Stress and the Effects of Hospital Restructuring in Nurses

Esther R. Greenglass and Ronald J. Burke

This study examines the extent of stress and burnout experienced by nurses during hospital restructuring. It includes both job-related outcomes such as job satisfaction and burnout, and psychosomatic outcomes such as depression. The study compares effects attributable to number of hospital restructuring initiatives with those attributable to specific work stressors such as workload, bumping (where one nurse replaces another due to greater seniority), and use of unlicensed personnel to do the work of nurses. It also examines the role of personal resources including self-efficacy and coping. Results show that, in hospitals undergoing restructuring, workload is the most significant and consistent predictor of distress in nurses, as manifested in lower job satisfaction, professional efficacy, and job security. Greater workload also contributed to depression, cynicism, and anxiety. The practice of bumping contributed to job insecurity, depression, and anxiety. The results point to specific deleterious effects of hospital restructuring. Implications of the findings are discussed. The extent to which workload issues are managed through appropriate practices can be expected to match the extent of nurses' experience of either job satisfaction or depression and anxiety. Such practices need to be part of an ongoing process of interaction between the hospital administration and nurses.

Esther R. Greenglass, PhD, is Professor, Department of Psychology, York University, Toronto, Ontario, Canada. Ronald J. Burke, PhD, is Professor, School of Business, York University.
Restructuring and downsizing are occurring increasingly throughout the private and public spheres. In Canada, downsizing is being imposed on the health-care system and hospitals are being restructured, merged, or closed, resulting in the loss of thousands of jobs. In the province of Ontario, it has been estimated that, as a result of the planned closure of 10 hospitals in Toronto alone, 10,000 workers would lose their jobs ("Big triumphs over small," 1997; "Public health units struggle," 1997). Since most of the nurses affected by such measures are employed in hospitals, and since hospital closures are occurring everywhere, nurses are faced with increasing job shortages.

With fewer qualified staff to care for patients, the workload of nurses has increased (Ontario Nurses’ Association, 1996). Nurses are reporting more stress and burnout, greater job insecurity, and a lowering of morale (Armstrong-Stassen, 1994; Bourbonnais, Comeau, Vezina, & Dion, 1998). Work overload predicts negative mental health outcomes in nurses (Tyler & Cushway, 1995), job dissatisfaction (Schaefer & Moos, 1993), and burnout (Armstrong-Stassen, Cameron, & Horsburgh, 1994) correlated with depression and anxiety (Belcastro & Gold, 1983; Greenglass, 1991; Schaufeli & Enzmann, 1998); these results have also been reported in teachers (Greenglass, Burke, & Ondrack, 1990).

Hospital restructuring is associated with stressful changes such as deterioration in facilities and services, bed closures, layoffs, bumping (where one nurse replaces another due to greater seniority), and use of unlicensed health-care personnel to replace trained nurses. This “deskilling” of health-care services as a cost-saving measure (Registered Nurses Association of Ontario, 1999) has resulted in lower levels of patient care. It has also resulted in increased nursing workloads, since nurses are often responsible for the training and supervision of unlicensed workers (Gzowski, 1997). Distress levels experienced during hospital restructuring vary with the personal coping resources used. People who believe that outcomes are within their control tend to engage in control coping, while people who believe that outcomes occur by chance tend to resort to escape coping (Lefcourt & Davidson-Katz, 1991). Those who use control coping experience reduced distress compared to those who use escape coping (Greenglass, 1988). Layoff survivors who use escape coping have reported lower job performance and higher intent to leave the organization (Armstrong-Stassen, 1994). Control coping is associated with greater commitment to the organization. Self-efficacy, another personal resource, reflects optimistic self-beliefs about ability to deal effectively with demands (Bandura, 1992). Low self-efficacy is central in the etiology of burnout (Cherniss, 1990); burnout is inconsistent with a sense of self-efficacy (Leiter, 1991). In hos-
pitals being downsized, nurses high in self-efficacy tend to experience less distress and have more professional commitment than those low in self-efficacy.

