Sources of stress and strategies for intervention during organisational change in a hospital environment

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Abstract
The present study investigated stress and stress management during organisational change. A diagnostic survey of 744 hospital employees undergoing a large-scale program of change was conducted. Sources of stress and possible strategies for intervention were determined using a qualitative approach. The major sources of stress were communication climate and resourcing issues. The intervention preferred by the majority of employees was an improved change process, including widespread dissemination of detailed information about the changes. The results also revealed some differences between occupational groups in what they described as significant sources of stress and what intervention strategies they requested. The paper concludes by discussing recommendations for managing stress during change.

Keywords
Stress; stress management; organisational change; content analysis.

Introduction
It can be argued that organisational change presents a stressful situation which can remain salient to employees for an extended period of time. Thoits (1986) describes stressful situations as those where a person is faced with an event or condition that disrupts their ability to engage in everyday activities. While temporary or infrequent stressors may be only mildly discomforting, long-term, chronic or compounded stressors can be quite problematic (Lowe & Northcott, 1987).

Organisational change can exacerbate inherent occupational stressors for many employees, and when job pressures exceed an individual’s ability to cope, behavioural, psychological and physiological problems can result (McLaney & Hurrell, 1988; Nowack, 1989; Fielding, 1989). Reduced employee well-being can also 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).

Much of the organisational development literature has been concerned with models of organisational change, and processes and interventions that aim to inform the implementation of change in a manner that benefits the organisation and minimises the stress experienced by employees. Cartwright & Cooper (1996) and Quick et al (1997) refer to stress management strategies as primary, secondary and tertiary. Interventions that aim to reduce occupational stress have largely focused on secondary and tertiary strategies, or psychological programs that target change in individual employees. This is despite continued recommendations that researchers address organisational issues (Reynolds and Shapiro, 1991). There are both ethical and practical consequences of implementing interventions which only aim to improve an employee’s response to stressors (Murphy, 1988; Ganster, Mayes, Sime, and Tharp, 1982; De Frank and Cooper, 1987). Roney and Cooper (1997) propose that primary prevention, or attempting to eliminate stress at its source, is the most effective way to approach stress management. They also argue that any intervention needs to be guided by a diagnosis which identifies what the stressors in a particular organisation are and who is affected by them. A wide sample of responses also ensures the development of appropriately consulted interventions.

Aim
The present study aimed to obtain and analyse qualitative data from a large sample of employees regarding sources of occupational stress and the desired remedial actions that could be taken by management to reduce or eliminate the change related stressors. The study also aimed to investigate occupational differences in sources of stress and strategies for intervention so that the priorities of different groups could be established and interventions appropriately targeted.
Methodology

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 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. 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 about the respondent was gathered.

Measures
A survey containing a range of quantitative measures (see Martin & Jones, 2000) also included two open-ended questions. These questions were worded “What causes you the most stress at work?” and “What would help you most in handling the changes? Write down anything that comes to mind.”

Results and Discussion

Data analysis procedure
A total of 744 surveys were returned for analysis. Based on calculations about how many staff received the questionnaire, this represents a 50% response rate. Within the sample obtained, response rates for the open-ended questions 1 and 2 were 85.2% and 71.6% respectively.

A standard content analysis of this data was conducted for each question. Firstly, all responses were read by the researcher in order to gain an overview of the major issues. Upon the second reading of responses, categories were developed which encompassed all of the responses. A number of themes emerged and several categories were developed and defined for the purposes of coding this data. Most of the categories generated from the data reflect occupational stressors typically identified in the literature (Cooper and Marshall, 1976; Roney and Cooper, 1997). However, themes specific to this organisation, or hospitals in general also emerged. The defining characteristics of each category are available from the authors upon request.

Inter-rater reliabilities were calculated for the coding of both data sets. A second rater independently recoded approximately 20% of the data using the categories that had been developed. The resulting level of agreement between the additional rater and the researcher was 83% for the first question and 73% for the second. Discussions following this process enabled 100% agreement to be obtained.

Finally, all responses were allocated a particular category. It is important to note that many employees mentioned multiple categories. Where more than one category was mentioned, only the first comment was coded to allow for the calculation of discrete frequencies in each of the occupational groups.

Cross tabulations revealed some important differences in sources of stress and desired interventions for the various occupational groups. Matrices which include percentages for each of the categories by occupational group are provided in Tables 1 and 2 for each of the open ended questions respectively.

Employee perceptions of sources of stress
It is important to note here that the coding categories “ineffective communication climate” and “ineffective management and supervisor communication” could be merged into a meta-category called organisational communication climate, which would then account for the majority of responses. Separate categories were retained in the analysis so that the magnitude of problems with management communication could be established.

