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ADMINSTRATIVE MEDICINE

Part I Examination

Tuesday 13 June 2017

17:30 – 19:00 (1½ hours)

Paper IIB

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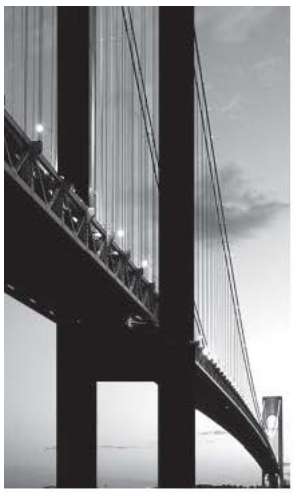

EFFECTS OF THE WORKPLACE SOCIAL CONTEXT AND JOB CONTENT ON NURSE BURNOUT

JENNY S.Y. LEE AND SYED AKHTAR

Introduction

Job burnout (Freudenberger, 1974; Sommer, 1973) has long been recognized as an occupational hazard for people-oriented professions. Maslach and Jackson (1981) conceptualized job burnout as a stress syndrome that can occur especially among individuals who work with people in need. It is characterized by three dimensions: emotional exhaustion, depersonalization, and reduced personal accomplishment. Emotional exhaustion, the depletion of one's emotional resources, and feelings of exhaustion from one's work are at the core of job burnout. Depersonalization involves negative, callous, and cynical attitudes and feelings about one's clients, whereas personal accomplishment reflects one's "feelings of competence and successful achievement in one's work with people" (Maslach & Jackson, 1986, p. 2).

The nursing profession is consistently recognized as a stressful occupation (Hansen, Sverke, & Näswall, 2009). Since the concept of

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burnout was introduced in the scientific literature in the mid-1970s, the subject of burnout among nurses has been extensively researched (Hansen, Sverke, & Näswall, 2009). The reason for this seems obvious: Nurses are particularly susceptible to the hazards of burnout because of the stressful nature of their work. Of particular concern in nursing is the emotional challenge of working intensively with other people in need or crisis, including patients and their families.

Nurses work within a larger workplace social context that can have a persistent influence on their well-being.

Burnout has an adverse impact on the quality of services offered to the patient and the health of caregivers. Nurses who suffer from burnout can withdraw emotionally and physically from patient interactions, jeopardizing the positive intentions of their care. They are more likely to have increased absenteeism (Peterson, Demerouti, Bergstrom, Asberg, & Nygren, 2008), experience feelings of inadequacy, and report low job satisfaction (Dollard, LaMontagne, Caulfield, Blewett, & Shaw, 2007). Eventually, burned-out individuals take their work problems home, potentially increasing interpersonal conflicts with members of their social network, including spouses, children (Jackson & Maslach, 1982), partners, and friends.

To reduce these negative outcomes, the prevailing approach is to identify sources of burnout among nursing professionals and formulate interventions. Various intervention strategies have been proposed based on the job content of health care workers (Kelloway & Barling, 1991). For example, Hobfoll and Freedy (1993) suggested giving nurses more resources, such as job control, to enhance engagement with the job. Maslach, Schaufeli, and Leiter (2001) suggested helping nurses develop effective coping skills to deal with overload or learn deep relaxation techniques, both of which may help individuals alleviate feelings of exhaustion. These strategies have also proven useful in occupations other than nursing (Barling, Kelloway, & Iverson, 2003).

This study contributes to the extant literature in three ways. First, we argue that focusing on immediate nursing job content (e.g., patient care responsibilities, workload, work pressure, etc.) is necessary, but not sufficient, for developing effective interventions. Nurses work within a larger workplace social context that can have a persistent influence on their well-being. Our arguments are also rooted in social exchange theory (for a review, see Cropanzano & Mitchell, 2005) and how it applies to health care settings (Buunk & Schaufeli, 1993, 1999; Schaufeli, 2006). Drawing on the work of Cropanzano, Rupp, and Byrne (2003), we define workplace social context as employees' social relationships with their clients, coworkers, and organizations that involve exchanging socioemotional benefits and open-ended obligations. We propose that workplace social context may shape the emotional and cognitive relationships that nurses develop with their jobs, and its role in the emergence of burnout may be stronger than that of job content, especially when exchange relations are characterized by lack of reciprocity and unmet expectations (Schaufeli, 2006). Realistic job previews and expectation-lowering procedures used in other occupational categories (Buckley et al., 2002) could help prevent the sense of unfairness often associated with unmet expectations in the nursing profession.