Research suggests that job variables play a role in the degree of job insecurity felt by employees during downsizing. For example, part-time nurses experience more job insecurity than full-time nurses (Armstrong, Cameron, & Horsburgh, 1996). Hospital size (in terms of number of beds) can also play a part in nurses’ reaction to downsizing, and large hospitals in Ontario have borne the brunt of the province’s $435 million in hospital cuts (“MDs step up protest,” 1996). Nurses employed in larger hospitals experience greater job insecurity because of the higher number of layoffs. Length of employment in a hospital is another factor influencing a nurse’s reaction to downsizing (Bartz & Maloney, 1986). Amount of time in nursing is related to burnout level during hospital restructuring (Chiriboga & Bailey, 1986), and whether or not a nurse has supervisory responsibilities is associated with reaction to downsizing. With the increased hiring of unlicensed health-care workers, nurses are being called upon to supervise and train these personnel, in addition to their other duties (Gzowski, 1997).

Demographic variables may play a part in nurses’ reactions to hospital downsizing. Most nurses are women, many with families, and child care falls disproportionately to women (Biernat & Wortman, 1991). Parenting may result in additional stressors for nurses who are experiencing job insecurity during downsizing. A nurse’s age may be a factor in her reaction to downsizing. Younger nurses report more depersonalization, one of the three burnout components of the Maslach Burnout Inventory (Maslach & Jackson, 1986). Perhaps older nurses experience less depersonalization because they have stayed in nursing as a result of personal involvement with patients (Robinson et al., 1991). Chiriboga and Bailey (1986) report an inverse relationship between age and burnout. Older nurses have been found to have lower stress levels during hospital downsizing (Kuhrik, Kuhrik, Katz, & Moore, 1996). Stress increases with nurse education (Tyler & Ellison, 1994); highly trained nurses perceive more stress, particularly from “conflict with doctors” and “workload” (Tyler & Cushway, 1995), which would be exacerbated during downsizing. The size of the community in which nurses work may be a factor in their reaction. Downsizing and tight budgets are a problem in smaller communities, where cutbacks make it difficult for hospitals to offer training in specialty nursing (Boyer, 1996).

The effects of downsizing can be understood within a stress-and-coping framework. Downsizing presents situational dimensions that
can elicit job-related and psychosomatic outcomes. Job outcomes include job insecurity, job dissatisfaction, and burnout, while psychosomatic outcomes include anxiety and depression. Outcomes are seen as related to organizational demands and to personal resources (coping and self-efficacy). Hospitals vary in the extent to which they are undergoing restructuring that may be quantified by computing the number of restructuring initiatives. Hospital restructuring measures are expected to be positively related to more nurse distress, as reflected in outcome measures.

A comprehensive framework was developed to guide selection of measures and data analyses. Predictors of job-related and psychosomatic outcomes in nurses are compared in two conditions. In model 1 the independent variable is the number of restructuring initiatives on the restructuring initiatives index (RII) undertaken by the hospital, such as layoffs, job sharing, bed closures, and unit closures. In model 2 the outcomes are studied in relation to three specific work stressors: workload, bumping, and use of unlicensed personnel. In both models the analyses use four panels of predictors (demographic, job variables, work stressors, and personal resources) and two sets of outcomes (job-related and psychosomatic). In model 1 the stressor is the number of restructuring initiatives. In model 2 the stressors are workload, bumping, and use of unlicensed personnel. The object of the research was to compare the outcomes of number of restructuring initiatives (model 1) with those of specific stressors (model 2). Model 2 was expected to be a better predictor of outcomes, since it is not the number of restructuring initiatives that is important, but their impact. Figure 1 presents schematic representations of models 1 and 2.

Method

Procedure

Data were collected using an anonymous questionnaire mailed out to 3,892 hospital nurses in the province of Ontario. The sample was chosen from among the nursing union’s 45,000 members using a computer-generated randomized program. A total of 1,363 questionnaires were returned in the self-addressed, stamped envelope provided, yielding a response rate of 35%.