Table 1 Employee perceptions of causes of stress for each occupational group

<table>
<thead>
<tr>
<th></th>
<th>Clinical Mgrs</th>
<th>Non-Clinical Mgrs &amp; Supvs</th>
<th>Doctors</th>
<th>Nurses</th>
<th>Allied Health Prof</th>
<th>Operational, Administrative, Trade &amp; Tech.</th>
<th>Total Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resources</td>
<td>15.2%</td>
<td>20.0%</td>
<td>13.5%</td>
<td>30.0%</td>
<td>24.6%</td>
<td>15.5%</td>
<td>22.7%</td>
</tr>
<tr>
<td>Communication</td>
<td>24.2%</td>
<td>28.6%</td>
<td>19.2%</td>
<td>24.0%</td>
<td>14.5%</td>
<td>9.3%</td>
<td>19.9%</td>
</tr>
<tr>
<td>Climate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Workload</td>
<td>15.2%</td>
<td>11.4%</td>
<td>34.6%</td>
<td>9.5%</td>
<td>17.4%</td>
<td>14.7%</td>
<td>14.1%</td>
</tr>
<tr>
<td>Manager &amp; Supv.</td>
<td>10.6%</td>
<td>8.6%</td>
<td>0.0%</td>
<td>8.8%</td>
<td>23.2%</td>
<td>21.7%</td>
<td>13.0%</td>
</tr>
<tr>
<td>Communication</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change Process</td>
<td>13.6%</td>
<td>2.9%</td>
<td>9.6%</td>
<td>5.7%</td>
<td>2.9%</td>
<td>10.1%</td>
<td>7.1%</td>
</tr>
<tr>
<td>Misc.</td>
<td>4.5%</td>
<td>5.7%</td>
<td>3.8%</td>
<td>6.7%</td>
<td>1.4%</td>
<td>6.2%</td>
<td>5.7%</td>
</tr>
<tr>
<td>Structure &amp; Procs</td>
<td>9.1%</td>
<td>11.4%</td>
<td>5.8%</td>
<td>3.9%</td>
<td>2.9%</td>
<td>5.4%</td>
<td>5.1%</td>
</tr>
<tr>
<td>Job Tasks</td>
<td>0.0%</td>
<td>2.9%</td>
<td>11.5%</td>
<td>4.9%</td>
<td>8.7%</td>
<td>2.3%</td>
<td>4.7%</td>
</tr>
<tr>
<td>Rosters &amp; Shifts</td>
<td>1.5%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>4.2%</td>
<td>1.4%</td>
<td>0.8%</td>
<td>2.3%</td>
</tr>
</tbody>
</table>

Edited by M. Sheehan, S. Ramsay
The category “ineffective communication climate” included comments characterised by references to general interpersonal tensions, co-worker attitudes, poor morale and motivation, lack of teamwork, organisational politics, resistance to change, conflict and aggressive behaviour. In addition, the issue of inter-group relations was quite salient in the sample. Many respondents highlighted a lack of communication or cooperation between professional groups or departments as a stressful aspect of the communication climate. Also included in this category were comments related to a perceived lack of consultation and participation in change-related decision making.

The category “ineffective management and supervisor communication style” included any comments about superiors such as unprofessional and aggressive behaviour, autocratic management style, a lack of encouragement, acknowledgment and feedback, a lack of listening, support and understanding and a lack of clear directions.

At the organisational level, the analysis revealed that during a change program, communication with others (i.e. superiors, colleagues, subordinates and patients) is the major source of stress. Michela, Lukaszwski and Allegrange, (1995) argued that aspects of worker’s 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.

Another major source of stress was “inadequate resources to provide quality patient care.” This category included comments related to the need for adequate numbers of permanent trained staff, improved facilities and equipment and general comments about the compromising of quality standards due to too much focus on cost cutting.

The coding category “increased workload” was also frequently mentioned as a source of stress. These comments were often linked to concerns about staffing levels (resources category), however it was retained as a separate category which contained references to long hours and frequent unpaid overtime or excessive work demands (competition demands, time management issues, not getting breaks). Roney and Cooper (1997) have also reported that increased workloads and limited resources can mean overwork for employees, which in turn can impact on organisational effectiveness.

Overall, these results are indicative that organisational climate issues are the primary source of stress for the majority of employees undergoing organisational change in a hospital environment, followed by resourcing issues. There were, however, some important differences between groups in the sources of stress they described (see Table 1).

**Group differences**

For managers (clinical and non-clinical) communication climate was the most frequently mentioned category, followed by inadequate resources. These groups also mentioned inefficient organisational structure and procedures more often than other groups. In addition, non-clinical managers mentioned HRM and OH&S issues more often than other groups. Clinical managers mentioned the change process itself as a source of stress more often than other groups. Martin and Jones (2000) also found that clinical managers had higher levels of change-related stress than other groups due to their responsibility for implementing significant changes to clinical practice.

Doctors talked about workload more often than climate and also mentioned job tasks as stressful more often than other groups. These findings are not surprising given workloads of up to 60 hours a week and a job involving responsibility for the lives of patients.

Nurses reported that the inadequate resources available had a major impact on the delivery of quality patient care. These findings are consistent with those of Baglioni, Cooper and Hingley (1990) who report considerable role conflict amongst nurses, stemming from discrepancies between the goals of clinical care and the goals of economic rationalism. Nurses also mentioned rosters and shift work as a source of stress more often than other groups.

Allied health professionals mentioned resources and managers and supervisors as the two most common sources of stress. Similarly to nurses, because allied health staff deliver patient care, they too feel this tension, or role conflict due to a lack of resources.

The operational group reported ineffective manager and supervisor communication style as the major source of stress. They were also the only group to make considerable mention of job security as a stressor. This group also found the change process more stressful than other groups. Martin and Jones (2000) found that operational staff had consistently more negative perceptions about organisational change across a range of climate, stress and adjustment criteria. These negative perceptions were attributed to the weak political position within the hospital culture and low levels of control, or influence of operational staff. over the change process.
communication skills and consistent orientation and employees felt were necessary were training in frequently requested. Other forms of training that computers, equipment and new technologies were particular, training and support in the area of by staff as an important form of intervention. In deal with changing roles/tasks” was also identified The provision of “training that enhances skills to management interventions. organisational climate will support any stress (1997) advocate the creation of healthy and style or organisational culture. Roney and Cooper training, or changes to workplace design, managerial process and may be assisted by interpersonal skills Improving interpersonal relationships is a complex making and an improved patient care focus. Table 2 indicates that, overwhelmingly, most employees wanted a more transparent change process. This category, “clearly planning and communicating the change process” consisted of requests for the dissemination of honest and detailed information about the rationale for change, job security, expectations and roles and responsibilities. Employees want to see evidence of thorough planning and objectives, a manageable pace and a clear time-line. They wanted information to be disseminated to all staff through a variety of channels (web site notice board, newsletters, in-services/personal visits, meetings, videos for night shifts etc). These improvements could include a goal setting process for each work area that includes determining milestones and evaluation criteria that employees have had some input into. Greenhalgh and Jick (1989) found that a core organisational change stressor is ambiguity regarding the organisation’s future. Sutton and Kahn (1986) argue that understanding, prediction and control of changes act as “stress antidotes” and thus, attention must be directed towards ensuring that employees are able to do this.

The next most often requested intervention was “improved organisational climate”. This category included comments related to the need for improved communication, morale, teamwork, interdisciplinary respect and more socially skilled and supportive colleagues. Also included were comments regarding the need for increased participation in decision-making and an improved patient care focus. Improving interpersonal relationships is a complex process and may be assisted by interpersonal skills training, or changes to workplace design, managerial style or organisational culture. Roney and Cooper (1997) advocate the creation of healthy and supportive networks within the work environment, because it is extremely important that the organisational climate will support any stress management interventions.

The provision of “training that enhances skills to deal with changing roles/tasks” was also identified by staff as an important form of intervention. In particular, training and support in the area of computers, equipment and new technologies were frequently requested. Other forms of training that employees felt were necessary were training in communication skills and consistent orientation and induction for new and temporary staff. Other relevant issues included in this category were that training needed to be delivered in an equitable manner and that attendance at training should be supported by workload reduction/timeout to integrate learning, practice skills and develop mastery and confidence. Hurrell (1989) also suggests extensive training programs for workers whose jobs are being changed. It is recommended that the improvements to the change process include a training needs analysis to determine the technical and communication skills necessary to achieve organisational change objectives.

Although the lack of resources was identified as one of the major sources of stress, it is interesting to note that employees were less likely to request an intervention in this area. This could be due to a sense of realism about budget restrictions and decreasing funding levels in the health sector. Although employees are generally quite stressed by the lack of resources and the effects of this on patient care, many of them may realise that change process and climate factors are more readily altered than funding levels.

Overall, these results indicate that what employees want most are organisational level (or primary) interventions directed at improving the change process and the climate within which the changes are implemented. However, individual-level strategies such as training are still considered important in some groups.

Group differences
Again, some interesting differences between groups emerged. Clinical managers were more concerned about intervening in the areas of resourcing and leadership than other groups. This finding is consistent with the major sources of stress identified by this group (communication climate, lack of resources and increased workload).

Doctors also requested assistance in the area of resources more often than other groups. When looking at the sources of stress for this group, the links between resources and workload are evident.

Nurses and operational staff were more interested in training than other groups. A lack of training is often linked to limited resources, a major source of stress for nurses in particular. Training in communication was often mentioned. This strategy would improve
the organisational climate, the second major source of stress for nurses. Martin and Jones (2000) also found that the operational group had lower levels of situational self-efficacy. Ensuring that these staff have the necessary skills to perform adequately in changing roles should improve their self-efficacy.

Operational staff mentioned improvements in the area of leadership more frequently than other groups (except clinical managers). This reflects their dissatisfaction with manager and supervisor communication (the major source of stress for this group).

**Conclusion**

The qualitative approach employed in this study enabled issues of stress and intervention during change to be examined in a diagnostic manner, so that the most effective strategies for different groups within the organisation could be appropriately targeted. Climate issues such as interpersonal communication, resource versus quality tensions and the increased workload resulting from this were the major sources of stress for hospital employees experiencing change.

Employees demonstrated a sense of realism about the possibility for changing resource allocation by requesting change management and climate interventions. Because additional resourcing is not possible, creating structural efficiencies and improving the organisational climate and change process by enhancing communication between staff at all levels should be a major priority.

**References**


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