences between the 6 occupational groups on adjustment criteria: job satisfaction and psychological symptoms (absence of personal well being). A significant overall multivariate effect was obtained (using Wilks Lambda, F(10, 1400) = 1.90, p <.05). Inspection of univariate effects found a significant difference between groups only on the measure of job satisfaction (F(5, 701) = 3.25, p <.01). Student- Newman Keuls tests indicated that operational staff reported significantly lower levels of job satisfaction than Allied Health professionals.

A second MANOVA was conducted to assess differences between the 6 occupational groups on climate indicators: work unit functioning, organisational climate and quality of patient care. A significant overall multivariate effect was obtained (using Wilks Lambda, F(15, 1778) = 4.18, p <.001). Inspection of univariate effects found a significant difference between groups on the measures of work unit functioning, (F(5, 646) = 6.53, p <.001) and organisational climate (F(5, 646) = 7.66, p <.001). No significant effects were found for quality of patient care. Student-Newman Keuls tests indicated that operational staff and non-clinical managers reported significantly lower levels of work unit functioning than Clinical Managers and Allied Health Professionals. In addition, Doctors and operational staff reported significantly less favourable ratings of organisational climate than Clinical Managers and Allied Health professionals.

A third MANOVA was conducted to assess differences between the 6 occupational groups on change appraisals: change-related stress, self-efficacy and openness to change. A significant overall multivariate effect was obtained (using Wilks Lambda, F (15, 1943) = 3.72, p <.001). Inspection of univariate effects found a significant difference between groups on the each of the measures of change appraisal: Openness to change, (F(5, 706) = 3.19, p <.01), Self efficacy (F (5, 706) = 4.56, p <.001), and stress (F (5, 706)) = 4.61, p <.001). Student-Newman Keuls tests indicated that

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**Table 1** Variable Means by Occupational Groups

<table>
<thead>
<tr>
<th>Scale (range)</th>
<th>Clinical Managers (n=69)</th>
<th>Non-Clinical Mangers/Supervisors (n=42)</th>
<th>Doctors (n=54)</th>
<th>Nurses (n=311)</th>
<th>Allied Health Professionals (n=85)</th>
<th>Operational, Administrative, Trade &amp; Tech (n=151)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job Satisfaction (1-5)</td>
<td>3.60 3.43</td>
<td>3.45 3.49</td>
<td>3.70</td>
<td>3.26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychological Symptoms (0-3)</td>
<td>0.97 0.99</td>
<td>1.00 0.93</td>
<td>0.91</td>
<td>1.02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organisational Climate (1-6)</td>
<td>4.58 4.19</td>
<td>3.83 4.19</td>
<td>4.63</td>
<td>3.89</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work Unit Functioning (1-5)</td>
<td>4.19 3.72</td>
<td>3.90 3.99</td>
<td>4.20</td>
<td>3.65</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality of Patient Care (1-6)</td>
<td>4.76 4.59</td>
<td>4.79 4.70</td>
<td>4.88</td>
<td>4.57</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change Related Stress (1-6)</td>
<td>3.54 3.35</td>
<td>2.92 3.14</td>
<td>2.94</td>
<td>3.58</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self Efficacy (1-5)</td>
<td>3.74 3.73</td>
<td>3.72 3.63</td>
<td>3.69</td>
<td>3.48</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Openness to Change (1-6)</td>
<td>5.16 4.99</td>
<td>4.69 4.94</td>
<td>4.97</td>
<td>4.74</td>
<td></td>
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</tr>
</tbody>
</table>

Doctors and operational staff reported significantly lower levels of openness to change than Clinical Managers. Operational staff reported significantly lower self-efficacy than Doctors, Allied Health professionals, Non-clinical and Clinical Managers. Doctors and Allied Health professionals reported significantly lower levels of change-related stress than Clinical Managers and Operational staff.

**Discussion**

Operational, administrative, technical and trade staff were significantly more likely to report lower job satisfaction and self efficacy, higher change related stress and rate the organisational climate and their work unit functioning less favourably than other occupational groups. In a qualitative study of employee sources of stress during change, Martin and Jones (2000) found that this group of staff reported that communication climate (in particular poor manager and supervisor communication style) was the major source of stress during change.

This pattern of results (poorer levels of adjustment across a range of indicators) is not surprising as support staff often fare worse than professional groups during organisational change, particularly in relation to downsizing and the amount of political influence they are able to exert. The concept of job control is highly relevant here. The decision latitude-job control model of occupational stress highlights the important role of job control in predicting levels of occupational stress and employee well-being (Karasek, 1979; Jimmieson & Terry, 1993).

The analyses also revealed significant differences for some of the other occupational groups. Non-clinical managers were significantly more negative in their perceptions of work unit functioning than other groups. These managers supervise the operational group described above and come from a similar occupational background, and thus it is likely that they might share some perceptions about the work climate.

Doctors rated the organisational climate less favourably and were less open to change than other groups. The fact that Doctors had more negative perceptions about the organisational climate may be because Doctors see themselves as the “internal client” within the hospital and thus have higher expectations about the extent of innovation and flexibility in delivering patient care (these are some of the items in the scale). They may be less open to change due to the pressure for major changes to how doctors practice in the new hospital. They are perhaps the most powerful political group within the organisation and it could be argued that they have strong vested interests in resisting change.

Clinical managers reported significantly more change-related stress than other groups. This group is primarily responsible for developing and implementing a lot of significant changes in relation to the core business of the hospital (patient care). It could be argued that the managerial responsibility for this process creates increased workload for this group. In addition, these managers often have to deal with increased hostility and or uncertainty from employees in response to the changes. Callan and Dickson (1992) also found that managers experience high levels of stress during change due to such pressures.

**Conclusion**

Overall, the results showed that while there were many similarities between the occupational groups, some statistically significant differences in perceptions of climate, appraisal of change and levels of adjustment were detected. These differences reflected the differing positions and roles of the groups in the organisation.

The results highlight the importance of organisations undergoing change developing targeted interventions for specific occupational groups. In particular, this study reported a pattern of negative perceptions for one group in particular (operational, administrative, technical and trade officers). These results suggest that this group could benefit from a number of specifically targeted intervention strategies focusing on organisational and work unit climate. Moreover, the results emphasise the importance of ensuring that all staff are involved in, and have knowledge about, the change process. Greenhalg and Jick (1989) found that a core organisational change stressor is ambiguity regarding the organisation’s future. The results also highlight the value of change management strategies differentiating between managerial and nonmanagerial staff. Future research will evaluate the effectiveness of such interventions in terms of managing stress and improving employee adjustment is currently being evaluated. These interventions are targeted at the organisational, or primary, level as well as at the individual, or secondary, level.

**References**


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