Measures

Outcome measures. Job-related outcomes include burnout, impact of restructuring, job insecurity, and job satisfaction. The MBI-General
**Figure 1** Models 1 and 2: Variables Predicting Outcome Measures

**Model 1**

Variables

- Demographic
- Job variables
- Work stressors (RII*)
- Personal resources

→ Outcome measures

**Model 2**

- Demographic
- Job variables
- Workload
- Bumping
- Unlicensed personnel
- Work stressors
- Personal resources

→ Outcome measures

* RII = restructuring initiatives index
Survey (Schaufeli, Leiter, Maslach, & Jackson, 1996) was used to measure three burnout components — emotional exhaustion, cynicism, and professional efficacy. Emotional exhaustion ($\alpha = 0.90$) refers to the concept of job stress, while cynicism ($\alpha = 0.82$) reflects an indifferent or distant attitude towards work. Professional efficacy ($\alpha = 0.73$) refers to satisfaction with past and present accomplishments at work. The validity of the MBI–General Survey is reported in principal component analyses where emotional exhaustion was found to be associated with mental and physical strain, work overload, and role conflict. Professional efficacy has been found to be related to job satisfaction, organizational commitment, job involvement, and access to resources. Cynicism has been found to be related to the same constructs as emotional exhaustion but with negative secondary loadings on the attitudinal concepts associated with professional efficacy (Schaufeli et al., 1996).

The impact of restructuring scale (developed for this research) measures the extent to which nurses perceive that restructuring has compromised delivery of health-care services (seven items) ($\alpha = 0.78$). Job insecurity ($\alpha = 0.76$) (developed for this research) measures the degree to which nurses expect to experience negative job outcomes in 10 areas including layoff, termination, demotion, and deterioration in working conditions. Job satisfaction (Quinn & Shepard, 1974) ($\alpha = 0.82$) consists of five items relating to respondents’ affective reaction to their jobs without reference to job factors. It correlates negatively with job anxiety and somatization, and positively with instrumental coping (Greenglass, 1993).

*Psychosomatic outcomes* include depression (11 items) ($\alpha = 0.88$) and anxiety (seven items) ($\alpha = 0.80$), assessed using the Hopkins Symptom Checklist (HSCL) (Derogatis, Lipman, Rickels, Uhlenhuth, & Cori, 1979). Depression and anxiety have been found to correlate negatively with preventive coping in teachers (Greenglass & Burke, 1991).

*Work stressors.* The extent of restructuring was assessed using the 16-item restructuring initiatives index (RII) ($\alpha = 0.69$), a composite measure designed for this study. Respondents indicated initiatives applicable to their hospital such as layoffs, job sharing, bed closures, and unit closures. RII scores were obtained by summing restructuring initiatives checked by the respondent. Workload ($\alpha = 0.70$), consisting of four items including two from Armstrong-Stassen et al. (1996), measured the nurse’s workload as a result of changes in the hospital. Bumping (two items) ($\alpha = 0.60$) measured the extent to which staff changes occurred as a result of one nurse replacing another due to greater seniority. Use of unlicensed personnel (two items) ($\alpha = 0.70$)
assessed the extent to which unlicensed health-care personnel were used to replace trained nurses. The work stressors were developed for this research.

**Personal resources.** Latack’s (1986) 28-item Coping Scale was used to measure control (α = 0.86) and escape coping (α = 0.71). Control coping consists of problem-focused actions and cognitions; escape coping consists of actions and cognitions indicative of avoidance. Control coping items correlate negatively with stress symptoms, while escapist coping items correlate positively. Leiter (1991) reports that control coping was found to correlate negatively with emotional exhaustion and depersonalization and positively with personal accomplishment on the MBI burnout subscales (Maslach & Jackson, 1986). Self-efficacy (α = 0.87) was assessed using a 10-item perceived self-efficacy scale (Schwarzer, 1993); this measure involves optimistic self-beliefs about dealing with critical demands that tax an individual’s resources (Bandura, 1992). Leppin (1992) reports positive correlations between self-efficacy scores and self-esteem, and negative correlations between depression and self-efficacy and between anxiety and self-efficacy.

**Job variables.** Respondents also indicated whether they had supervisory duties, whether they worked full- or part-time, length of current employment, and number of beds in their hospital. Demographic variables include sex, age, education, whether a parent or not, and size of community.

**Respondents**

Respondents were primarily women (94.8%) employed in at least 11 different nursing units, with approximately two thirds in medical/surgical, intensive care/coronary, emergency, and obstetric units. One half worked part-time. Forty-five percent had supervisory duties. The communities in which they worked varied in population from 50,000 to over one million. About one half of the nurses worked in large hospitals of over 250 beds. On average, the nurses were employed 13 years in their current hospital. The majority were professional nurses who had completed an approved college or hospital nursing program. Eighty percent were married or living with a partner. Three quarters had children (approximately two). The average age of the respondents was 42.
<table>
<thead>
<tr>
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<th>4</th>
<th>5</th>
<th>6</th>
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<th>13</th>
<th>14</th>
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<tbody>
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<td>1</td>
<td>Control coping</td>
<td>-.07**</td>
<td>.34***</td>
<td>-.03</td>
<td>-.20***</td>
<td>.33***</td>
<td>.08**</td>
<td>.04</td>
<td>.14***</td>
<td>-.12***</td>
<td>-.10***</td>
<td>.08**</td>
<td>.09**</td>
<td>.08**</td>
</tr>
<tr>
<td>2</td>
<td>Escape coping</td>
<td>...</td>
<td>.01</td>
<td>.09**</td>
<td>.29***</td>
<td>-.05</td>
<td>.02</td>
<td>.08**</td>
<td>-.12***</td>
<td>.13***</td>
<td>.09**</td>
<td>-.00</td>
<td>.01</td>
<td>.00</td>
</tr>
</tbody>
</table>
| 3 | Self-efficacy  | ... | -.13*** | -.15*** | .31*** | .01 | .00 | .11*** | -.25*** | -.25*** | -.01 | -.00 | .01 | -.05 | -.03*
| 4 | Emotional exhaustion | ... | .58*** | -.12*** | .36*** | .31*** | -.53*** | .43*** | .40*** | .18*** | .46*** | .17*** | .11*** |         |
| 5 | Cynicism       | ... | -.23*** | .29*** | .27*** | -.58*** | .39*** | .32*** | .11*** | .29*** | .10*** | .11*** |         |         |
| 6 | Professional efficacy | ... | -.01 | -.05 | .26*** | -.15*** | -.12*** | .01 | -.07* | .04 | -.03 |         |         |         |         |
| 7 | Impact of restructuring | ... | .32*** | -.35*** | .17*** | .13*** | .31*** | .54*** | .35*** | .34*** |         |         |         |         |
| 8 | Job insecurity1 | ... | -.20*** | .27*** | .23*** | .19*** | .28*** | .19*** | .16*** |         |         |         |         |         |
| 9 | Job satisfaction | ... | -.27*** | -.25*** | -.13*** | -.40*** | -.13*** | .12*** |         |         |         |         |         |         |
| 10| Depression     | ... | .75*** | .09** | .20*** | .15*** | .05 |         |         |         |         |         |         |         |
| 11| Anxiety        | ... | .09** | .16*** | .13*** | .01 |         |         |         |         |         |         |         |         |
| 12| Restructuring initiatives index (RII) | ... | .20*** | .25*** | .22*** |         |         |         |         |         |         |         |         |         |
| 13| Amount of work | ... | .25*** | .18*** |         |         |         |         |         |         |         |         |         |         |
| 14| Bumping        | ... | .21*** |         |         |         |         |         |         |         |         |         |         |         |
| 15| Use of unlicensed personnel | ... |         |         |         |         |         |         |         |         |         |         |         |         |

*p < .05   ** p < .01   *** p < .001

1The higher the score, the greater the job insecurity.
Results

Restructuring Initiatives

Most respondents (94.9%) indicated that budget cuts had occurred, followed by layoffs (94.0%) and bed closures (91.3%). In 88.3% of hospitals, the practice of bumping occurred. In 83.6% of hospitals, early retirement incentives were offered to staff. Close to 80% of hospitals were not filling job vacancies. Three quarters of respondents reported unit closures. Close to 70% of respondents said that they experienced wage and hiring freezes. Approximately one half of respondents reported overtime restrictions on employment or having to switch to a part-time position. Respondents reported an average of 9.57 (SD = 2.64, n = 1,362) restructuring initiatives at their hospital.

Cronbach alphas on combined variables indicated that reliabilities of the variables were acceptably high (0.70 or higher).

Table 1 presents a correlation matrix of variables. Results show that the RII and the impact of restructuring correlated positively with control coping, workload, bumping, use of unlicensed personnel, emotional exhaustion, cynicism, depression, anxiety, and job insecurity. The higher the RII score and the greater the impact of restructuring, the lower the job satisfaction. Thus the RII and the impact of restructuring measure were related to job insecurity and stressors associated with downsizing as well as to psychosomatic outcomes. Job insecurity correlated positively with emotional exhaustion, cynicism, depression, anxiety, workload, bumping, and use of unlicensed personnel. Workload correlated positively with control coping, emotional exhaustion, cynicism, depression, and anxiety, and negatively with professional efficacy and job satisfaction. Use of unlicensed personnel correlated positively with emotional exhaustion, cynicism, workload, and bumping. Bumping correlated positively with emotional exhaustion, cynicism, depression, and anxiety. Thus the three stressors of workload, bumping, and use of unlicensed personnel were positively related to burnout and psychosomatic outcomes.

Statistical Analyses

In order to determine the contribution of variables to outcomes, hierarchical multiple regressions were conducted, with variables entered in blocks. This model parallels those used to study stress and coping (e.g., Cooper & Marshall, 1976; Edwards, 1992) by simultaneously examining several panels of variables. Two hierarchical regression models were
used to compare the effects of stressors and restructuring initiatives. The models were identical except for the variables entered in the third block. The first block (5) entered were demographic (control) variables including sex, age, education, whether a parent, and size of community. The second block (4) were job-related variables including hospital size, length of current employment, whether job included supervisory duties, and whether full- or part-time. The third block consisted of either the RII (model 1) or specific stressors (model 2). The fourth block (3) were resource variables such as control coping, escape coping, and self-efficacy. This plan considers the increment in variance explained in each dependent variable when other predictors were previously entered. Outcomes were job-related or psychosomatic. Job-related outcomes included impact of restructuring, emotional exhaustion, job satisfaction, cynicism, job insecurity, and professional efficacy. Psychosomatic outcomes were depression and anxiety.

**Multiple Regression Results — Model 1**

Table 2 presents the multiple regression results where the RII was the stressor (model 1), total R Square, increase in variance in outcome variables accounted for by each block of variables, and significance levels. Results show that the four blocks accounted for between 7% and 16% of total variance, depending on the outcome measure. Increase in explained variance due to demographic variables, job variables, and the RII was small. Resources accounted for between 1% and 14% of the variance in outcome measures. The RII accounted for 8% or less of the variance in outcome measures (see Table 2).

**Multiple Regression Results — Model 2**

Total variance accounted for in outcome variables was greater when specific work stressors were entered in the Stressor Block (model 2). Using model 2, the four blocks of variables accounted for between 13% and 39% of the total variance in outcome variables. Increase in variance due solely to the stressor block ranged from 1% to 39%; approximately twice as much of the variance in outcome measures was accounted for in model 2 than model 1. Outcomes showing the greatest increase in variance due to stressors were impact of restructuring, emotional exhaustion, and job satisfaction (see Table 3).

Of the three stressors examined, workload emerged as the most significant predictor of outcomes. Workload was a significant and positive contributor to impact of restructuring ($\beta = .45$, $t = 16.29^{**}$),

\[1^{**}p < .001 \quad *p < .05.\]

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### Table 2 Hierarchical Multiple Regression Results: Model 1

<table>
<thead>
<tr>
<th>Outcome Variable</th>
<th>Total $R^2$</th>
<th>I Demographic</th>
<th>II Job</th>
<th>III Work stressors</th>
<th>IV Personal resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact of restructuring</td>
<td>0.13</td>
<td>0.03***</td>
<td>0.01</td>
<td>0.08***</td>
<td>0.01</td>
</tr>
<tr>
<td>Emotional exhaustion</td>
<td>0.10</td>
<td>0.02**</td>
<td>0.04***</td>
<td>0.02***</td>
<td>0.02***</td>
</tr>
<tr>
<td>Job satisfaction</td>
<td>0.07</td>
<td>0.02**</td>
<td>0.00</td>
<td>0.01***</td>
<td>0.04***</td>
</tr>
<tr>
<td>Cynicism</td>
<td>0.14</td>
<td>0.01*</td>
<td>0.00</td>
<td>0.01***</td>
<td>0.12***</td>
</tr>
<tr>
<td>Job insecurity$^2$</td>
<td>0.11</td>
<td>0.02**</td>
<td>0.04***</td>
<td>0.03***</td>
<td>0.02**</td>
</tr>
<tr>
<td>Professional efficacy</td>
<td>0.16</td>
<td>0.01</td>
<td>0.01</td>
<td>0.00</td>
<td>0.14***</td>
</tr>
<tr>
<td>Depression</td>
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<td>0.00</td>
<td>0.01</td>
<td>0.01***</td>
<td>0.09***</td>
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<tr>
<td>Anxiety</td>
<td>0.10</td>
<td>0.00</td>
<td>0.01</td>
<td>0.01***</td>
<td>0.08***</td>
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</tbody>
</table>

1 The restructuring initiatives index is the stressor.
2 The higher the score, the greater the job insecurity.
* $p < .05$ ** $p < .01$ *** $p < .001$

### Table 3 Hierarchical Multiple Regression Results: Model 2

<table>
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<tr>
<th>Outcome Variable</th>
<th>Total $R^2$</th>
<th>I Demographic</th>
<th>II Job</th>
<th>III Work stressors</th>
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<td>Emotional exhaustion</td>
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<td>0.20***</td>
<td>0.03***</td>
</tr>
<tr>
<td>Job satisfaction</td>
<td>0.22</td>
<td>0.02**</td>
<td>0.00</td>
<td>0.15***</td>
<td>0.05***</td>
</tr>
<tr>
<td>Cynicism</td>
<td>0.24</td>
<td>0.01</td>
<td>0.01</td>
<td>0.09***</td>
<td>0.13***</td>
</tr>
<tr>
<td>Job insecurity$^2$</td>
<td>0.19</td>
<td>0.03***</td>
<td>0.05***</td>
<td>0.09***</td>
<td>0.02***</td>
</tr>
<tr>
<td>Professional efficacy</td>
<td>0.18</td>
<td>0.01*</td>
<td>0.02**</td>
<td>0.01</td>
<td>0.14***</td>
</tr>
<tr>
<td>Depression</td>
<td>0.16</td>
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<td>0.01</td>
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<td>0.09***</td>
</tr>
<tr>
<td>Anxiety</td>
<td>0.13</td>
<td>0.00</td>
<td>0.01</td>
<td>0.04***</td>
<td>0.08***</td>
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</table>

1 Workload, bumping, and unlicensed personnel are the stressors.
2 The higher the score, the greater the job insecurity.
* $p < .05$ ** $p < .01$ *** $p < .001$
exhaustion ($\beta = .43, t = 14.36^{***}$), cynicism ($\beta = .30, t = 9.02^{***}$), job insecurity ($\beta = .23, t = 6.97^{***}$), depression ($\beta = .18, t = 5.18^{***}$), and anxiety ($\beta = .15, t = 4.26^{***}$), and a negative contributor to job satisfaction ($\beta = -.39, t = -12.27^{***}$) and professional efficacy ($\beta = -.09, t = -2.58^*$).

Bumping contributed positively to impact of restructuring ($\beta = .18, t = 6.55^{***}$), job insecurity ($\beta = .07, t = 2.20^*$), depression ($\beta = .09, t = 2.66^{**}$), anxiety ($\beta = .11, t = 3.08^{**}$), and professional efficacy ($\beta = .08, t = 2.37^*$). Use of unlicensed personnel contributed to impact of restructuring ($\beta = .36, t = 6.85^{***}$) and job insecurity ($\beta = .21, t = 2.92^{**}$).

**Discussion**

Increased workload was found to be the most significant and consistent predictor of stress among nurses in hospitals being downsized. The greater the nurse's workload as a result of changes in the hospital, the greater the impact of restructuring and the greater the nurse's emotional exhaustion, cynicism, depression, and anxiety. Increased workload was also found to be associated with decreased job satisfaction, professional efficacy, and job security. The hospital's practices of bumping and using unlicensed personnel contributed to stress in nurses, but to a lesser degree. These practices resulted in greater impact of restructuring and less job security. In comparison to specific work stressors, the RII was a less influential factor in the outcomes.

The present results extend those of previous research showing that work overload is a significant predictor of stress and burnout in nurses (Armstrong-Stassen et al., 1994; Moore, Kuhrik, Kuhrik, & Katz, 1996; Tyler & Cushway, 1995). When hospitals are downsizing — cutting budgets and reducing nursing personnel — surviving nurses are required to do more work in less time. Thus it is not surprising that the respondents in the present study showed greater cynicism, depression, anxiety, and emotional exhaustion. An additional finding is that, compared to work stressors, demographic factors contributed less to the variance in outcome measures. Variables such as presence or absence of supervisory duties, full-time versus part-time work, length of current employment, and hospital size were also less important than stressors in determining outcomes. As expected, individual resources, including coping and self-efficacy, contributed significantly to outcomes. Nurses, like other employees, need personal coping strategies for dealing with the chaos associated with restructuring. Nurses who show higher levels of self-efficacy cope correspondingly effectively with the changes in their hospitals.
The stressors and outcome measures developed for this research were found to be valid measures. For example, the RII and the impact of restructuring scale were positively related to job insecurity, work stressors, and psychosomatic outcomes. Job insecurity was positively related to burnout, work stressors, and psychosomatic outcomes, thus providing evidence for its validity. The stressors were positively associated with burnout and psychosomatics, demonstrating their validity.

A limitation of the present study was a relatively low response rate, probably due in part to the length of the questionnaire (13 pages). However, the sample was representative of the general population of nurses on a number of key variables. For example, approximately 80% of nurses in Canada are employed in hospitals (Canadian Nurses Association, 1990). The average age of the nurses in the study was 42, compared to 44 in Ontario overall (Nursing Task Force, 1999). While 47% and 51% of the sample were employed full- and part-time, respectively, 49% and 47% of all nurses in Ontario were full- and part-time in 1997 (College of Nurses of Ontario, 1997). Most of the sample were women, similar to Ontario nurses in general. In the sample, nurses came from hospitals and communities of various sizes, while Ontario hospitals and communities in general vary in size. Forty-five percent of respondents stated they had supervisory duties in addition to their regular responsibilities, due to the need for registered nurses to supervise unlicensed health-care workers who have replaced registered nurses as a cost-saving measure (Gzowski, 1997). Taken together, these data indicate that the sample of nurses is representative of Ontario nurses.

These findings have implications for interventions that might be initiated by hospitals during restructuring. The significant betas for workload and bumping indicate their extensive influence on outcomes. If the deleterious effects of stressors such as workload are made known to hospital administrators, this finding may serve as a first step in the design of programs to ameliorate distress in nurses. Hospitals could be proactive in reducing stressful outcomes in nurses by implementing policies to limit increased workloads and teach nurses how to use more control-oriented coping in response to stress. Administrative changes are needed that will facilitate communication between nurses and administrators, including negotiations regarding workload. If workload issues are managed appropriately during restructuring, nurses should experience greater job satisfaction and less depression and anxiety. This will allow nurses to continue their work while retaining their sense of professional efficacy.
References


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