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# BURNOUT AND ORGANIZATIONAL FACTORS: A STUDY OF CHINESE NURSES IN CHINA

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*The problem of burnout in nursing has received world-wide attention. However, research on how work-related and social factors cause burnout within the context of China's transitional health-care system is limited. Our study examines the relationships between burnout and organizational factors within the context of hospital in China. Based on the quantitative method, the findings of the study indicate that both work overload and role conflict are positively related to Chinese nurses' burnout in China. Work demands from doctors and patients are also contributing to Chinese nurses' burnout. Social support and role ambiguity do not have statistically significant relationships with burnout. The study provides valuable recommendations for HRM in China to improve the efficiency and performance of nurses.*

## Introduction

The problem of burnout in nursing has received world-wide attention (Demerouti Bakker, Nechreiner and Schaufeli, 2000; Whittington and Higgins, 2002; Heyns, Venter, Esterhuyse, Bam and Odendaal, 2003) and has been a recurring topic for research (Happell, Martin, T. and Pinikahana, 2003; Garrosa et al, 2008). Burnout is a specific form of occupational and chronic stress in the professional social services (Garrosa Moreno-Jime'nez, Liang and Gonza, 2008) and a consequence of organizational, governmental and personal factors. It can cause a significant reduction in productivity, a diminishment of motivation and a high rate of turnover of employees (Payne, 2001).

Nursing has been identified as an occupation that has high levels of stress and burnout (Jenkins and Elliott, 2004), as the job requires nurses to handle a variety of human relationships and tasks, frequently under high pressure and in unpleasant circumstances. Although a number of studies have been conducted on burnout among nurses in the developed countries (Jenkins and Elliott, 2004; Garrosa et al, 2008), research on how work-related and social factors cause burnout within the context of China's transitional health-care system is limited. Reform of the health-care system has been undertaken for nearly ten years in China. If not successfully carried out, this would not only negatively affect the patients, but also lead to high work pressure on hospital staff (Wu, Zhu, Li, Wang' and Wang, 2008). Unlike the developed countries where the government financially supports the hospital system with taxpayers' money, hospitals in China get little funds from the government and have to obtain financial resources and earn income by taking as many patients as they can. As a result, the nurses, a critical part of the system in Chinese hospitals, are under enormous work pressure. This comes from multiple sources, including doctors, patients, supervisors and hospital administration. Burnout amongst Chinese nurses is consequently growing (Wu et al, 2008). In addition, China is contending with a very serious nursing shortage (Xianyu and

Lambert, 2006), which contributes to the rate of burnout among nurses working in Chinese hospitals.

To address the gap in the literature, this study examines the extent to which organizational factors, including work overload, role ambiguity, role conflict, work demands of patients and doctors, and social support, are related to the level of burnout of nurses in China. The findings of our study will increase understanding of the issue of burnout in nurses in China and add knowledge to the literature of stress and burnout from a perspective of international management. At a practical level, the study provides human resource management or administration of hospitals in China with guidance on how to reduce burnout and improve the performance of Chinese nurses.

## **Theoretical Background and Hypotheses**

### ***Burnout***

Burnout is a severe consequence of prolonged stress at work, which develops when the demands of work and individual capacities are not in balance. As Firth and Britton (1989) described, the term “burnout” is a loose term, often with different meanings. “Burnout” is different from dissatisfaction, though both are internal, negative, psychological experiences. Burnout usually implies exhaustion or depletion of energy or motivation for work (Firth and Britton, 1989). As in Payne’s (2001) paper, burnout in this study is defined as a combination of emotional exhaustion, cynicism, and reduced professional efficacy.

It has been found that staff experiencing burnout is more likely to have a higher rate of turnover, be less motivated, have low productivity, and be unable to cope with challenges that arise from changes in the workplace (Payne, 2001). In a review of the impact of burnout, Phipps (1988) found that burnout may lead nurses to have diminished job satisfaction which caused negative attitudes toward their work, family, patients, colleagues and, finally, towards themselves. Several major factors leading to nursing burnout have been identified in the literature. Role ambiguity, problems with supervision and work overload are frequently highlighted as important factors in the findings of studies carried out in developed countries (Stordeur, D’hoore and Vandenberghe, 2001; McVicar, 2003). However, the same organizational factors may not necessarily be the most important for explaining the burnout of Chinese nurses who are faced with the various requirements of the administrative system, personal economic pressure and cultural settings. Le (2006) and Wang and Sun (2007) point out that “job burnout” is a serious occupational disease for Chinese nurses. The further investigation in this issue within the context of China therefore is justified. In our study, we investigate the relationships between burnout of Chinese nurses and the organizational factors of work overload, role ambiguity, role conflict, high work demand and social support within the context of China’s hospital system.

### ***Work Overload and Burnout***

Excessive workload occurs when the employee perceives that he/she has too many tasks to do in a certain period of time. Theoretically, burnout occurs within a situation of chronic imbalance, where the organization provides resources to the individual that are less than what are needed to satisfy the demands of the job (Xianyu and Lambert, 2006).

There is considerable research supporting the idea that excessive workload contributes to burnout and damages individuals’ health, both physical and psychological Xianyu and

Lambert (2006) found that work overload caused by long work hours and rotating shifts in nursing leads to negative outcomes, psychologically and physically. Pinikahana and Happell's (2004) study found that workload was the primary stressor in the nursing workplace. Greenglass and Burke (2003) stated that burnout could result from the strain of excessive workload. Their research findings supports the idea that workload is a significant stressor associated with burnout in several different samples of workers. Leiter and Harvie (1996) reported that a high workload led to increased emotional exhaustion in a sample of mental hospital workers. In addition, there is a Japanese word "Karoshi" and a similar Chinese word "Guolaosi (过劳死)", to describe "working yourself to death" or "overload work stress resulting in death" (Gillan, 2005). Meanwhile, in China in July 2006, a journal, entitled *Liao Wang Eastern Weekly*, reported that in statistics published by the China Association for the Promotion of Physical Health revealed that at least one million people in China currently die from overwork each year (China-Labor, 2006). This is a staggeringly high figure.

As shown in previous studies, the global nursing shortage is likely to increase nurses' workload, and China is not exempted from this challenge. Lu et al (2007), for example, noted that according to research in 2003 by the Ministry of Health, China, the ratio of number of registered nurses to the total population was 10:10,000 during the period 1997 and 2002. Meanwhile, with the cost of health-care increasing, the requirements from nurses' work by patients and their relatives are much higher than in the past.

As a result, the imbalance between job demands and what the organization can provide to meet the individual needs increases work overload in Chinese nurses. Moreover, Brooks & Anderson (2005) stated that the imbalance is likely to continue in the health care industry for the foreseeable future, and it is possible that the current global nursing shortage might increase nurses' workload in China as well. Furthermore, the global nursing shortage might worsen the situation of nurse shortage in China, especially for highly qualified and skilled nurses. China's entering the World Trade Organization, opening the labour market and adopting more relaxed immigration policies is likely to increase job mobility. Consequently, the number of Chinese nurses being recruited to western countries where salaries and opportunities are better (Lu, While and Barriball, 2007) will increase. In this case, it is assumed that Chinese nurses moving to western countries are those with higher skills and education, and are more able to satisfy the standards of western countries than those nurses continuing to work in China. As a result, the shortage of quality nurses in Chinese hospitals is further increasing. Consequently, the high workload put on Chinese nurses is likely to cause their burnout. It is thus hypothesized that:

***Hypothesis 1: Work overload is positively related to burnout in nurses in China.***

### ***Role Ambiguity and Burnout***

According to the definition by Stordeur et al (2001), role ambiguity in this study refers to a lack of clarity about tasks and goals and unpredictability about the consequences of role performance and information deficiency. Unclear expectations of the nursing role are found to be associated with higher levels of burnout in both the early research (Firth et al, 1989) and also in more recent studies (Jenkins and Elliot 2004). Role ambiguity occurs because of an unclear job description and confusing responsibilities. The Ministry of Health, China published "Working Responsibilities of Health Care Personnel in Hospitals" in 1982, which clearly set out the working roles of staff nurses, health-care assistants, doctors and other health-care personnel. However, recently Lu et al 2007 and Xianyu and Lambert (2006)

found that the role of nurse at the workplace is still not clear. For example, the responsibilities of the chief nurse in the Chinese hospitals are found not only to ensure quality patient care, but also to enacting roles related to nursing education and research, finance management, supply preparation, dispute handling, and collaboration with other staff members (Xianyu and Lambert, 2006). Chu, Lee and Hsu's study (2006) found that a high degree of role ambiguity tends to reduce job satisfaction and helping behaviour. Moreover, Gil-Monte et al, (1993) and Stordeur et al (2001) found role ambiguity and burnout are positively related to each other.