Second, it is assumed that depersonalization in the burnout process develops as a passive coping mechanism in response to emotional exhaustion, whereas personal accomplishment is presumed to develop relatively independently (Cordes, Dougherty, & Blum, 1997; Maslach & Leiter, 2008). For this reason, we examine the role of emotional exhaustion as a mediator in the relationship between workplace social context and job content and depersonalization. Third, we propose empirically grounded management interventions for reducing burnout among nurses. In the following sections, we examine the burnout model and the role the workplace social context and job content play in this model.

Literature Review

Job Burnout Dimensions

Before examining the sources of burnout arising from social context and job content, we

Schaufeli, 2006). By focusing on equity and reciprocity, the authors implied a perceived balance between one's investments in and expected outcomes from social exchange relationships. They further argued that humans have an innate capacity to expect reciprocity in exchange relationships, such that a lack of reciprocity can generate distress (Buunk & Schaufeli, 1999; Schaufeli, 2006).

Nurses who received help from two or more people to do house chores were found to have low levels of depersonalization.

Several aspects of the workplace social context can affect the incidence of burnout in health care settings. For instance, Buunk (1995) reported that nurses experience an imbalance between providing care and its outcomes in their relationships with patients. Nurses may expect certain rewards such as gratitude and personal recognition in return for their care and service, but such expectations are often not fulfilled. Van Yperen, Buunk, and Schaufeli (1992) found that nurses who believed they invested more in their patients than they received in return perceived an imbalance in their relationships with patients and reported high levels of emotional exhaustion, depersonalization, and a diminished sense of personal accomplishment.

Other frequently cited aspects of the workplace social context include relationships with supervisors, coworkers, and physicians. Leiter and Maslach (1988) looked at contact with coworkers and supervisors, distinguishing between pleasant and unpleasant contacts. Among nurses, unpleasant supervisor contact was positively related to emotional exhaustion, and pleasant supervisor contact was negatively related to depersonalization. Pleasant coworker contact was positively related to personal accomplishment.

The work of a nurse often takes place within a large organization that includes complex hierarchies, operating rules, and limited resources (Maslach et al., 2001). This organizational focus highlights the importance of the values that are implicit in organizational processes and structures and how these values shape the emotional relationships that workers develop with their work. Generally, positive acts on the part of the organization and supervisors toward employees are evidence that the organization cares about employees and recognizes their contributions. As a result, workers tend to feel less stressful within their working environment (Jenkins & Elliott, 2004). Inequitable social exchange, however, can produce negative motivational effects leading to resentment (Cropanzano & Greenberg, 1997) and job burnout in organizations. It has also been argued that when employees make high emotional investments in their work, they are sensitive to the rewards the organization provides them in return, such as feedback and career advancement (Schaufeli, 2006). When such rewards fall short of what the employees feel they deserve, burnout may develop. Indeed, Schaufeli, van Dierendonck, and van Gorp (1996) showed that student nurses who perceive inequity at the organizational level experienced burnout.

Other studies have demonstrated a relationship between the private living conditions of nurses and burnout (e.g., Barnett & Marshall, 1993). Nurses who received help from two or more people to do house chores were found to have low levels of depersonalization. Because family life demands time and devotion from all partners, a satisfactory family life has a favorable effect upon personal accomplishment levels (Demir, Ulusoy, & Ulusoy, 2003).

Considered together, the preceding findings suggest key aspects of social exchange relationships that can influence burnout in health care settings. These include, among other things, the quality of nurses' relationships with their patients, coworkers, and family members as well as their expectations for professional recognition. Whether the workplace social context, as conceptualized here, has a stronger influence on burnout than do job content factors is an empirical question that this study addresses.

