

Job Burnout: Towards a Resource-based Sequential Model

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Abstract

This study aimed at developing and testing a sequential model of job burnout based on Conservation of Resources theory (COR; Hobfoll, 2001). The proposed model posits that job resources have a primary role in protecting individuals from the threats posed by high job demands, which in turn sequentially influence two core dimensions of job burnout, i.e., emotional exhaustion and depersonalization.

Measures of job resources consisted of scales on job control and supervisory support whereas job demands included scales on psychological demands (work pressure, work pace, etc.) and role conflict. Job burnout comprised scales on emotional exhaustion and depersonalization. A questionnaire survey was conducted among a randomly selected sample of 2,267 nurses from public hospitals in Hong Kong. Data were analyzed using structural equations modeling procedures.

Results supported the resource-based sequential model, indicating that job resources had a negative effect on emotional exhaustion via job demands, and emotional exhaustion in turn had a positive effect on depersonalization. Job resources also had a direct negative effect on emotional exhaustion indicating that job demands acted as a partial mediator. Sequentially, emotional exhaustion mediated fully the effects of job resources and job demands on depersonalization.

Findings imply that control over one's job and experienced support from immediate supervisors play a central role in the burnout process. These job resources sequentially reduce threats posed by high job demands and protect individuals from experienced losses, i.e., emotional exhaustion and depersonalization.

Introduction

Job burnout is a psychological syndrome that involves chronic stressors in the workplace with long-term negative consequences for both individual employees and organizations (Swider & Zimmerman, 2010). It results in physical and psychological health impairments for employees whereas it increases the economic costs of sick leave, turnover, and insurance premiums for organizations (Awa, Plaumann, & Walter, 2010).

Researchers have shown sustained interest in identifying the workplace stressors and devising strategies to deal with them for promoting employee and organizational well-being (Schabracq, Winnubst, & Cooper, 2003). Reflecting this concern, numerous empirical studies on burnout have been published since the concept was first introduced in the 1970s (Maslach, Schaufeli, & Leiter, 2001). Critical reviews of these studies have however increasingly called for developing theory based burnout models and interventions (Halbesleben & Buckley, 2004). Answering this call, researchers have used a variety of theoretical frameworks in burnout studies including social exchange theory (Buunk & Schaufeli, 1999) and resource-based theories (see Halbesleben & Buckley, 2004 for a review).

This study contributes to the field of burnout research in two ways. First, it aims at proposing a parsimonious sequential model of burnout based on one of the currently dominant resource based theories of stress and burnout, namely, Conservation of Resources theory (COR; Hobfoll, 1989, 2001; Hobfoll & Freedy, 1993). The model begins with job resources as an antecedent condition and works through job demands followed by emotional exhaustion, and ends with depersonalization as an outcome.

Second, this study provides a test of the sequential model in a healthcare setting among a sample of nurses. The nursing profession has been traditionally associated with burnout because of its emotionally demanding work and care-giving responsibilities (Cordes & Dougherty, 1993; Maslach et al., 2001). In recent times, organizational changes accompanied by stringent resource allocation in healthcare systems have escalated job demands on healthcare employees including nurses with adverse health consequences (Dollard, LaMontagne, Caulfield, Blewett, & Shaw, 2007; Wong, Leung, & So, 2001).

In the following sections, we propose the sequential model of the burnout process and discuss the critical role of job resources in it.

A Resource-based Sequential Model of Burnout

Structure of Burnout Dimensions

As a multidimensional construct, burnout is characterized by emotional exhaustion, depersonalization (cynicism), and reduced personal accomplishment (Maslach & Jackson, 1981, 1986; Maslach, Schaufeli, & Leiter, 2001). Emotional exhaustion refers to depletion of motivational resources by one's work whereas depersonalization involves negative, callous, and cynical attitudes towards various aspects of one's job. Reduced personal accomplishment refers to feelings of professional incompetence and lack of work productivity (Maslach & Leiter, 2008).

Some of the early empirical studies examined the question whether there is a sequential progression among burnout dimensions, i.e., whether the occurrence of one dimension precipitates another (Cordes, Dougherty, & Blum, 1997; Golembiewski & Munzenrider, 1988; Leiter & Maslach, 1988). In a recent study, Maslach and Leiter (2008) concluded that emotional exhaustion "prompts actions to distance oneself emotionally and cognitively from one's work, presumably as a way to cope with work overload" (p. 499). They observed that depersonalization as a way of distancing oneself from one's job is "an immediate reaction to exhaustion" (p. 499) such that a strong path from exhaustion to depersonalization is consistently found in burnout research. The third dimension, reduced personal accomplishment, has complex relationships with the first two, sometimes being directly related to them and sometimes developing rather independently. For this reason, only the first two core burnout dimensions were considered in the present study.

Conservation of Resources Perspective

The COR theory (Hobfoll, 1989, 1998, 2001) is a general theory about stress with applications to burnout. This theory states that burnout occurs under one of the following three conditions: "(1) when individuals' resources are threatened with loss, (2) when individuals' resources are actually lost, or (3) when individuals fail to gain sufficient resources following significant resource investment" (Hobfoll, 2001, pp. 341-342). In an organizational context, resources refer to valued things such as job control, supervisor support, etc. Job demands refer to threats of resource loss or of potential loss and the consequences of such threats are seen to be actual losses because "meeting such demands requires the investment of valued resources" (Lee & Ashforth, 1996, p. 129).

Whether job resources and job demands sequentially influence burnout is a theoretical as well as an empirical question. A key principle of COR theory states that “people must invest resources in order to protect against resource loss, recover from resource loss, and gain resources” (Hobfoll, 2001, p. 349). This principle has two aspects: (1) job resources are assumed to provide resistance to threats of loss posed by job demands and (2) such resources are expected to protect people from actual resource loss such as the experience of burnout.

There is substantial support for COR theory’s first aspect of the principle of resource investment in providing protection from losses. For example, several studies have reported negative effects of job resources on emotional exhaustion, depersonalization, or both (Innstrand, Langballe, Espnes, Falkum, & Aasland, 2008; Ito & Brotheridge, 2003; Neveu, 2007). The second aspect of this principle is concerned with the question of whether resource investment provides a general resistance to or protection from possible threats such as job demands. This means that high job resources may reduce perceived threats of high job demands which in turn influence the core dimension of burnout, i.e., emotional exhaustion.

Research Model

Taken together, the two aspects of the principle of resource investment imply that job resources would influence emotional exhaustion directly and indirectly via job demands. This means that job demands may partially mediate the relationships of job resources with emotional exhaustion. Specifically, job resources will have negative effects on job demand and emotional exhaustion. Job demands in turn will have a positive effect on emotional exhaustion. Given that emotional exhaustion can trigger depersonalization as a coping mechanism (Maslach & Leiter, 2008), emotional exhaustion will further mediate the relationships of job resources and job demands with depersonalization.

Method

Sample

Data were collected from a random sample of nurses working for the Hospital Authority of Hong Kong. Using a mail survey, 2,267 nurses returned usable questionnaires with a response rate of 24.17%. The respondents were 89.2% female and 10.8% male. Sixteen percent were under 25 years, 20.40% were 26-30 years old, 40.9% were 31 to 40 years, and 22.90 were 40 years and above. Twenty-four percent of the nurses were enrolled, 52.5% registered, and 22.0% held managerial positions.

Measures

Maslach Burnout Inventory (Maslach & Jackson, 1981, 1986) was used to measure two core dimensions of job burnout, i.e., emotional exhaustion and depersonalization (Maslach & Leiter, 2008). Respondents were asked to indicate frequency of their experience of burnout on a 7-point scale anchored by 0 (never) and 6 (always). The coefficient alpha was .90 for emotional exhaustion and .82 for depersonalization.

Job demands consisted of two scales, i.e., psychological demands and role conflict. We adapted seven items from the work of Karasek (1979) to measure psychological demands using a 5-point scale anchored by 1 (almost never) and 5 (almost always). Similarly, eight items devised by Rizzo, House, and Lirtzman (1970, cited in Cook et al., 1981) were used to measure role conflict on a 7-point scale anchored by 1 (very false) and 7 (very true). The coefficient alphas for psychological demands and role conflict items were .86 and .85, respectively.

Job resources comprised scales on job control and supervisory support. Seventeen items, developed by Dwyer and Ganster (1991), were adopted for measuring perceptions of control over different facets of work environment. The respondents indicated the amount of control they had on particular aspects of the work environment on a 5-point scale anchored by 1 (very little) and 5 (very much). Finally, supervisory support was measured by four items adapted from the work of Caplan et al. (1980). We used a 6-point scale anchored by 1 (never) and 6 (very great). The coefficients alpha for job control and supervisory support were .88 and .85, respectively.

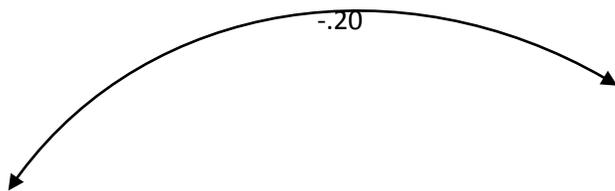
Results

Measurement Model

Prior to testing the sequential model of burnout, we tested a two-factor measurement model of job demands and job resources using confirmatory factor analysis (AMOS program; Arbuckle & Wothke, 1995-99). Job demands comprised psychological demands (workload, work pace, etc.) and role conflict; job resources included job control and supervisory support. The fit indices (GFI, NFI, and CFI) were close to 1.00 and RMSEA = .09.

Testing the Sequential Model

We performed structural equation analysis using the AMOS program (Arbuckle & Wothke, 1995-99) for testing the sequential model of job burnout. Results presented in Figure 1 indicate that job resources had negative effects on job demands ($\beta = -.53, p \leq .01$) and emotional exhaustion ($\beta = -.20, p \leq .01$). Sequentially, job demands had a positive effect on emotional exhaustion ($\beta = .54, p \leq .01$) which in turn positively affected depersonalization ($\beta = .80, p \leq .01$).



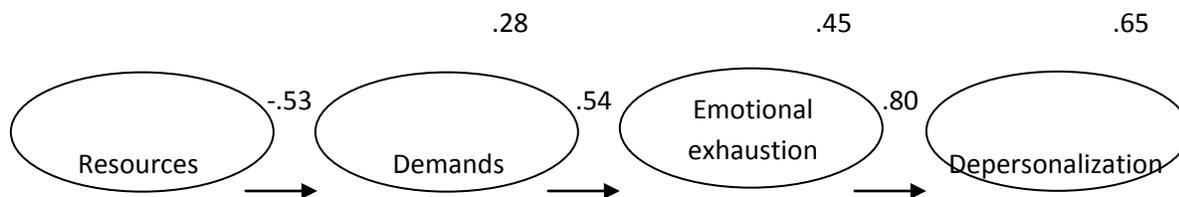


Figure 1. Sequential model of job burnout

Figure 1 also shows that job resources accounted for 28.0% of the variance in job demands. Direct and mediated effects together amounted to 45.0% of the variance in emotional exhaustion and 65.0% in depersonalization. The indices of goodness of fit for the sequential model were RMSEA = .07, GFI = .93, NFI = .93, and CFI = .93. These findings indicate that the model had a good fit with the data.

Results of the Mediation Analysis

We further performed the mediation analysis to test whether job demands partially mediate the effects of job resources on emotional exhaustion and whether emotional exhaustion fully mediates the effects of job resources and job demands on depersonalization. In doing this analysis, we used Baron and Kenny's (1986) procedure which requires the following to confirm the significance of mediation: (1) an independent variable should significantly affect an outcome variable and a hypothesized mediator, (2) the mediator should have a significant effect on an outcome variable, and (3) the effect of a independent variable on an outcome variable should become non-significant when there is complete mediation, or such effect should be significantly reduced in strength when the mediation is partial. Table 1 presents results of the mediation analysis using this procedure.

Results indicate that Models 1 and 2 satisfied the first condition of the mediation analysis for emotional exhaustion by testing whether job resources had significant effects on the mediator, i.e., job demands (Model 1, $\beta = -.52, p \leq .01$) and the dependent variable, i.e., emotional exhaustion (Model 2, $\beta = -.49, p \leq .01$). In Model 3, job demands had a significant effect on emotional exhaustion ($\beta = -.64, p \leq .01$) satisfying the second condition of the mediation analysis. Model 4 tested the combined effects of job resources ($\beta = .21, p \leq .01$) and job demands ($\beta = .53, p \leq .01$). Consistent with the third condition of the mediation analysis, these results show that job demands partially mediate the relationship between job resources and emotional exhaustion.

Table 1

Path Coefficients in the Mediation Analysis

	Job Demands		Emotional Exhaustion		Depersonalization		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Direct effect							
Job resources	-.52**	-.49**	--	-.21**	-.11**	--	.05
Job demands	--	--	.64**	.53**	.49**	--	.06
Emotional exhaustion	--	--	--	--	--	.80**	.79**
Indirect effect							
Job resources	--	--	--	-.28**	--	--	-.42**
Job demands	--	--	--	--	--	--	.42**

Note. Significance of indirect effects was estimated using bootstrapping procedure in AMOS (Arbuckle & Wothke, 1995-99).

* $p \leq .01$, ** $p \leq .01$.

The same procedure was followed for testing whether emotional exhaustion mediated the relationships of job resources and job demands with depersonalization. Test results of Models 4-7 shown in Table 1 meet all the three conditions of the mediation analysis. In particular, results of Model 7 support the case for full mediation in that the effects of job resources ($\beta = .05$, ns) and job demands ($\beta = .06$, ns) on depersonalization became non-significant when combined with the effect of emotional exhaustion ($\beta = .79$, $p \leq .01$).

The significance of the indirect effects of job resources and job demands were estimated using the bootstrapping procedure in AMOS (Arbuckle & Wothke, 1995-99). Table 1 shows that the indirect effects of job resources on emotional exhaustion ($\beta = -.28$, $p \leq .01$) and on depersonalization ($\beta = -.42$, $p \leq .01$) were significant and negative. The indirect effect of job demands on depersonalization ($\beta = .42$, $p \leq .01$) was significant and positive.

Discussion

We proposed a sequential model of job burnout based on the COR theory's principle of resource investment. Given the importance of job resources in the burnout process, the model presents these resources as antecedent conditions to job demands and emotional exhaustion which in turn influences depersonalization. Findings from a test of this model showed that job resources had a direct effect on emotional exhaustion and a mediated effect through job demands. Emotional exhaustion, in turn, mediated the effects of both job resources and job demands on depersonalization. Overall, our findings support the sequential model of burnout among nurses.

Findings imply that the sequential model is a parsimonious model in which job resources and job demands can be used as two generic categories of job aspects (Bakker & Demerouti, 2007; Schaufeli et al., 2009) whose effects can be explained through the mechanisms of mediation. The idea of job demands as a mediator is rather novel because previous studies have treated job demands primarily as an antecedent condition. It is clear that employee perceptions of job demands depend on their perceptions of job resources. From a health perspective, "it is distressing for people to feel responsible for producing results to which they are deeply committed while lacking the capacity to deliver on that mandate" (Maslach et al., 2001, p. 414).

Implications for Practice

Two of the job aspects, i.e., job control and supervisory support appear to be critical in providing resistance to the potential threats of job demands and reducing the experience of emotional exhaustion that symbolizes resource loss. It is notable that the indirect effects of these job resources extend all the way up to depersonalization. Findings suggest that organizational interventions patterned on employee control over their job facets and supportive leadership that promotes employee empowerment and problem solving would significantly decrease the perceived threats of high job demands, which in turn would reduce the experienced burnout.

This study examined psychological demands (work overload, work pace, etc.) and role conflict as the most commonly cited job demands that expose healthcare professionals to the hazard of burnout (Michie & Williams, 2009). Rising expectations of the quality care from healthcare systems exacerbate the negative effects of high job demands on the well-being of professionals and consequently on the delivery of healthcare (Dollard et al., 2007; Wong, Leung, & So, 2001). Although it may not be possible to altogether eliminate job stressors, their negative effects can be significantly reduced by developing appropriate human resource management policies and practices and using some planned interventions.

The management policies and planned interventions can be implemented at different organizational levels. For example, the selection process of fresh nurses should consider job previews, person-job fit, and person-organization fit (Maslach & Lieter, 2008) so that selected nurses have realistic job expectations, are proficient in their work, and can get along with coworkers with professional ease. The experienced nurses should be offered continuous learning opportunities for building professional competencies that are required for meeting the rising expectations of quality care. Using planned

interventions, nurses should be given opportunities for developing portable skills in communication, problem solving, performance management, etc.

The findings presented and discussed here have some limitations. First, they may suffer from common method bias. Future studies may include some objective measures of job demands. Second, data were collected at a single point in time. In order to establish causal links between resources, demands, and burnout dimensions, longitudinal studies would be needed for further validation of the sequential model.

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