In most cases in China, hospitals do not have formal written job descriptions, nor do they follow them, even when they do have them. Consequently, Chinese nurses work in ambiguous situations where they are not sure of their work responsibilities. Under the influence of the Chinese culture, they feel the need to work as much as they can, even if they should not actually be involved in their assigned tasks. They therefore work more than they should without much dispute even when nobody respects their work. A nurse's position is regarded as a low social status in China, especially compared with that of doctors (Xianyu and Lambert, 2006). Also, there is little respect for their work and exhaustion or depletion of energy occurs in this situation. The adverse situation caused by role ambiguity is likely to increase nurses' burnout physically and psychologically. Thus:

***Hypothesis 2:** Role ambiguity is positively related to burnout of nurses in China.*

### **Role Conflict and Burnout**

Stordeur et al (2001) defined role conflict as "a lack of congruent expectations between roles and within a work role. It involves contrary requirements, competing demands, and inadequate resources" (Lu et al, 2007). This study defines role conflict as the personally psychological conflict and anxiety caused by a nurse's attempt to satisfy a number of incompatible demands arising from other people's expectations of his/her role.

Compared with conflict with supervisors, conflict with doctors may be more harmful to nurses (Tabak and Koprak, 2007). Additionally, task conflict also could arise from having to carry out doctors' instructions that may cause pain and discomfort for the patient (Tabak and Koprak, 2007). Moreover, Gil-Monte et al (1993), and Stordeur et al. al (2001), found that role conflict and burnout are positively correlated. In addition, conflict between nurses and doctors or supervisors, could be made worse by nurses' low social status. On the one hand, nurses in the Chinese hospital are following the traditional work style that requires them to respect supervisors' and doctors' requirements as mentioned above. On the other hand, they try to practice something based on their own opinions. This kind of conflict results in exhaustion or depletion of energy and motivation. Role conflict is likely to increase nurses' burnout physically and psychologically. Hence:

***Hypothesis 3:** Role conflict is positively related to burnout of Chinese nurses in China*

### **Work Demands from Patients and Doctors and Burnout**

#### *Patients' Demands*

Gil-Monte et al (1993) state that nurses are faced with physical and emotional demands from patients who are often repugnant and frightening. They also have to deal with patients' family members who are usually reluctant to accept the fact of their relative's illness and prognosis. Moreover, studies based on Singaporean (Lim & Yuen, 1998) and Chinese (Liang, 2006; Tan, 2004) nurses find that, with the increasing health costs, some patients make greater

demands on the providers of health-care service, primarily directed towards nurses. The studies (Liang, 2006) suggest that much of nurses' dissatisfaction arose from the unreasonable demands which patients and their relatives made upon them. It is also stated that patients and their relatives do not treat them with respect and expect nurses to comply with their wishes without understanding the constraints within which nurses have to operate. It is plausible that such demands from patients and the public may pose additional challenges as well as generate considerable pressure among nurses in China. As mentioned, there is the gap between the number of qualified nurses and the need of patients across China's provinces. Medicare costs that patients have to pay themselves rises up to an unaffordable level. The patients' anger and anxiety are also expressed through their demands on the nurses in China.

### *Doctors' Demands*

Anecdotal evidence suggests that doctors often show a lack of consideration for nurses and are concerned that nurses should not overstep the boundaries of their professional roles (Lim & Yuen, 1998). Doctors often do not treat nurses as their equals and sometimes bark orders at them in the presence of patient and the public (Lim & Yuen, 1998). A lack of understanding from fellow doctors with whom they have to interact closely in the course of their daily activities might exert pressure on nurses and affect their work attitudes. The Chinese values of respecting hierarchy may reinforce the doctors' negative attitude towards the nurses and give the Chinese nurses unreasonable demands. In sum, work demands both from patients and doctors are likely to increase nurses' burnout physically and psychologically. Hence:

***Hypothesis 4:** High work demand from doctors and patients is positively related to burnout of Chinese nurses in China.*

### **Social Support and Burnout**

Social support at work can be from supervisor and/or from co-worker. It offers direct buffer effects on both stress and burnout. Jenkins and Elliot (2004) claim that social support can be either "emotional", for example, the action of caring or listening sympathetically; or "instrumental", for instance, tangible assistance such as help with a work task. They also state that high levels of support have been associated with low levels of burnout in a number of mental health nursing studies. Gil-Monte et al (1993) further note that the more social support at work, the lower burnout people feel at work. Moreover, social resources have a beneficial effect on reduction of burnout level, irrespective of whether persons are under stress. Hence, people with more perceived social support will report lower levels of burnout. Prins, et al, (2007) found that a lack of social support has a direct effect on emotional exhaustion, and depersonalization, two of the three burnout indicators. Nurses, especially those without experience as trainees, may need support and confirmation from significant others (including supervisors, doctors and other colleagues) to reduce uncertainty about their own performance at work. The nature of their work is a potential risk factor for burnout, because it can be described as a demanding job with great responsibility, combined with low levels of control. In addition, Boyle, Grap, Younger, and Thornby's (1991) study found that one of the major determinants of burnout is lack of supervisor support. Further, these authors found that as supervisor support increased, the relationship between low job enhancement and emotional exhaustion virtually disappeared.

Although few Chinese studies have been done on the relationship between social support and burnout among nurses, there are several previous studies involving different occupations

supporting the idea that social support is negatively related to burnout (Sun and Ren, 2006; Shao and Gao, 2005; Tang and Peng, 2007; Lv, n.d.). Therefore, social support is likely to decrease nurses' level of burnout. We thus propose that:

***Hypothesis 5:** Social support has a negative relationship with burnout of Chinese nurses in China.*

## **Method**

### **Sample**

The study used a sample that consisted of nurses working in the public hospital located in east-coastal China (n=202). The data was collected in 2007. All subjects except one were female. The ages ranged from 22 to 54 years, with an average age of 31.22 years. For a majority of the subjects (55%) their highest level of education was junior college. The second most common highest level of education (25.7%) was the technical secondary school. The third highest (at 16.3%) was the bachelor degree. Of all the subjects, 65.3% were married. It was surprising to find that 52% of the subjects said nursing was not their first choice of career. The average number of years working as a nurse was 10.25, with the average number of years worked on the current hospital being similar to the number of years worked as a nurse (9.61 years). On average nurses were employed 4.68 years in their current units.

### **Procedure**

All ethical requirements for conducting research on human subjects were met in the units of hospital participating in gathering of data, as well as the ethical research requirements of authors' university. The researcher contacted the nursing department of the hospital and obtained consent from the director of nursing to approach the nurses to be research participants. The director informed the head nurses that all the nurses in their clinical units would receive a package of questionnaires that they were to complete (if they were willing to take part in the study). The questionnaires were given to the head nurses by personnel of the nursing department and then distributed to nurses by the head nurses.

All subjects were told about the study in a covering letter that accompanied the questionnaires and were instructed to complete the questionnaires if they chose to participate in the study. Then all completed questionnaires were placed in a sealed envelope and returned to the nursing department within seven days of receipt of the questionnaires. The investigator then retrieved the sealed envelopes containing the completed questionnaires.

To reduce the influence of social desirability effect, and for ethical reasons, the respondents were given assurance that their responses would be anonymous. Code numbers were assigned to the sets of questionnaires as the investigator opened the sealed envelopes. All data were reviewed only by the investigator and the investigator's research advisors. In addition, all data were kept in a locked file so as to protect the confidentiality of the subjects.

### **Instruments**

A questionnaire was used to obtain measures of factors that previous research has shown to be related to employees' level of burnout. The questionnaire contained three sections. One obtained demographic information, the second contained items related to characteristics of

the job, workplace and family, and the third section measured the nurses' level of burnout. The questionnaires were originally written in English. To ensure the accuracy of the translation, the questionnaire in Chinese version was back-translated into English and checked against the original version.

#### *Dependent Variable*

Burnout tested the extent to which a nurse develops feeling of exhaustion and disengagement. The measurement was adopted from the previous study of Demerouti et al, (2001).

#### *Independent Variables*

'Work overload' tests the extent to which participant feels to be required to do too much at work by using Begat, Ellefsen, and Severinsson's (2005) measurement. 'Role ambiguity' and 'role conflict' were measured by Lu et al's (2007) instrument. 'Role ambiguity' tests the extent to which participant perceives lack of clarity about requested tasks and goals and unpredictability about the consequences of role performance. Price's (2001) measure for 'social support' was also directly employed in our study and tests the extent to which the participants get immediate supervisor's support and kinship support for the job-related concern or problem. Variables of 'patient demand' and 'doctor demand' were measured with modification of Lim and Yuen's (1998) measurement.

#### *Control Variables*

The demographic variables used as control variables were the same as those used in similar studies by Lu et al (2007) and Montes-Berges and Augusto (2007). Questionnaire items obtained information on the nurses' gender, age, basic nursing education, marital status, first career choice as a nurse, number of years worked as a nurse, number of years worked in the current hospital, number of years worked in the current clinical unit in the current hospital

### **Data Analysis**

All statistical analyses were performed using the statistical computer program SPSS Version 15. Each of the multi-item scales was examined using exploratory factor analysis and reliability analysis. Following factor analysis, items were removed if they had unacceptably low communalities (below .2) or if their removal resulted in an acceptable single factor solution, as indicated by root-one criterion. Items were also removed if this resulted in an increase in the Cronbach reliability of the scale. Factor scores for each of the scales were obtained from the factor solutions using the Regression method as implemented in the SPSS program. Pearson product moment correlations between the main variables were calculated, and regression analysis carried out to determine the influence on burnout of the other variables included in the study. For ease of interpretation of the results, questionnaire items were reverse scored where necessary so that higher values reflected a greater degree of the constructs being measured.

### **Results**

Table 1 displays the means, standard deviations and inter-correlations for the main variables in the study, as well as the Cronbach alpha reliability coefficients for the multi-item scales. Reliability estimates for the scales were adequate, with Cronbach alphas being above, or very close to, the generally agreed upon acceptable value of .7. Only two of the multi-item scales,



Workload and Social Support, had Cronbach alpha coefficients less than .70 (alphas = .68 and .69, respectively). The remaining scales had Cronbach alpha coefficients ranging from .75 (for Work Demands) to .85 (for Burnout). Correlations amongst the five multi-item scales were consistently smaller than the Cronbach alpha reliability estimates, providing evidence for differential validities of the constructs.

**Table 1. Means, Standard Deviations and Correlations for the Main Variables**

Variable	M	SD	1	2	3	4	5	6	7	8	9	10
1. Age	31.21	7.2										
2. Years of Education	3.82	.78	-.03									
3. Years Nursing	10.25	8.25	.97**	-.06								
4. Years in Hospital	9.61	7.79	.91**	-.06	.95**							
5. Workload	2.77	1.43	.01	.02	.00	.01	(.68) <sup>a</sup>					
6. Role ambiguity	5.71	1.02	.15*	.01	.15*	.10	-.03	(.82)				
7. Role conflict	4.02	1.27	-.03	.10	-.03	-.01	.57**	.08	(.78)			
8. Work Demands	2.59	1.14	.03	.11	.02	.04	.54**	-.14*	.50**	(.75)		
9. Social support	3.00	1.12	.09	.11	.10	.10	-.04	-.40**	-.06	.06	(.69)	
10. Burnout	2.78	1.23	-.03	.15*	-.06	-.06	.57**	.08	.49**	.49**	-.07	(.85)

$p < .05$ ; \*\*  $p < .01$ ; (2-tailed);  $N = 205$ ;

<sup>a</sup> Numbers in brackets are the Cronbach alpha reliability coefficients.

Consistent with Hypotheses 1, 3 and 4, statistically significant correlations with Burnout (all  $p$ 's  $< .01$ ) were found for Workload ( $r = .57$ ), Role Conflict ( $r = .49$ ) and Work Demands ( $r = .49$ ). However, no statistically significant correlations with Burnout were found for Role Ambiguity and Social Support. Therefore Hypotheses 2 and 5 are not supported by the correlations with Burnout.

The results of a hierarchical regression analysis for the prediction of burnout are shown in Table 2. Initially, the variables Age, Years of Education, Years Nursing and Years in the Hospital, were included in the regression equation as control variables. However, due to the very high correlations between the three variables Age, Years Nursing and Years in the Hospital (all above .90; see Table 1) this leads to an unacceptably high level of multicollinearity. In order to obtain VIF values less than 10, two of these variables were needed to be removed, and it was decided to retain the variable Age in the regression model.

As can be seen in Table 2, there is a statistically significant change in R Square with the addition of the main variables, after controlling for Age and Education (change in R Square = .401;  $p < .01$ ). The findings of the regression analysis are consistent with those from the correlational analyses. Statistically significant regression coefficients can be seen for the

variables Workload ( $\beta = .38$ ;  $p < .01$ ), Role Conflict ( $\beta = .14$ ;  $p < .05$ ) and Work Demands ( $\beta = .22$ ;  $p < .01$ ), thus supporting Hypotheses 1, 3 and 4. However, the regression analysis does not provide support for Hypotheses 2 and 5, with the regression coefficients for Role Ambiguity and Social Support not being statistically significant for an alpha rate of .05. It should be noted, however, that the positive and negative signs for these two regression coefficients were in the direction predicted by the hypotheses.

**Table 2: Hierarchical Regression Analysis of Workload, Role Ambiguity, Role Conflict, Work Demands and Social Support on Nurses' Level of Burnout**

	Model 1		Model 2	
	$\beta$	t	$\beta$	t
<b>Control Variables</b>				
Age	.027	.382	.046	.824
Years of Education	-.153	-2.194*	-.126	-2.289*
<b>Main Effects</b>				
Workload			.382	5.383**
Role Ambiguity			.108	1.757
Role Conflict			.141	2.016*
Work Demands			.216	3.142**
Social Support			-.025	-.413
<b>R<sup>2</sup></b>	.024		.425	
<b>Adjusted R<sup>2</sup></b>	.015		.405	
<b>F</b>	2.504**		20.837**	
<b><math>\Delta R^2</math></b>			.401	
<b>F Change</b>			27.513**	

\* $p < 0.05$ , \*\* $p < 0.01$  (two tailed). N = 205

In summary, the findings of both the correlation and regression analyses lead to the same conclusions regarding the hypotheses. Hypotheses 1, 3 and 4 are supported, while Hypotheses 2 and 5 are not supported by the results of the study.

## Discussion and Conclusions

### *Theoretical implication*

The findings of our study extend previous studies (Xianyu & Lambert, 2006; Pinikahana and Happell, 2004; Greenglass & Burke, 2003) both in Western cultures and in China. Most previous studies on burnout were done in Western cultures, whereas the studies under a Chinese situation are very limited. Moreover, those limited Chinese studies have been based on the samples of teachers or doctors, while the study of nurses in China has been extremely limited. The contribution of this study to the burnout literature is that we focus on the relationships between burnout of nurses and various possible causal antecedents within the Chinese emerging economy.

The findings of our study indicate that work overload is the variable most strongly related to burnout in Chinese nurses. Our results also support the hypothesis that role conflict is positively associated with burnout in nurses in Chinese hospitals, and lend support to

previous research findings, both in western cultures and in China (Gil-Monte et al, 1993; Stordeur et al, 2001). The findings of this study indicate that work demands from both patient and doctor are also positively related to the level of Chinese nurses' burnout. Also previous studies on work demands have mostly focused on the demands from supervisors. Our study contributes to the burnout literature by including the work demands from patients and doctors.

Interestingly, based on previous studies, we assumed that role ambiguity could be one of the most critical factors leading to burnout of nurses in Chinese hospitals. However, this hypothesis is not supported by the findings of our study. The reason might be due to the influence of the Chinese culture stressing hierarchical inequality. