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Job uncertainty and personal control during downsizing: A comparison of survivors and victims

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ABSTRACT

This study developed and tested a model of job uncertainty for survivors and victims of downsizing. Data were collected from three samples of employees in a public hospital, each representing three phases of the downsizing process: immediately before the announcement of the redeployment of staff, during the implementation of the downsizing, and towards the end of the official change programme. As predicted, levels of job uncertainty and personal control had a direct relationship with emotional exhaustion and job satisfaction. In addition, there was evidence to suggest that personal control mediated the relationship between job uncertainty and employee adjustment, a pattern of results that varied across each of the three phases of the change event. From the perspective of the organization's overall climate, it was found that levels of job uncertainty, personal control and job satisfaction improved and/or stabilized over the downsizing process. During the implementation phase, survivors experienced higher levels of personal control than victims, but both groups of employees reported similar levels of job uncertainty. We discuss the implications of our results for strategically managing uncertainty during and after organizational change.

KEYWORDS control ▪ downsizing ▪ survivors ▪ uncertainty ▪ victims

Restructuring and downsizing have become established concepts in the lexicons of organizations and their members (Armstrong-Strassen, 2002). Although these strategies are typically undertaken to improve organizational efficiency (Shaw & Barrett-Power, 1997), many restructuring and downsizing efforts are undermined by the negative outcomes experienced by 'surviving' employees and 'victims' of downsizing alike (Latack et al., 1995; see also Thornhill & Saunders, 1998). Recognizing this, a body of research has examined factors that influence employee adjustment to downsizing, including job insecurity (Armstrong-Strassen, 1998; Hellgren & Sverke, 2003; Hellgren et al., 1999), work ethic (Brockner et al., 1988), empowerment (Niehoff et al., 2001) and workload (Greenglass & Burke, 2000).

One aspect of employees' restructuring and downsizing experience that has received less attention is job uncertainty (Bordia et al., 2004a; Kivimaki et al., 2001). Redeployment and retrenchment announcements create stressful environments for employees as they struggle with uncertainties surrounding the security of their position in the organization (Jackson et al., 1987; Jimmieson et al., 2004). In these unpredictable and uncertain working environments, employees are expected to continue their jobs amidst changes to workplace culture, organizational structures, and work roles and responsibilities (Jackson et al., 1987; Schweiger & DeNisi, 1991). Despite the reality of this situation for many organizations, there has been a limited research focus on how job uncertainty is conceptually related to other negative outcomes and what factors might mediate its impact during downsizing (see Ashford et al., 1989; Bordia et al., 2004a). In addition, most studies of job uncertainty in other change contexts are cross-sectional in nature (Ito & Brotheridge, 2001; Maurier & Northcott, 2000), and most studies of downsizing are conducted either after layoffs have occurred (Greenglass & Burke, 2000; Niehoff et al., 2001), or only examine the adjustment of survivors (Kernan & Hanges, 2002) or victims (Bennett et al., 1995). As a result, relatively little is known regarding the extent to which survivors and victims experience job uncertainty and its correlates at different stages of downsizing, or the extent to which organizations and their members recover from lingering job uncertainty in downsized organizations.

Building on previous research, the present study utilized a repeated cross-sectional research design to examine the adjustment of survivors and victims in a large psychiatric hospital undergoing restructuring and downsizing. Levels of job uncertainty and personal control were measured immediately before the implementation of the change, during the implementation of the change, and one and a half years later as survivors implemented the final stages of the change programme. Therefore the study reported in this article presented a unique research opportunity to capture employee perceptions

across three stages of downsizing as well as the perceptions of both survivors and victims during the implementation of the change programme. In each phase of the study, we explored the mediating relationship between job uncertainty and personal control in the prediction of emotional exhaustion and job satisfaction. Indeed, at the individual level, one of the most harmful impacts of change is the reduced adjustment of employees, as evidenced by heightened levels of emotional exhaustion and other stress symptoms (Ashford, 1988; Hellgren et al., 1999; Jackson et al., 1987; Miller & Monge, 1985; Schweiger & DeNisi, 1991). Job uncertainty and a lack of personal control over issues of personal significance (e.g. work roles) can lead to a feeling of being overwhelmed and dissatisfied by events. Thus, emotional exhaustion and job satisfaction served as the indicators of employee adjustment for the present research. The design allowed us to identify the differential effects of downsizing on survivors' and victims' levels of job uncertainty and personal control, and in doing so, to illustrate the importance of uncertainty management throughout different stages of downsizing.

Job uncertainty and its correlates during downsizing

According to Milliken (1987), uncertainty involves an individual's perceived inability to accurately predict the consequences of choices or decisions. Uncertainty is an aversive state that arises due to a lack of sufficient information, or the inability to discriminate between relevant and irrelevant information (Gifford et al., 1979). Our focus is on individual perceptions of job-related uncertainty during organizational change (Bordia et al., 2004a), which refers to employees' uncertainty about aspects of their immediate work situation such as changes to the job role, job tasks, promotion opportunities, and so forth (Buono & Bowditch, 1989; Jackson et al., 1987). This focus is somewhat different to job insecurity, which relates to employee perceptions regarding the continuity of the job itself (De Witte, 1999). Most conceptualizations of job insecurity include elements of uncertainty; however, the concept generally relates to an overall concern about the continued existence of the job in the future (Hellgren et al., 1999). Others have argued for a more nuanced conceptualization of job insecurity, which incorporates both objective and subjective components (Blau & Sharp, 2000; Blau et al., 2004; Chirumbolo & Hellgren, 2003; Hellgren et al., 1999). The objective component of job insecurity reflects changes in the organization or society at large and concerns about the future existence of the current job, whereas the subjective component relates to individual appraisals of uncertainties in the work environment (Chirumbolo & Hellgren, 2003; Hellgren et al., 1999). It is this latter aspect of job insecurity that is akin to the

approach taken here. We focus on uncertainty regarding content and features of the job (De Witte, 1999) rather than the more specific perceptions related to the continuation of the job per se. In the organization under study, jobs were changing through the adoption of a new service delivery model being implemented over a 2-year period. At the same time, the organization was downsizing. Consequently, for all staff, both those who eventually retained a job in the new structure and therefore gained a sense of job security (survivors) and those who did not (victims), there was a degree of uncertainty over the nature of tasks, the future team structure, and how much control employees had over the way in which jobs were to be implemented in the new service delivery model.

Previous research in other change contexts suggests that job uncertainty is linked to higher levels of employee stress and strain, reduced job satisfaction and job commitment, and an increased desire to leave the organization (Ashford, 1988; Ashford et al., 1989; Matteson & Ivancevich, 1990; Pollard, 2001; Terry & Jimmieson, 2003). The model of job uncertainty tested in the current research extends a prior analysis of the job uncertainty construct (Bordia et al., 2004a, 2004b). We examine the mediating role of personal control in the relationship between job uncertainty and employee adjustment throughout three different stages of downsizing, as well as the overall levels of job uncertainty and its correlates for survivors and victims. The model is based on three central propositions: (i) job uncertainty is related to employee adjustment, (ii) personal control is related to employee adjustment, and (iii) the relationship between job uncertainty and employee adjustment is mediated by employees' perceptions of personal control (see Figure 1).

First, job uncertainty is related to levels of employee adjustment. Uncertainty is a stressful state in and of itself. The inability to predict one's environment is maladaptive because one cannot adequately prepare for, or

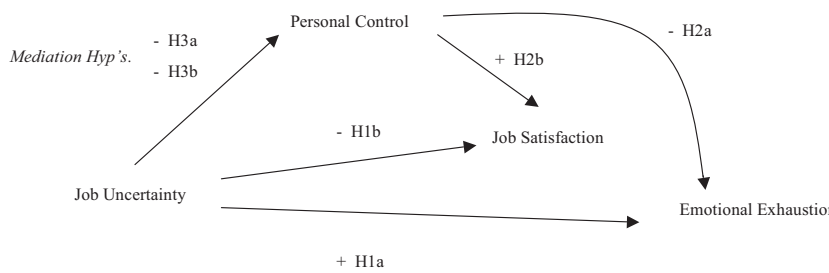

Figure 1 Diagram of mediation hypotheses

deal with, the unknown. This idea is inherent in several theories that treat uncertainty reduction as a motivational force for individual and group behaviour (Berger & Bradac, 1982; Hogg & Mullin, 1999; Kramer, 1999). The organizational change literature has also emphasized the psychological discomfort associated with uncertainty. For instance, Miller and Monge (1985) found that uncertainty was related to anxiety. Schweiger and DeNisi (1991) found that uncertainty had a moderate correlation with stress, averaging around .30 across several periods. Similarly, Ashford (1988) found relationships between uncertainty and measures of tiredness, depression and nervousness. More recently, Jimmieson et al. (2004) found that employees who perceived higher levels of change-related information in the early phases of the regionalization process of a state government department reported higher levels of psychological well-being, client engagement and job satisfaction. Based on these findings, in the context of restructuring and downsizing, we predicted that:

> *Hypothesis 1a*: Job uncertainty would be positively related to emotional exhaustion.
>
> *Hypothesis 1b*: Job uncertainty would be negatively related to job satisfaction.

Second, personal control is related to employee adjustment. The notion of personal control, or the degree to which individuals feel in control of their environment, is central to the work stress literature and has been studied in a number of ways (Karasek, 1979; Terry & Jimmieson, 1999). In general, the more personal control we have over stressful events, the less harmful the consequences of the stressors. In the occupational stress literature, it has been shown that a sense of control is desirable when individuals are required to cope with threatening or aversive events (Ganster & Fusilier, 1989; Greenberger & Strasser, 1986). Indeed, studies that have examined employee adjustment to change have supported the importance of control appraisals in coping with change (Karasek, 1979; Lazarus & Folkman, 1984; Mishra & Spreitzer, 1998). Low levels of personal control have been associated with poorer physiological and psychological well-being (Terry & Jimmieson, 1999), decrements in performance (Bazerman, 1982) and learned helplessness (Martinko & Gardner, 1982). Other studies of strategies for coping with stress during organizational change have examined how individuals regain a sense of control by using a range of problem-focused and emotion-focused coping strategies (Ashford, 1988; Terry & Callan, 1997). Thus, based on previous research of this nature, we predicted that:

Hypothesis 2a: Personal control would be negatively related to emotional exhaustion.

Hypothesis 2b: Personal control would be positively related to job satisfaction.

Third, the relationship between job uncertainty and employee adjustment is mediated by levels of personal control. A number of investigators have suggested that the association between uncertainty and strain is mediated by feelings of personal control (Bordia et al., 2004b; DiFonzo & Bordia, 2002; Hogg & Mullin, 1999; Ito & Brotheridge, 2001; Lazarus & Folkman, 1984). However, there is a lack of research that specifically examines the mediating role of personal control between job uncertainty and the well-being of survivors and victims of downsizing (see Ashford, 1988; Ito & Brotheridge, 2001). This study tests this relationship over three different stages of an organizational change process. In this research, it is proposed that the psychological mechanism through which job uncertainty is related to employee adjustment is that of personal control. Several studies support this proposition and these are briefly reviewed.

For example, Hogg and Mullin (1999) have noted that job uncertainty is an aversive state because it threatens people's sense of personal control over their actions (Hogg & Mullin, 1999). As Terry and Jimmieson (1999) also assert, knowledge of outcomes (i.e. the opposite of uncertainty) is a prerequisite to the ability to influence the outcomes. Similarly, Berger and Bradac (1982) claim that knowledge is essential to gain control and achieve desired aims from interpersonal interactions. Several authors have drawn links between uncertainty and control in the context of organizational change. Bastien (1987) noted that employee uncertainty in a merger is associated with a change in locus of control from within the individual (in their known organizational context) to outside the individual (in an unknown organizational context). If employees do not know the nature and consequences of the change upon their job, status or reporting structures, they often feel ill-equipped to deal with the change; in other words, they lack personal control over the change process. Reflecting this, studies report a negative relationship between job uncertainty and personal control, as well as control-related constructs such as feelings of powerlessness (Ashford et al., 1989; Parker et al., 1997). In the context of restructuring and downsizing, therefore, we predicted that job uncertainty engenders a depleted sense of personal control, which, in turn, heightens emotional exhaustion and reduces job satisfaction. That is:

Hypothesis 3a: Personal control would mediate the relationship between job uncertainty and emotional exhaustion.

Hypothesis 3b: Personal control would mediate the relationship between job uncertainty and job satisfaction.

The model of job uncertainty outlined earlier may help to explain why downsizing tends to be more stressful for some employees than for others (Pollard, 2001). However, it is also important to recognize that organizational change is a dynamic process that unfolds over time (Armenakis et al., 2001). As such, different stages of downsizing may influence the levels of job uncertainty and personal control experienced by employees. To this end, Isabella (1990) identified three stages of change that can be usefully applied to downsizing: the anticipation, implementation and aftermath stages.

Anticipating downsizing

In the anticipation stage of downsizing, employees are typically aware of impending layoffs but do not know whether or not they have a job in the downsized organization. Not surprisingly, this situation creates a highly uncertain environment for employees, which affects not only their levels of job security (Armstrong-Strassen, 2002), but also their ability to predict the nature of their working environment in the new organization (Jackson et al., 1987). Coupled with the often-disempowering experience of downsizing (see Mishra & Spreitzer, 1998), these heightened levels of uncertainty can lead to perceptions of a lack of personal control over the future. For instance, Fugate et al. (2002) found that levels of personal control were lowest during the anticipation stage of a merger, where levels of job uncertainty were high because employees were expecting job losses. Personal control increased over time as employees learnt about how the change would affect them. Other research has shown that uncertainty and strain responses are heightened during the anticipation and implementation stage of change compared with the aftermath (Fugate et al., 2002; Parker et al., 1997; Pollard, 2001).

Based on this line of reasoning, it seems reasonable to expect that employees would experience the highest levels of job uncertainty and lowest levels of personal control in the anticipation stage of downsizing. As downsizing progresses and employees learn whether they will be staying or leaving the organization, levels of job uncertainty should decrease and levels of personal control should increase during the implementation stage of downsizing. At this time in the downsizing process, employees learn of their

employment status and two distinct groups of employees emerge: survivors, who remain with the organization; and victims, who leave the organization as their employment contracts are terminated. In this study, employees were surveyed in the anticipation stage, immediately prior to the implementation of the new service delivery model and prior to decisions regarding deployment of staff to jobs in the new structure.

Implementing downsizing: survivors and victims

In an examination of survivors' and victims' responses to downsizing, Armstrong-Strassen (1997) found that victims engaged in less effective coping and were more stressed than survivors. However, in a more recent study, Armstrong-Strassen (2002) observed that there were no differences in levels of perceived job security between survivors and victims. Although levels improve from the anticipation stage, job uncertainty and personal control issues can continue to have an impact on victims of downsizing during the implementation of change (Thornhill & Saunders, 1998). Even though they have received notice of redundancy, victims may still feel uncertain about employment obligations and further redeployment options (Doherty et al., 1993). These issues may be particularly salient for victims who continue working in the organization until their contract expires. Survivors of downsizing also experience adverse effects as they are confronted with uncertainties about new or altered job responsibilities, changes in career paths and work group changes (Brockner, 1992; Kernan & Hanges, 2002). Therefore, although we expected overall levels of job uncertainty to decline between the anticipation and implementation stages of downsizing, we did not predict differences in survivors' and victims' levels of job uncertainty during the implementation of change. In the current study, survivors and victims worked together for up to 18 months while the new service model and associated job changes were implemented. It was expected that both groups of employees would be faced with similar levels of job uncertainty as they performed their jobs in a state of organizational flux.

> *Hypothesis 4*: Survivors and victims would feel similar levels of job uncertainty in the implementation of downsizing.

Differences were expected, however, in perceptions of personal control between survivors and victims of downsizing. Losing one's job is damaging to an employee's sense of personal control over the future. Learning that they are no longer required in the new organization can be a highly disempowering experience for victims of downsizing (Mishra & Spreitzer, 1998).

Research has indicated that during downsizing, victims' perceptions of personal control remain important as they contribute to more effective coping strategies (Bennett et al., 1995; Latack et al., 1995; Leana & Feldman, 1990). Although they are often required to remain with the organization until their contract expires, victims of downsizing may feel less able to make decisions, solve difficulties and rise to work challenges. We therefore predicted that:

> *Hypothesis 5*: Survivors would feel more personal control at work than victims in the implementation of downsizing.

Aftermath of downsizing

Some studies indicate that survivors show reduced levels of work effort, job satisfaction and organizational commitment in the aftermath of downsizing (Brockner et al., 1988; Campbell-Jamison et al., 2001). These negative reactions may be due to increased workload (Greenglass & Burke, 2000), increased job insecurity (Hellgren et al., 1999; Kivimaki et al., 2001), or a loss of trust in the organization (Niehoff et al., 2001). The negative responses of employees who retain their jobs after downsizing are sometimes referred to as 'survivor syndrome' (Baruch & Hind, 2000); however, the research examining survivor responses to downsizing is inconclusive. Other studies show that the most negative impact on survivor attitudes occurs immediately post-downsizing, but in the aftermath of downsizing, attitudes return to pre-downsizing levels (Armstrong-Strassen, 2002; Parker et al., 1997) or may even improve attitudes (Baruch & Hind, 2000).

Although the findings relating to employee attitudes during downsizing are somewhat mixed, research in other change contexts suggests that employees' levels of job uncertainty and personal control stabilize or improve after major change events. Nelson et al. (1995) found no significant changes in job uncertainty and personal control over time in a longitudinal study of the impact of privatization and reorganization. Pollard (2001) found that levels of tense arousal, self-reported mental health, and systolic blood pressure were highest just prior to and 4 months after reorganization, and levels of uncertainty were positively associated with these variables. Other research has shown that uncertainty and stress are elevated during change, but then decrease or stabilize after the implementation of change (Armstrong-Strassen, 2002; Parker et al., 1997; Pollard, 2001; Schweiger & DeNisi, 1991). For instance, Parker and colleagues found that role clarity, job control and participation had increased during the change process due to improvements to work characteristics. Armstrong-Strassen reported that

levels of job security for survivors in the post-downsizing period were significantly higher than during any of the three downsizing stages. This pattern of improvement is particularly obvious in organizations that effectively and actively manage organizational change as survivors attempt to reduce uncertainty about their jobs and futures (Campbell-Jamison et al., 2001; Greenglass & Burke, 2000; Parker et al., 1997). Thus, we predicted that:

> *Hypothesis 6*: Employees' perceptions of job uncertainty would be at their highest during the anticipation stage of downsizing, decreasing (i.e. improving) during the implementation stage of downsizing, and then improving further, or at least stabilizing, at the post-downsizing stage.

> *Hypothesis 7*: Employees' perceptions of personal control would be at their lowest during pre-downsizing activities, increasing (i.e. improving) during the implementation phase, and then improving further (or stabilizing) at post-implementation.

Accordingly, a similar pattern of results was anticipated in regards to emotional exhaustion and job satisfaction.

> *Hypothesis 8*: Employees' perceptions of emotional exhaustion would be at their highest during the anticipation stage of downsizing, decreasing (i.e. improving) during the implementation stage of downsizing, and then improving further, or at least stabilizing, at the post-downsizing stage.

> *Hypothesis 9*: Employees' perceptions of job satisfaction would be at their lowest during pre-downsizing activities, increasing (i.e. improving) during the implementation phase, and then improving further (or stabilizing) at post-implementation.

The present study

Building on previous research, this study utilized a repeated cross-sectional research design to examine the relationships among job uncertainty, personal control and employee adjustment, as well as overall changes in these variables at three stages of downsizing. We examined the adjustment of survivors and victims in a large psychiatric hospital undergoing restructuring and downsizing. As indicated earlier, levels of job uncertainty and personal control were measured immediately before the announcement of the redeployment of staff (and prior to the implementation of a new service model),

during the implementation of the change as victims continued working alongside survivors, and one and a half years later as survivors implemented the final stages of the change programme. This design allowed us to identify the differential effects of downsizing on survivors' and victims' levels of job uncertainty and personal control, and in doing so, to illustrate the importance of uncertainty management throughout different stages of downsizing.

The first sample in this study was analysed in a previous cross-sectional analysis that examined the effects of communication effectiveness on employee uncertainty, and the extent to which personal control mediated the effects of uncertainty on emotional exhaustion (see Bordia et al., 2004b). The current study extended the earlier work in a number of important ways. First, the study reported here presented a unique opportunity to examine the mediating role of personal control across three stages of the change process rather than just in the anticipation stage (as in Bordia et al., 2004b). Second, because of the multi-wave approach, we were able to identify differences in levels of job uncertainty and personal control for each sample. This is particularly important as it allowed for an examination of the long-term effects of downsizing on employee adjustment across the various stages. Third, because the current research contains a sample from the implementation stage of downsizing, we were able to examine differences between survivors' and victims' levels of job uncertainty, personal control and employee adjustment. Finally, job satisfaction was included as an additional indicator of employee adjustment.

Method

Organizational context

Data were collected from three samples of employees at a large psychiatric hospital in Australia undergoing large-scale restructuring and downsizing. Initiated by changes in government policy, the hospital was about to decentralize its services. In this respect, it would no longer offer services through one large facility, but rather through a new smaller facility built on site and through services operated in local community health centres, providing acute care, extended rehabilitation services, and some specialist care for specific client groups (see Roan et al., 2002). This new model of service delivery – based on a multidisciplinary and client-focused approach to mental health care – required the construction of a new facility on site, restructuring of work teams, and the relocation of many of its clients. As part of this restructuring process, significant job losses were planned with an initial proposal to

reduce the 700 full-time equivalent positions to fewer than half. In addition to this, jobs were also being restructured as part of the implementation of the new service model, and as such, a considerable amount of uncertainty existed around the way in which the jobs would be organized and tasks allocated. The changes undertaken are best described as transformational change, where structural and strategic changes ripple down to affect fundamental changes in employees' roles and tasks (Armenakis et al., 2001).

Research design

It is important to note that we were unable to match individual responses over time (i.e. the three phases of downsizing). The organization was experiencing a significant amount of turmoil, to the extent that survival of the hospital was threatened. The organization was also undergoing a considerable amount of public scrutiny. Thus, the management team was extremely cautious about having individual employees identified in the data collection process. Nevertheless, a cross-sectional research design repeated over time permits a macro-level assessment of an organization's climate in the midst of downsizing and changes to existing jobs. Repeated cross-sectional designs allow for comparisons among different time points, as they involve probability sampling from the same population at each point in time (King, 2001). Although this research design does not facilitate an assessment of intra-individual change, it does permit an evaluation of change at the aggregate level (Baltes et al., 1988; Menard, 1991). Thus, in this study, we examined – from the perspective of the organization's overall climate – employee attitudes over time: before, during and after the change process.

Participants

Sample 1 was collected 2 weeks before the announcement of major staff redeployment decisions. The hospital had developed a new model of service delivery, and had developed a set of competency profiles required for positions in the new facility. Redeployment decisions were being made on the basis of employees achieving specific criteria in each of the job competencies. Employees had completed a detailed self-assessment of their job performance, which was compared with ratings made by their direct supervisors. Based on this assessment, staff were either assigned to positions in the new structure, redeployed to positions in community-based care centres, redeployed to health services positions elsewhere or offered voluntary redundancy. Questionnaires were distributed to all staff (N = 660). A total of 222 participants returned completed surveys representing a response rate of

approximately 34 percent. Although this response rate is not high, the response rates across the three samples in this research are not atypical of research conducted in other research contexts (Baruch, 1999; Roth & BeVier, 1998). Sample 1 contained 48 percent (n = 106) male and 46 percent (n = 103) female participants (13 participants did not specify their gender). The age range was between 18 and 63, with a mean age of 42.60 (SD = 9.49) years.

Sample 2 was collected approximately 6 months after redeployment decisions had been announced. By this stage, employees had been reassigned to new teams, and were beginning to operationalize the new service model. In total, 630 questionnaires were administered to employees. The sample consisted of 189 participants, representing a response rate of approximately 30 percent; 55 percent (n = 104) were male and 43 percent (n = 82) were female (three participants did not specify their gender). The age range was between 20 and 67, with a mean age of 41.00 years (SD = 10.67). Employees in this sample included survivors – those who knew they had a continuing appointment (from success in the competency-matching process) – as well as others who were unsuccessful but were still working at the hospital (i.e. victims). Employees in both categories were required to work alongside each other for up to 18 months and were reassigned to various units as required while the organizational changes were taking place. The sample included 100 survivors and 76 victims. For the sample of survivors, 57 percent (n = 55) were male and 43 percent (n = 44) were female (one participant did not specify his/her gender). The age range was between 22 and 67, with a mean age of 42.15 years (SD = 9.70). For the sample of victims, 59 percent (n = 44) were male and 41 percent (n = 30) were female (two participants did not specify his/her gender). The age range was between 20 and 64, with a mean age of 39.51 years (SD = 11.90).

Sample 3 was collected approximately one and a half years after the redeployment decisions had been announced, by which time the transition plan was well underway. Employees on continuing appointments were working in new work teams under the new model of service delivery, and victims of the downsizing were no longer employed at the hospital. Owing to building delays, however, some employees had not yet started work in the newly constructed facility. Questionnaires were distributed to all staff (N = 450) and 142 completed questionnaires were returned representing a response rate of approximately 32 percent. Of these respondents, 25 employees had been working at the hospital for less than 12 months. Given that these employees had been hired after most of the significant changes had been implemented, they were not considered survivors of the downsizing process for the purposes of this research. Thus, they were excluded from the

analyses reported in this article. For this sample of survivors, 57 percent (n = 64) were male and 43 percent (n = 49) were female (two participants did not specify their gender). The age range was between 23 and 68, with a mean age of 42.16 years (SD = 10.02).

Measures

The questionnaires contained scales for each of the variables in the model. All items were anchored by a 5-point response scale, except that job uncertainty, personal control and emotional exhaustion were measured using a 7-point response scale for the first group of employees (i.e. Sample 1).

Job uncertainty

Job uncertainty during change was measured with five items selected from the uncertainty scale reported by Bordia et al. (2004b). For the purpose of this analysis, we used the five items related to uncertainty that were included in all three surveys (Appendix). The items asked respondents to indicate how uncertain they were regarding outcomes of the change for various job-related dimensions (e.g. whether you will have to learn new job skills; the level of influence you will have over changes in your job) on a 5-point response scale ranging from 1 (*very little uncertainty*) to 5 (*very great uncertainty*). Data from the present study showed satisfactory Cronbach's alpha reliability across the three samples (T1, alpha = .80; T2, alpha = .80; T3, alpha = .77).

Personal control

Personal control was measured with three items taken from Bordia et al. (2004b). The scale was designed to measure global perceptions of employees' perceived job-related control (e.g. I feel I can influence the nature of change in my work unit) and was rated on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The measure showed a satisfactory Cronbach's alpha across the three samples (.74, .82 and .84, respectively).

Emotional exhaustion

The emotional exhaustion sub-scale of the Maslach Burnout Inventory was used to measure emotional exhaustion (Maslach, 1982; Maslach & Jackson, 1986). Emotional exhaustion indicates an individual's stress reaction to social demands at work (Leiter et al., 1994), and is a measure of overextension and depletion of individuals' physical and psychological resources

(Leiter & Harvie, 1998). Miller et al. (1990) have previously used the 7-item scale (e.g. I feel used up at the end of the day) in the change communication literature. We used a 5-point response format ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Cronbach's alpha scores for the emotional exhaustion scales across the three samples were satisfactory (.90, .88 and .87, respectively).

Job satisfaction

For Sample 1, job satisfaction was measured by a three-item measure of global job satisfaction developed by Warr and Payne (1983). The items asked respondents to indicate their levels of enjoyment, satisfaction and happiness with their job. For Samples 2 and 3, job satisfaction was assessed with five items (e.g. All things considered, how satisfied are you with your job?), adapted from those developed by Caplan et al. (1980). The items were anchored by 1 (*very dissatisfied*) to 5 (*very satisfied*).

Data from the present study showed satisfactory reliability, with Cronbach's alpha for the three scales above .85 (.92, .82 and .84, respectively).

Self-report data are vulnerable to common method bias, which may inflate observed relationships among variables. Harman's one-factor test was conducted to examine the influence of common method variance (Podsakoff & Organ, 1986). A principal components exploratory (varimax rotation) factor analysis was conducted for each sample and involved a one-factor model of all items measuring the four variables (using the eigenvalue greater than 1 criterion). For Sample 1, a four-factor solution was obtained, which explained 67 percent of the variance. All of the items loaded on their predicted factor, and factor loadings ranged from .52 to .89. For Sample 2, a four-factor solution was obtained, which explained 63 percent of the variance. All of the items loaded on their respective factor and factor loadings ranged from .53 to .83. For Sample 3, a four-factor solution was obtained, which explained 62 percent of the variance. All of the items, except one item for job uncertainty (loading of .15), loaded on their predicted factors. Therefore, job uncertainty in the third sample was calculated using the remaining four items. The remaining factor loadings ranged from .59 to .85. Thus, the one-factor model was rejected for each phase of the data collection and we retain confidence that our results are not due to common method variance. Furthermore, the analysis provides evidence for the discriminant validity of the measures in each sample. The Appendix shows the results of the factor analysis of all items used to measure our constructs for Sample 1. All samples revealed a similar factor structure.

Table 1 Means, standard deviations, intercorrelations and internal consistency for the focal variables for Samples 1, 2 and 3

Variables	*M*	*SD*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*
1. Job uncertainty S1[a]	3.24	1.17	(.80)											
2. Personal control S1[a]	2.22	1.20	–.48***	(.74)										
3. Emotional exhaustion S1[a]	2.67	1.18	.39***	–.37***	(.90)									
4. Job satisfaction S1[b]	2.90	1.04	–.23***	.34***	–.57***	(.92)								
5. Job uncertainty S2	2.83	0.86	–	–	–	–	(.80)							
6. Personal control S2	2.99	1.08	–	–	–	–	–.58***	(.82)						
7. Emotional exhaustion S2	2.47	0.89	–	–	–	–	.31***	–.38***	(.88)					
8. Job satisfaction S2	3.48	0.92	–	–	–	–	–.42***	.55***	–.44***	(.82)				
9. Job uncertainty S3	2.68	0.81	–	–	–	–	–	–	–	–	(.77)			
10. Personal control S3	3.08	1.06	–	–	–	–	–	–	–	–	–.48***	(.84)		
11. Emotional exhaustion S3	2.50	0.83	–	–	–	–	–	–	–	–	.27***	–.18*	(.87)	
12. Job satisfaction S3	3.73	0.83	–	–	–	–	–	–	–	–	–.34***	.35***	–.46***	(.84)

Note. S1 = Sample 1; S2 = Sample 2 (survivors only); S3 = Sample 3; Cronbach's (1951) alpha coefficients are in parentheses along the main diagonal; Minimum pairwise *n* for S1 = 217; *n* for S2 = 100; *n* for S3 = 112.

[a] Measured on a 7-point scale and rescaled to a 5-point scale. All other variables measured using a 5-point scale.

[b] Job satisfaction for S1 was measured using different items to that used for measuring job satisfaction for S2 and S3.

* $p < .05$; *** $p < .001$.

Results

Table 1 provides the means, standard deviations, intercorrelations and internal consistency alphas for all of the variables for Sample 1 (employees assessed prior to the anticipation phase of the downsizing), Sample 2 (employees assessed during the downsizing) and Sample 3 (surviving employees assessed after the downsizing). Cronbach's (1951) alpha coefficients were all above .76. For each sample, there were negative correlations between job uncertainty and personal control and job satisfaction, between personal control and emotional exhaustion, and between emotional exhaustion and job satisfaction. There were positive correlations between job uncertainty and emotional exhaustion. The correlations were all moderate in size (the highest being –.58 between job uncertainty and personal control for Sample 2).

Mediating hypotheses (Hypotheses 1–3)

Hierarchical multiple regression analyses were conducted to test the associations among job uncertainty, personal control, emotional exhaustion and job satisfaction for each sample of employees. For the second sample, analyses were conducted separately for the survivors and victims of the downsizing. Following Baron and Kenny's (1986) procedure, separate regression equations were conducted to test for the mediating role of personal control in the relationship between job uncertainty and the two outcome variables. First, personal control was regressed on job uncertainty and the outcome variables in two separate analyses. Second, the outcome variables were regressed on job uncertainty. Third, the outcome variables were regressed upon both job uncertainty and personal control. Table 2 reports the results for emotional exhaustion and Table 3, job satisfaction.

To establish mediation: (i) job uncertainty must significantly affect the mediator, (ii) job uncertainty must significantly affect the outcome variables in the absence of the mediator, (iii) personal control must have a significant unique effect on the outcome variables, and (iv) the effect of job uncertainty on the outcome variables must decrease upon the addition of personal control in the regression. This four-step approach to examining mediation can be used to judge whether mediation is occurring. MacKinnon and Dwyer (1993) have proposed methods by which mediation may be statistically assessed. As described by Baron and Kenny (1986), we conducted a Sobel (1982) test of the indirect effect of job uncertainty on emotional exhaustion via personal control. The purpose of the Sobel test is to evaluate whether a mediator carries the influence of the independent variable to the dependent

Table 2 Hierarchical multiple regression analyses predicting emotional exhaustion

	Emotional exhaustion Sample 1			*Emotional exhaustion Sample 2*						*Emotional exhaustion Sample 3*		
				Survivors			*Victims*					
	β	β	β	β	β	β	β	β	β	β	β	β
Step 1: Control variables												
Age	.03	.04	.04	–.27*	–.26*	–.21	–.05	–.08	–.05	–.09	–.12	–.11
Gender	–.07	–.05	–.10	–.16	–.12	–.12	.01	.02	~0	–.04	–.05	–.04
Tenure	–.13	–.04	–.03	.15	.09	.06	.24	.09	.09	.24*	.21*	.21*
Employment status	.18	.19*	.13	–.05	–.06	–.07	–.20	–.17	–.15	–.07	–.12	–.13
Work unit	.12	.05	.04	.19	.25	.18	–.15	–.13	–.12	.02	.03	.03
Step 2: Job uncertainty		.43***	.27**		.29**	.17		.43***	.32**		.32***	.31**
Step 3: Personal control			–.31**			–.23*			–.24*			–.13
F	1.55	5.72	6.60	1.97	2.74	2.70	2.03	4.52	4.20	1.65	5.28	4.79
d.f.	(5, 109)	(6, 108)	(7, 107)	(5, 84)	(6, 83)	(7, 82)	(5, 55)	(6, 54)	(7, 53)	(5, 122)	(6, 121)	(7, 120)
R^2	.07	.24***	.30***	.10	.17*	.19*	.15	.33**	.35**	.06	.21***	.22***
Adjusted R^2	.02	.20	.26	.05	.11	.12	.08	.26	.27	.03	.17	.17
R^2 change	.07	.17***	.06**	.10	.06*	.02*	.16	.18**	.05**	.06	.14***	.01
F change	1.55	24.82	9.18	1.97	5.96	2.25	2.03	14.47	1.47	.17	21.99	1.68

* $p < .05$; ** $p < .01$; *** $p < .001$.

Table 3 Hierarchical multiple regression analyses predicting job satisfaction

	Job satisfaction Sample 1			*Job satisfaction Sample 2*						*Job satisfaction Sample 3*		
				Survivors			*Victims*					
	β	β	β	β	β	β	β	β	β	β	β	β
Step 1: Control variables												
Age	.03	.04	.04	.33**	.32**	.24*	−.19	−.18	−.20	−.07	.03	.01
Gender	.19*	.19*	.24	.12	.06	.05	−.05	−.05	−.04	.07	.08	.06
Tenure	.15	.10	.08	−.21	−.12	−.07	−.08	.04	.03	−.13	−.10	−.10
Employment status	−.07	−.07	~0	.10	.12	.13	.17	.15	.12	.04	.09	.11
Work unit	−.09	−.05	−.04	.01	.04	.02	.16	.15	.12	.15	.13	.15
Step 2: Job uncertainty		−.25**	−.05		−.40***	−.18		−.32**	−.21		−.40***	−.28**
Step 3: Personal control			.30***			.43***			.25*			.20*
F	1.33	2.36	3.83	2.07	4.25	5.23	1.69	2.90	2.93	1.08	4.85	4.86
d.f.	(5, 107)	(6, 106)	(7, 105)	(5, 84)	(6, 83)	(7, 82)	(5, 56)	(6, 55)	(7, 54)	(5, 122)	(6, 121)	(7, 120)
R^2	.06	.12*	.20***	.11	.24**	.31***	.13	.24*	.28*	.04	.19***	.22***
Adjusted R^2	.02	.07	.15	.06	.18	.25	.05	.16	.18	≈0	.15	.18
R^2 change	.06	.06	.09***	.11	.13***	.07**	.13	.11*	.04*	.04	.15***	.03*
F change	1.3	7.13	11.25	2.07	13.58	8.75	1.69	7.91	2.62	1.07	22.77	4.15

* $p < .05$; ** $p < .01$; *** $p < .001$.

variable. A *t*-test of the indirect effect was conducted using a ratio of the indirect coefficient to its standard error. A significant *t* value indicates that the indirect effect of the independent variable on the dependent variable via the mediator is significantly different from zero. As suggested by Baron and Kenny, analyses used the Goodman (1960) version of the Sobel test.

We entered gender, age, sex, unit, tenure and employment status (full-time, part-time, casual employment) as a block in the first step of all regression analyses to control for the possible influence of these variables on the outcome measures. Our objective was to test for the impact of job uncertainty and personal control over and above the impact of these variables. For Sample 1, in the first regression, job uncertainty was significantly negatively related to personal control, $R^2_{adj} = .33$, $F(6,108) = 10.35$, $p < .001$; $\beta = -.53$, $p < .001$. In the second regression, job uncertainty was significantly positively related to emotional exhaustion, $R^2_{adj} = .20$, $F(6,108) = 5.72$, $p < .001$; $\beta = .43$, $p < .001$, and significantly negatively related to job satisfaction $R^2_{adj} = .07$, $F(6,106) = 2.36$, $p < .05$; $\beta = -.25$, $p < .01$, both of which provide support for Hypotheses 1a and 1b, respectively. In the third regression, when job uncertainty and personal control were entered together, the association between job uncertainty and emotional exhaustion was reduced but remained significant, $R^2_{adj} = .20$, $F(7,107) = 6.60$, $p < .001$; $\beta = .27$, $p < .01$, and personal control was significantly negatively associated with emotional exhaustion, $\beta = -.31$, $p < .01$ (in support of Hypothesis 2a). When job uncertainty and personal control were entered together in the regression for job satisfaction, the association between job uncertainty and job satisfaction was no longer significant, $R^2_{adj} = .15$, $F(7,105) = 3.83$, $p < .001$; $\beta = -.05$, NS, and personal control was significantly associated with job satisfaction, $\beta = .30$, $p < .001$ (in support of Hypothesis 2b). The Sobel test showed that the mediating effect of personal control on the relationship between job uncertainty and both outcome variables was significantly different from zero (emotional exhaustion, $t = 3.14$, $p < .01$; job satisfaction, $t = -3.43$, $p < .001$). These results provide support for Hypotheses 3a and 3b, which proposed that job uncertainty would have indirect effects (mediated by personal control) on emotional exhaustion and job satisfaction in the anticipation stage.

For survivors at the implementation stage of the downsizing, job uncertainty was significantly negatively related to personal control, $R^2_{adj} = .27$, $F(6,83) = 6.44$, $p < .001$; $\beta = -.49$, $p < .001$. In the second regression, job uncertainty also was significantly positively related to emotional exhaustion, $R^2_{adj} = .11$, $F(6,83) = 2.74$, $p < .05$; $\beta = .29$, $p < .01$ and significantly negatively related to job satisfaction, $R^2_{adj} = .18$, $F(6,83) = 4.25$, $p < .001$; $\beta = -.40$, $p < .001$ (Hypotheses 1a and 1b). In the third regression, when job uncertainty and personal control were entered together, the association

between job uncertainty and emotional exhaustion was no longer significant, R^2_{adj} = .12, $F(7,82) = 2.70$, $p < .05$; β = .17, NS, and personal control was significantly negatively associated with emotional exhaustion, β = –.23, $p < .05$ (in support of Hypothesis 2a). For job satisfaction, the association between job uncertainty and job satisfaction was no longer significant, R^2_{adj} = .25, $F(7,82) = 5.23$, $p < .001$; β = –.18, NS, and personal control was significantly positively associated with job satisfaction, β = .43, $p < .001$ (as anticipated in Hypothesis 2b). Results of the Sobel test showed that the indirect effect of job uncertainty on both outcome variables mediated by personal control was significantly different from zero (emotional exhaustion, $t = 2.35$, $p < .05$; job satisfaction, $t = -3.41$, $p < .001$). Therefore, the results of both analyses provide support for the mediating role of personal control in the association between job uncertainty and the outcome variables. Personal control fully mediated the relationship between job uncertainty and both outcome variables for survivors of downsizing (Hypotheses 3a and 3b).

For the sample of victims identified during the implementation phase, job uncertainty was significantly negatively associated with personal control, R^2_{adj} = .18, $F(1,70) = 15.17$, $p < .001$; β = –.42, $p < .001$. In the second regression, job uncertainty was also significantly positively related to emotional exhaustion, R^2_{adj} = .26, $F(6,54) = 4.52$, $p < .01$; β = .43, $p < .001$ and significantly negatively related to job satisfaction, R^2_{adj} = .16, $F(6,55) = 2.90$, $p < .05$; β = –.32, $p < .01$ (Hypotheses 1a and 1b). In the third regression, when job uncertainty and personal control were entered together, the association between job uncertainty and emotional exhaustion was reduced but remained significant, R^2_{adj} = .27, $F(7,53) = 4.20$, $p < .01$; β = .32, $p < .01$ and personal control was significantly negatively associated with emotional exhaustion, β = –.24, $p < .05$ (as anticipated in Hypothesis 2a). Thus, Hypothesis 3a was not supported for this group of employees. For job satisfaction, the association between job uncertainty and job satisfaction was no longer significant, R^2_{adj} = .18, $F(7,54) = 2.93$, $p < .05$; β = –.21, NS, and personal control was significantly positively associated with job satisfaction, β = .25, $p < .05$ (in support of Hypothesis 2b). However, results of the Sobel test showed that the indirect effect of job uncertainty on both outcome variables mediated by personal control was not significantly different from zero (emotional exhaustion, $t = 1.79$, NS; job satisfaction, $t = -1.70$, NS), providing no support for Hypothesis 3b for this sample of downsizing victims.

Finally, for the group of survivors who were assessed after the downsizing, job uncertainty was significantly negatively related to personal control, R^2_{adj} = .34, $F(5,122) = 10.53$, $p < .001$; β = –.55, $p < .001$. In the second regression, job uncertainty was significantly positively related to

emotional exhaustion, R^2_{adj} = .17, $F(6,121)$ = 5.28, p < .001; β = .32, p < .001, and significantly negatively related to job satisfaction, R^2_{adj} = .15, $F(6,121)$ = 4.85, p < .001; β = –.40, p < .001 (again, supportive of Hypotheses 1a and 1b). In the third regression, when job uncertainty and personal control were entered together, the association between job uncertainty and emotional exhaustion reduced marginally but remained significant, R^2_{adj} = .17, $F(7,120)$ = 4.79, p < .001; β = .31, p < .01, and personal control was not significantly associated with emotional exhaustion, β = –.13, NS (thereby, not supporting Hypothesis 2a). For job satisfaction, the association between job uncertainty and this outcome variable was reduced but remained significant, R^2_{adj} = .18, $F(7,120)$ = 4.86, p < .001; β = –.28, p < .01, and personal control was significantly associated with job satisfaction, β = .20, p < .05 (Hypothesis 2b). The Sobel test showed that the mediating effect of personal control on the relationship between job uncertainty and job satisfaction was significantly different from zero (t = –2.00, p < .05), but that the mediating effect for emotional exhaustion was not significantly different from zero (t = 1.34, NS). Thus, these results do not support the mediating role of personal control on the association between job uncertainty and emotional exhaustion (Hypothesis 3a) but did support the partial mediating role of personal control in the relationship between job uncertainty and job satisfaction (Hypothesis 3b). Overall, the significant R^2 values across the regression analyses represent low to moderate effect sizes (see Tables 2 and 3; Cohen, 1988).

Survivors versus victims (Hypotheses 4–5)

A multivariate analysis of variance (MANOVA) was conducted for the second sample of employees to compare the levels of job uncertainty, personal control, emotional exhaustion and job satisfaction between individuals who had a job in the new hospital (i.e. survivors) and those who did not (i.e. victims). There was a statistically significant multivariate effect for job status, Wilks' lambda = .88, $F(8,334)$ = 2.73, p < .01. At the univariate level, the effect of job status was only significant for personal control, $F(2,170)$ = 7.47, p < .001. As shown in Table 4, survivors and victims reported similar levels of job uncertainty, emotional exhaustion, and job satisfaction. These results support Hypothesis 4, which predicted that survivors and victims would experience the same levels of job uncertainty during this stage of the downsizing process. As anticipated, survivors – when assessed at the implementation phase of the downsizing process – reported higher levels of personal control than victims (Hypothesis 5).

Table 4 Means and standard deviations for survivors and victims during the implementation stage of downsizing

	Survivors		*Victims*	
	M	*SD*	*M*	*SD*
Job uncertainty (Sample 2)	2.83	0.85	3.02	1.04
Personal control (Sample 2)	2.99	1.08	2.34	1.10
Emotional exhaustion (Sample 2)	2.47	0.89	2.44	1.07
Job satisfaction (Sample 2)	3.48	0.92	3.29	1.05

Changes across samples (Hypotheses 6–9)

A MANOVA was conducted to examine changes in job uncertainty, personal control, emotional exhaustion and job satisfaction over the three stages of downsizing, as represented by each sample of employees. Specifically, it was proposed that levels of job uncertainty and emotional exhaustion would decrease (Hypotheses 6 and 8, respectively) and that levels of personal control and job satisfaction would increase (Hypotheses 7 and 9, respectively). For this analysis, victims from the implementation phase (from Sample 2) were not included. Results demonstrated a significant multivariate effect for sample, Wilks' lambda = .79, $F(8,842) = 13.35$, $p < .001$. Examination of the univariate results showed that there was a significant effect of sample for job uncertainty, $F(2,424) = 18.39$, $p < .001$, personal control, $F(2,424) = 27.24$, $p < .001$, and job satisfaction, $F(2,424) = 32.92$, $p < .001$, but not emotional exhaustion, $F(2,424) = 1.58$, NS.

Pairwise comparisons revealed support for Hypothesis 6 in that job uncertainty was significantly higher for Sample 1 employees (who were experiencing the anticipation stage of the downsizing process) compared with Samples 2 and 3, but was not significantly different for Sample 2 compared with the survivors at Sample 3 (refer to Table 1 for *M* and SD). Likewise, personal control was significantly lower for Sample 1 than Samples 2 and 3, but was not significantly different at Sample 2 compared with Sample 3 (in line with Hypothesis 7). Although predictions involving emotional exhaustion were not supported (Hypothesis 8), there was some evidence to suggest that job satisfaction was significantly lower for employees working in the midst of a pre-downsizing climate compared with employees in the implementation and post-implementation stages of the downsizing process (Hypothesis 9). Job satisfaction levels also were significantly lower

for Sample 2 compared with Sample 3, indicating that this aspect of employee adjustment further improved, once the majority of downsizing activities had subsided. Therefore, at the organizational level, these results indicate that levels of job uncertainty, personal control, and job satisfaction improved or at least stabilized over the stages of the downsizing.

Discussion

This study examined levels of job uncertainty, personal control, emotional exhaustion and job satisfaction over three stages of a change process involving restructuring and downsizing. As predicted, job uncertainty was significantly higher and personal control was significantly lower at the anticipation stage of the downsizing process, when the work environment was at its most turbulent. Levels of job uncertainty and personal control for employees assessed during the implementation and post-implementation stages of the change event were similar, suggesting that these job characteristics stabilized as the downsizing and change process progressed. Levels of emotional exhaustion remained consistent across each of the three downsizing stages. However, there was some evidence to suggest that job satisfaction was reduced for those working in the midst of a pre-downsizing climate compared with those employees in the implementation and post-downsizing stages. Furthermore, job satisfaction levels improved for the sample of employees during downsizing compared with the sample of employees assessed 18 months later. Overall, this pattern of results suggests that as employees became more comfortable with the new organization, issues relevant to the change diminished. These results are consistent with expectations at various stages of transformational change (Armenakis et al., 2001), and support previous studies showing that the negative consequences of downsizing diminish or stabilize across time (Armstrong-Strassen, 2002; Baruch & Hind, 2000; Parker et al., 1997; Pollard, 2001).

A key finding of the study is that the stage of downsizing influenced the mediating role of personal control in the relationship between job uncertainty and employee adjustment. In the anticipation stage of change, personal control partially mediated the relationship between job uncertainty and emotional exhaustion and fully mediated the relationship between job uncertainty and job satisfaction. A similar pattern of findings was reported for survivors assessed during the implementation phase of downsizing, with personal control fully mediating the negative effects of job uncertainty on both emotional exhaustion and job satisfaction. These results provide evidence for the suggestion that uncertainty in the lead-up to downsizing and

throughout such an event is stressful for employees because it weakens their sense of personal control, which, in turn, reduces their levels of adjustment. Indeed, a loss of prediction, understanding, and control arising from future changes to one's job is likely to be particularly salient as employees anticipate and experience downsizing (Fugate et al., 2002; Pollard, 2001; Schweiger & DeNisi, 1991; Sutton & Kahn, 1986).

In the implementation stage of downsizing, consistent with predictions and previous research (Armstrong-Strassen, 2002), issues relating to job uncertainty were as salient for survivors as they were for victims. As pointed out by Doherty et al. (1993), victims of downsizing who continue working in the organization until their employment contract expires need to understand their current responsibilities, changes to their job and what redeployment opportunities are available. Also, in line with predictions, it was found that victims reported lower levels of personal control compared with survivors. This result reflects the lack of personal control that victims of downsizing experience when they are informed that they will no longer be required in the downsized organization (Mishra & Spreitzer, 1998). The differences in survivors' and victims' levels of personal control influenced the mediating role of this variable in the uncertainty–adjustment relationship. As noted earlier, personal control mediated the negative effects of job uncertainty on emotional exhaustion and job satisfaction for survivors during the implementation stage of downsizing; but not for the victims of downsizing. For victims, job uncertainty and personal control both exerted direct effects on employee adjustment. These results suggest that, for victims, uncertainty is stressful for reasons other than a lack of personal control at work.

Issues of personal control appear to be less important in the aftermath of downsizing, as it is at this stage that the benefits of change are apparent and the work environment is no longer as uncertain (Kivimaki et al., 2001; Parker et al., 1997). Indeed, in the aftermath of restructuring and downsizing, personal control was not related to emotional exhaustion, nor did it play a mediating role in the uncertainty–adjustment relationship when predicting employee adjustment. However, job uncertainty was significantly related to both emotional exhaustion and job satisfaction for employees assessed at this point in time. This result supports previous findings that uncertainty has a lingering effect on survivors' emotional health (Hellgren et al., 1999). Therefore, while survivor attitudes generally stabilized across the implementation and aftermath stages of the downsizing, residual uncertainty was still related to the degree of emotional exhaustion and job satisfaction experienced by employees.

Collectively, these results suggest that when individuals are confronted with a particularly stressful or uncertain situation, they are more likely to

appraise the situation as less controllable (Ganster & Fusilier, 1989; Greenberger & Strasser, 1986), and that personal control is particularly important when change is turbulent or the situation is uncertain. Moreover, the results suggest that employees may adjust to change more readily when they perceive that they have more personal control over the implementation of change. This is in line with previous findings suggesting that survivors who feel in control are more likely to use control-coping (Armstrong-Strassen, 1998), have improved mental health (Kivimaki et al., 2001), and feel more organizational attachment and loyalty, compared with survivors who do not feel in control (Niehoff et al., 2001). However, in times of relatively high job uncertainty and low levels of personal control (i.e. the anticipation stage and the implementation stage for victims), employees reported a sense of job uncertainty that influenced their levels of adjustment independently of their perceptions of personal control over the future. It is important to note that the effect sizes observed across the regression analyses were low to moderate (Cohen, 1988). This may indicate that although job uncertainty and personal control are important factors that influence employees' levels of job satisfaction and emotional exhaustion, there are other factors in the workplace that also explain the variation in employee adjustment throughout the various stages of downsizing.

Regardless, uncertainty-management looms as an important task for managers throughout the various stages of downsizing and during organizational change efforts. The results of this study highlight the need to improve both employees' understanding of changes to their jobs, and their level of discretion and autonomy regarding these changes. These issues are particularly salient during the anticipation and implementation stages of change, where victims experience lower levels of personal control than survivors. However, survivors' residual job uncertainty can continue to affect emotional exhaustion in the aftermath of downsizing. Therefore, managers' efforts to reduce employees' uncertainty about their jobs and to enhance their feelings of personal control over their work environment should not be restricted to the earlier stages of downsizing. One strategy that could be used to reduce job uncertainty is effective (accurate, timely and helpful) job-related communication (Johnson et al., 1996; Miller et al., 1994). Research has shown that providing quality communication and involving survivors in decision-making contributes to greater perceptions of procedural justice and fairness (Kernan & Hanges, 2002; Mansour-Cole & Scott, 1998). Victims of downsizing can also benefit from effective communication about their job. Managers responsible for implementing a downsizing process should inform survivors and victims about what changes are occurring, how individuals are going to be involved in the change, how the change will affect them in their

work, and clarify any misunderstandings about the change. This type of communication can increase employees' knowledge about the change and reduce job-related uncertainty. Given the mediating role of personal control in the earlier stages of downsizing, participative mechanisms that include employees in decision-making processes also may help employees to cope with change.

This study used a repeated cross-sectional design to collect data at three points in an organizational change process. Repeated cross-sectional designs allow for comparisons among different groups of employees who represent a particular phase of the downsizing process. Thus, the design allowed us to examine how employee attitudes changed over time: before, during and after the downsizing. The disadvantage of repeated cross-sectional designs is that developmental patterns and relationships between independent and dependent variables cannot be evaluated. Although the limited sample sizes tend to reduce the power of our statistical tests, the results discussed generally support our predictions. Future research could address this by applying a longitudinal design to the study of job uncertainty during downsizing using increased sample sizes with matched data.

Future research could also explore the consequences of different types of job uncertainty (Chirumbolo & Hellgren, 2003; De Witte, 1999; Probst, 2003). The current research examined job uncertainty related to immediate work concerns for employees. However, there are other sources of uncertainty that may also affect an individual's adjustment to organizational change, such as organizational and group uncertainty (Jackson et al., 1987) or strategic and structural uncertainty (Bordia et al., 2004a). Although these types of uncertainty relate to different levels of analysis, the literature has suggested that they affect each other and that they are more or less salient depending on the stage of change (Bordia et al., 2004a, Buono & Bowditch, 1989; Jackson et al., 1987). Regardless, our results suggest that job uncertainty and personal control are important aspects of survivors' and victims' responses to restructuring and downsizing. The management of uncertainty is thus a key challenge facing managers of change.

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Appendix

Table A1 Factor analysis of the study variables at Time 1[a]

	Uncertainty	*Control*	*Emotional exhaustion*	*Job satisfaction*
Job uncertainty				
The level of influence you will have over changes in your job	**.59**	–.19	.03	–.05
The extent to which existing policies and procedures will change	**.57**	–.12	.08	–.03
Whether you will fit with the culture of the 'new' organization	**.61**	–.20	.12	–.10
The possibility of a promotion	**.63**	–.16	.23	–.11
Whether you will have to learn new job skills	**.76**	–.09	.26	–.07
Personal control				
I feel I am in control of my future at the hospital	–.28	**.61**	–.08	.13
I feel in control of the direction in which my career is headed	–.34	**.85**	–.16	.06
What I do at the hospital is largely under my control	–.19	**.41**	–.18	.28
Emotional exhaustion				
I feel used up at the end of a work day	.24	–.01	**.70**	–.17
I feel fatigued when I get up in the morning and have to face another day on the job	.24	–.06	**.72**	–.32
Working with people all day is a real strain on me	.07	–.06	**.70**	–.11
I feel burned out from my work	.03	–.19	**.84**	–.18
I feel frustrated by my job	.18	–.06	**.56**	–.48
I feel I'm working too hard on my job	.14	–.14	**.63**	–.12
I feel like I am 'at the end of my rope'	.18	–.15	**.66**	–.33
Job satisfaction[c]				
I don't enjoy it – I really enjoy my job and couldn't enjoy it more	.01	.12	–.28	**.79**
I am extremely satisfied with my job, and couldn't be more satisfied – I am not at all satisfied	–.14	.09	–.24	**.87**
I am not happy – I am extremely happy with my job, and couldn't be more happy	–.13	.17	–.29	**.84**
Eigenvalue	2.50	1.54	3.77	2.72
Percent variance explained	13.87	8.56	20.92	15.13
Cumulative percent variance explained		22.43	43.35	58.48

[a] Maximum likelihood extraction with varimax rotation. Factor analyses of Samples 2 and 3 revealed the same factor structure.
[b] Reverse-scored.
[c] Scale anchors scored 1–5.

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