Job Content

Emphasizing workplace social context does not preclude the significance of job content in predicting burnout. A meta-analysis

need to examine the internal structure of the burnout syndrome and propose pathways to its dimensions. Burnout is a psychological syndrome that includes symptoms of emotional exhaustion, depersonalization, and reduced personal accomplishment (Maslach & Jackson, 1981). As the core dimension of burnout (Moore, 2000), emotional exhaustion occurs when an individual experiences fatigue, frustration, and loss of energy, such that the person feels drained and lacks the energy to face another day. Depersonalization occurs when a burned-out individual treats service recipients as impersonal objects, which usually develops in response to an overload of emotional exhaustion. Reduced personal accomplishment is indicated by an increased tendency to evaluate oneself negatively and feeling dissatisfaction with one's job accomplishments.

This three-dimensional model of burnout emerged from initial studies based on surveys and interviews with a variety of human-service providers (Maslach, 1982). The first phase of empirical research focused on assessing burnout using the Maslach Burnout Inventory (MBI; Maslach & Jackson, 1981, 1986). Early empirical research also examined the sequential progression in which the occurrence of one component precipitated the next (Golembiewski & Munzenrider, 1988). Two models have been tested using this approach. First, Golembiewski and Munzenrider (1988) found support for a sequential model that progressed from (1) depersonalization, followed by (2) decreased personal accomplishment, and finally (3) emotional exhaustion. Second, Leiter and Maslach (1988) found support for a burnout model that progressed from (1) emotional exhaustion to (2) depersonalization, and finally to (3) decreased personal accomplishment. They observed that emotional exhaustion results from emotional overload caused by working with demanding recipients. In an attempt to cope with that stress, human-service professionals distance themselves psychologically from their recipients through depersonalization. Because such an attitude decreases the capacity to deal with recipients, service providers are likely to fail to meet their work goals and hence decrease their accomplishments.

Subsequent empirical research by Cordes et al. (1997) compared the two preceding burnout models and found evidence for an amended version of Leiter and Maslach's (1988) sequential process: emotional exhaustion occurs first and leads to the development of depersonalization, whereas feelings of reduced personal accomplishment develop separately. Cordes et al. (1997) reported a significant path between emotional exhaustion and depersonalization, and a nonsignificant path between depersonalization and personal accomplishment. In a more recent study, Maslach and Leiter (2008) reiterated that depersonalization is "an immediate reaction to exhaustion" (p. 499), which is found consistently in burnout research. In determining the relative importance of the effects of social context and job content on burnout dimensions, the present study uses the amended version of the burnout model, in which emotional exhaustion precedes depersonalization and personal accomplishment develops independently (Cordes et al., 1997).

Social exchange processes and expectations of equity and reciprocity play an important role in the relationships between health care professionals and their clients, coworkers, and organizations.

Workplace Social Context

The significance of the three-dimensional model of burnout is that "it clearly places the individual strain experience within the social context of the workplace" (Maslach & Leiter, 2008, p. 498). Referring to social exchange theory, Buunk and Schaufeli (1993) proposed a central thesis that "burnout develops primarily in a social context" (p. 53). In particular, they extended Adams's (1965) equity theory to health care settings, stating that social exchange processes and expectations of equity and reciprocity play an important role in the relationships between health care professionals and their clients, coworkers, and organizations (Buunk & Schaufeli, 1999;

conducted by Lee and Ashforth (1996) showed that perceived workload and time pressure share an average of 42% and 25% of variance, respectively, with emotional exhaustion. One well-known model that focused on job demands is the job demand-control model (JD-C model) by Karasek (1979) in which jobs characterized by high demands and low control were found to be associated with high strain. This model substantially improved earlier insights regarding job burnout experiences and outcomes. Karasek's (1979) model has been criticized, however, as too simplistic (Janssen, Jonge, & Bakker, 1999) because it focuses primarily on job demands and job control as the main causes of stress and strain, whereas burnout in health care settings is influenced by a wide variety of stressors.

Another major influence on nursing burnout related to job content is role conflict (Lambert & Lambert, 1993). Role conflict requires an individual to strike a balance among competing demands that may threaten the person's resources and subsequently trigger physical and emotional strain (Hobfoll & Freedy, 1993). Previous research has identified significant relationships between role conflict and emotional exhaustion and, to a lesser extent, between role conflict and depersonalization (Leiter & Maslach, 1988). According to a meta-analysis (Pfenning & Husch, 1994, cited in Schaufeli & Buunk, 2003), role conflict shared 24% of the variance with emotional exhaustion, 13% with depersonalization, and 2% with personal accomplishment.

Patient care responsibilities form the main component of nurses' daily work; therefore, researchers have focused specifically on contact between nurses and patients. Day-to-day contact with patients drains the emotional resources of nursing professionals. Working with difficult patients can lead to feelings of helplessness and frustration, which can initiate the burnout process (Schaufeli, 1995). Negative client behaviors, on the other hand, have been positively correlated with emotional exhaustion, depersonalization, and lack of personal accomplishment (Ackerley, Burnell, Holder, & Kurdek, 1988).

These findings can be explained more effectively by the recently developed job demands-resources (JD-R) model, which assumes that burnout develops when high job demands and limited resources lead to depleted energy and reduced employee motivation, respectively (Bakker, Demerouti, & Verbeke, 2004; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). Compared with the JD-C model, the JD-R model defines demands more broadly in terms of "aspects of the job that require sustained physical or mental effort" (Demerouti et al., 2001, p. 501). Our use of the term "job content" refers to this more inclusive use of job demands. In health care settings, job content factors, such as high work pressure, work overload, role conflicts, and patient care responsibilities, can occur on a sustained basis and are therefore associated with physical and emotional drain.

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Proposed Research Model

In the current study, we consider some of the emergent issues from the literature review as illustrated through the research model shown in Figure 1. First, compared with job content, workplace social context is expected to have a stronger effect on all three dimensions of burnout because of the primary role social context plays in the emergence of burnout (Buunk & Schaufeli, 1999; Schaufeli, 2006). These relationships are represented by the direct paths originating from workplace social context and job content to emotional exhaustion, depersonalization, and personal accomplishment. Second, emotional exhaustion is central to burnout; depersonalization follows as a passive coping mechanism (Cordes et al., 1997; Maslach & Leiter, 2008). Thus, Figure 1 shows a path running from emotional exhaustion to depersonalization.

Third, being central to burnout, emotional exhaustion is shown as a

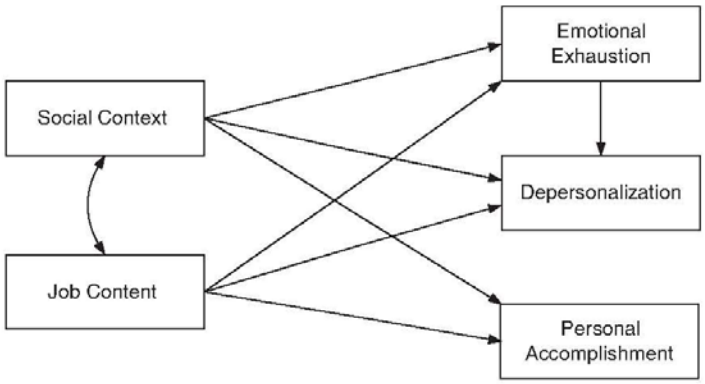

FIGURE 1. Proposed Model of Workplace Social Context and Job Content as Antecedents of Burnout

mediator in the relationships of workplace social context and job content with depersonalization. However, we expect emotional exhaustion to be a partial mediator because we do not rule out the direct effects of the antecedents on depersonalization. For example, a prior meta-analysis indicated that stressful events and role conflict are direct correlates of depersonalization (Lee & Ashforth, 1996). In other words, antecedent conditions, such as job content and workplace social context for nurses, may evoke depersonalization both directly and through the mediation of emotional exhaustion. Finally, decreased personal accomplishment is assumed to develop independently, but in parallel; therefore, emotional exhaustion is not expected to play a mediating role in its relation to the antecedents.

Method

This study involved an extensive questionnaire survey of registered nursing professionals administered in every public hospital in Hong Kong. In the following sections, we describe the nursing profession in Hong Kong and then provide sample characteristics and measures of the job burnout and job stressors that were contained in the survey questionnaire. Questionnaire items, except for the copyrighted Maslach's Burnout Inventory,[1] are included in the Appendix.

The Nursing Profession in Hong Kong

In 2007, approximately 27,000 registered nurses were working in public and private hospitals in Hong Kong, of which 88.8% were women and 11.2%, men. Among these, 71.80% were working in public hospitals, 13.5% in the private sector, and the remaining in academic and subvented sectors (Hong Kong Department of Health, 2007). In Hong Kong, all registered nurses are required to have a 4-year bachelor's degree in nursing. Additionally, they are required to pass a licensing examination and obtain a valid practicing certificate issued by the Nursing Council of Hong Kong. Newly registered nurses are appointed on a probationary term of 3 years. If they pass that probationary period successfully, they may be appointed to a 3-year contract prior to being considered for a permanent rather than fixed-term contract appointment (Nursing Council of Hong Kong, 2011).

In Hong Kong, there are 5.2 nurses per 1,000 people, whereas in The Netherlands, Britain, and Canada the numbers are 14.5, 9.1, and 10, respectively (Hong Kong Census and Statistics Department, 2007). The median work hours per week are 44. Around 10.0% of registered nurses are required to

undertake on-call duty as part of their posts, with a median of 18 hours of on-call duty per week (Hong Kong Department of Health, 2007).

In the 1990s, reforms were initiated in the Hong Kong public hospital system that introduced the practice of patient-centered services. Nurses were given greater responsibility for managing wards and were expected to participate in hospital-wide administration (Hong Kong Medical Services Development Committee, 1995). Rapid developments in medical technology and fast patient throughput have further increased the complexity and volume of nursing care in Hong Kong (Wong, Leung, & So, 2001).

Sample Characteristics

With assistance from the Operations and Human Resource Division of the Hospital Authority of Hong Kong, we drew a random sample of 5,154 registered nurses from across Hong Kong's public hospitals to represent more than 50% of the nursing population. From among the selected nurse group, 1,190 returned usable questionnaires, generating a response rate of 23%.

The respondents were 89% women and 11% men. Their length of service varied from 5 years or less to 21 years or more. Among this group of nurses, 65.0% were from general acute hospitals with 24-hour accident and emergency services; 19.1% were from hospitals offering a mix of acute and nonacute services; 8.7% were from acute service hospitals with particular care missions; 5.7% were from psychiatric hospitals; and the remainder were from nonacute or infirmary hospitals.

To examine the representativeness of our sample, we compared the gender ratio of our respondents with that of the general nursing population. The Hong Kong Department of Health (2007) statistics on the gender ratio of registered nurses mentioned previously compares well with our sample. We also compared the responses of nurses who completed the survey with those of nurses who were excluded from analysis because their surveys were incomplete. These results showed that there were no significant differences between the two groups in terms of gender and length of work experience. Nurses who returned incomplete surveys, however, were older than nurses who returned completed surveys ($F = 6.66$, $p \leq .01$). Overall, the results suggest that our sample of registered nurses was fairly representative of the general nursing population in Hong Kong's public hospitals.

Survey Questionnaire

Job Burnout

The Maslach Burnout Inventory (Maslach & Jackson, 1981, 1986) was selected to measure the three dimensions of job burnout: (1) emotional exhaustion, (2) depersonalization, and (3) decreased personal accomplishment. The three dimensions were measured using nine, five, and eight items, respectively. Respondents were asked to indicate how frequently they experienced a particular aspect of burnout using a 7-point scale (0 = *never*, 1 = *a few times a year or less*, 2 = *once a month or less*, 3 = *a few times a month*, 4 = *once a week*, 5 = *a few times a week*, 6 = *everyday*). A confirmatory factor analysis of burnout items using AMOS (Arbuckle & Wothke, 1995–1999) indicated acceptable goodness of fit indices for a three-dimensional model (GFI = .91, NFI = .89, CFI = .90, RMSEA = .07). The coefficient alphas for emotional exhaustion, depersonalization, and decreased personal accomplishment were .90, .82, and .79, respectively.

Dimensions of Workplace Social Context

Measures of the workplace social context covered five dimensions that reflect the extent of perceived imbalance or lack of reciprocity in nurses' social exchange relationships. Items were adapted from the Health Professions Stress Inventory (Wolfgang, 1988) to measure three of these dimensions, namely, (1) lack of professional recognition ($\alpha = .81$), (2) professional uncertainty ($\alpha = .78$), and (3) interpersonal

and family conflicts (α = .69). The fourth indicator, tension in professional work relationships (α = .69), was assessed using four items from the Nursing Stress Scale devised by Gray-Toft and Anderson (1981). We devised three items specifically for this survey to assess the fifth indicator, tensions in nurse–patient relationships (α = .78). Respondents were asked to indicate how often they found each situation to be stressful using a 5-point scale anchored by 0 = *never* and 4 = *very often*. Prior to using these dimensions in the confirmatory factor analysis of our measurement model, we established their dimensionality using limited information factor analysis.

Dimensions of Job Content

Job content consisted of three dimensions. The first indicator, patient care responsibilities (α = .63), was assessed based on five items adapted from Wolfgang's (1988) Health Professions Stress Inventory. Seven items were adapted from Karasek (1979) to measure the second indicator, job demands (α = .87), in terms of workload and work pressure. An illustrative item was "How often does your job require you to get a great deal done?" Responses were measured on a 5-point scale anchored by 1 = *almost never* and 5 = *almost always*. The third indicator, role conflict (α = .85), was measured using an 8-item scale devised by Rizzo, House, and Lirtzman (1970, cited in Cook, Hepworth, Wall, & Warr, 1981). An illustrative item in the survey was "I receive incompatible requests from two or more people." Respondents indicated how true each statement was when describing their work on a 7-point scale anchored by 1 = *very false* and 7 = *very true*. Prior to using these dimensions in the confirmatory factor analysis of our measurement model (Figure 2), each dimension was assessed separately for its dimensionality, using limited information factor analysis.

Translating the Survey Questionnaire

The questionnaire was translated into Chinese by a professional translator and back-translated into English by another translator. The back-translated version was compared with the original to ensure accuracy. A mutually acceptable Chinese version was then mailed to the selected sample of nurses with return envelopes addressed directly to the researchers. An introductory letter to the nurses was included to assure

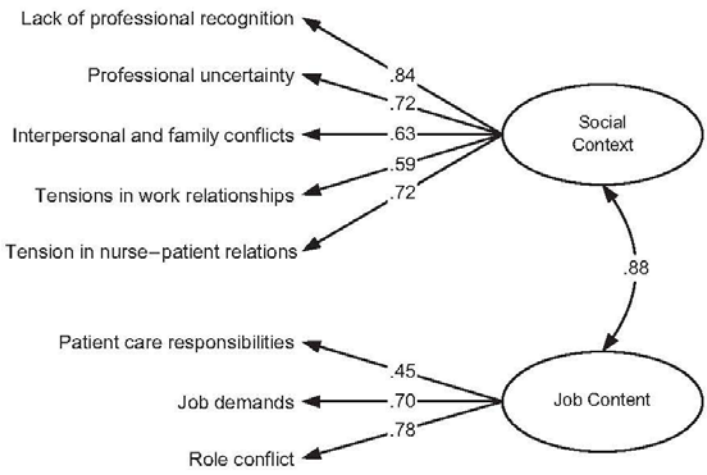

FIGURE 2. Dimensions of Workplace Social Context and Job Content

Note: Goodness of Fit Index = .97, Normed Fit Index = .97, Comparative Fit Index = .97, Root Mean Square Error of Approximation = .08

them that their responses would remain confidential.

Results

Descriptive and Correlation Analyses

Table I presents the descriptive statistics on dimensions of workplace social context, job content, and burnout dimensions and the zero-order correlations between them. Coefficient alphas for individual variables ranged from .63 to .90. The correlation coefficients between the variables ranged from a low of .13 to a high of .61. All dimensions of workplace social context had significant correlations, ranging from .41 to .61. Similarly, correlations among job content factors ranged from .32 to .55. The burnout dimensions of emotional exhaustion and depersonalization were also highly correlated with a coefficient of .66. These two dimensions had small, but significant negative correlations with personal accomplishment, the third dimension of burnout.

Confirmatory Factor Analysis

Before testing the proposed model shown in Figure 1, we used AMOS (Arbuckle & Wothke, 1995–1999) to conduct a confirmatory factor analysis of a measurement model that specified the proposed classification of the job stressors. The measurement model shown in Figure 2 classified the eight job stressors into two latent factors, namely, workplace social context and job content. Workplace social context captured the lack of professional recognition, professional uncertainty, interpersonal and family conflicts, tensions in work relationships, and tensions in nurse–patient relations. Job content contained patient care responsibilities, job demands, and role conflict. We also tested a 1-factor model containing all job stressors. The chi-square difference between the two models

TABLE I Zero-Order Correlations Between Job Stressors and Burnout Dimensions ($N = 1,190$)

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11
1. Lack of professional recognition	2.23	.63	**.81**										
2. Professional uncertainty	1.96	.66	.61	**.78**									
3. Interpersonal and family conflicts	1.69	.68	.53	.56	**.69**								
4. Tensions in work relationships	1.77	.76	.49	.61	.64	**.72**							
5. Tensions in nurse–patient relations	2.33	.74	.59	.56	.41	.43	**.75**						
6. Patient care responsibilities	2.53	.60	.35	.24	.28	.21	.33	**.63**					
7. Role conflict	4.42	1.14	.59	.48	.50	.47	.47	.32	**.85**				
8. Job demands	3.79	.67	.51	.40	.32	.30	.49	.35	.55	**.87**			
9. Emotional exhaustion	3.21	1.36	.50	.51	.46	.43	.46	.24	.44	.49	**.90**		
10. Depersonalization	2.23	1.42	.44	.50	.39	.37	.46	.13	.41	.32	.66	**.82**	
11. Personal accomplishment	3.62	.99	−.15	−.20	−.08	−.16	−.12	.18	−.05	.00	−.08	−.09	**.79**

Notes: Correlation coefficients equal to or higher than .06 are significant at $p \leq .01$. Scores ranged from 0 = never to 4 = very often for the Stress Inventory scales; from 1 = very false to 7 = very true for role conflict; from 1 = almost never to 5 = almost always for job demands; and from 0 = never to 6 = always for the job burnout dimensions. Figures in bold on the diagonal are alpha coefficients.

was significant ($\chi^2 = 51.73$; $p \leq .01$), indicating that the 2-factor model had a better fit with the data than did the 1-factor model. The 2-factor model, consisting of workplace social context and job content, also had satisfactory levels of goodness of fit indices (GFI = .97, NFI = .97, CFI = .97, RMSEA = .08). Taken together, these findings indicate that the measurement model fit the data well.

Path Analysis Using Structural Equations

To prepare for the path analysis, we created weighted scores of workplace social context and job content, using factor loadings from the measurement model. Figure 3 shows the results of this path analysis, using AMOS (Arbuckle & Wothke, 1995–1999). Results indicate that workplace social context had significant positive effects on emotional exhaustion ($\beta = .44, p \leq .01$) and depersonalization ($\beta = .26, p \leq .01$) and had a negative effect on personal accomplishment ($\beta = -.33, p \leq .01$). Job content also had a significant positive effect on emotional exhaustion ($\beta = .22, p \leq .01$), a nonsignificant negative effect on depersonalization ($\beta = -.04$, *ns*), and a positive effect on personal accomplishment ($\beta = .23, p \leq .01$).

We used the parameter comparison procedure in AMOS (Arbuckle & Wothke, 1995–1999) to compare the relative strength of the workplace social context and job content path coefficients. When compared with job content, workplace social context had significantly stronger effects on emotional exhaustion ($t = 5.32$, $p \leq .01$), depersonalization ($t = 6.23$, $p \leq .01$), and personal accomplishment ($t = 8.20$, $p \leq .01$).

Following Baron and Kenny's (1986) procedure, we further tested whether emotional exhaustion partially mediated the effects of workplace social context and job content on depersonalization. This procedure involved showing that (1) an independent variable has significant effects on an outcome variable and a presumed mediator; (2) the mediator is significantly related to an outcome variable; and (3) when the effects of the independent variable and the mediator are considered together, the path between the independent variable and the outcome variable becomes either nonsignificant in the case of complete mediation or is significantly reduced in strength in the case of partial mediation. Using this procedure, we tested the four models presented in Table II. Models 1 and 2 met the first condition of Baron and Kenny's (1986) procedure by determining

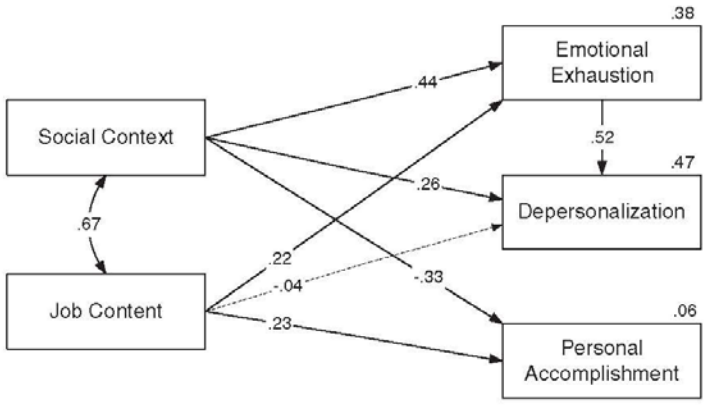

FIGURE 3. Path Analysis of Workplace Social Context, Job Content, and Burnout Dimensions

Note: The path between Job Content and Depersonalization is nonsignificant. All other path coefficients are significant at .01 level. Goodness of Fit Index, Normed Fit Index, and Comparative Fit Index reached unity. Root Mean Square Error of Approximation = .00.

TABLE II Standardized Path Coefficients for Direct and Indirect Effects on Depersonalization

Variable	Emotional Exhaustion	Depersonalization		
	Model 1	Model 2	Model 3	Model 4
Direct effect				
Social context	44**	.50**	–	.26**
Job content	.22**	.07*	–	−.04
Emotional exhaustion	–	–	.66**	.52**
Indirect effect				
Social context	–	–	–	.23**
Job content	–	–	–	.11**

Notes: Significance of indirect effects was estimated using bootstrapping procedure in AMOS (Arbuckle & Wothke, 1995-1999).
*$p \leq .05$, **$p \leq .01$.

that workplace social context and job content had significant effects on the mediator; that is, emotional exhaustion and the dependent variable; that is, depersonalization, respectively. Model 3 tested and found that emotional exhaustion had a significant effect on depersonalization ($\beta = .66$, $p \leq .01$), thus meeting the second condition. Model 4 met the third condition by testing the effects of workplace social context, job content, and emotional exhaustion on depersonalization together. Results presented in Table II show that emotional exhaustion mediated the relationship between workplace social context and depersonalization partially (the direct effect remained significant after including the mediator) and between job content and depersonalization fully (the direct effect became nonsignificant after including the mediator).

We also estimated the significance of the indirect effects of workplace social context and job content on depersonalization, using the bootstrapping procedure in AMOS (Arbuckle & Wothke, 1995–1999). Table II shows that the indirect effects of workplace social context ($\beta = .23$, $p \leq .01$) and job content ($\beta = .11$, $p \leq .01$) on depersonalization were significant and positive.

Figure 3 shows that workplace social context and job content accounted for 38% of the variance in emotional exhaustion and 6% of the variance in personal accomplishment. Both the direct and the mediated effects amounted to 47% of the variance in depersonalization. The chi-square statistic for the path model was nonsignificant ($\chi^2 = 0.04$, $p \leq .98$). The other indices for goodness of fit, including GFI, NFI, and CFI, reached unity. These findings suggest a tight fit of the model with the data.

Discussion

Read the paper: J Lee and S Akhtar (2011), Effects of the Workplace Social Context and Job Content on Nurse Burnout, Human Resource Management, 50(2), 227-237. (Parts of the paper including the Executive Summary and Discussion are not reproduced). Answer the following questions:

1. Lee and Akhtar's paper studies the effect of Social Context factors and Job Content factors on the three dimensions of Burnout in accordance with their proposed research model as depicted in Figure 1 and explained in the text. Choose any three (3) Social Context factors and two (2) Job Content factors that are used in this study (refer to Figure 2), and apply to the context of a busy Accident and Emergency Department of a major public hospital to illustrate conditions that may lead to nurse burnout. (15 marks)

2. Study their results and data analysis. Using the figures summarized in Figure 3, state the conclusions that can be drawn regarding whether the authors' postulations as described in their proposed model are substantiated. Explain your answer in detail. (60 marks)

3. Assuming the findings of this study are valid, what managerial actions are called for to reduce nurse burnout? (25 marks)

END OF PAPER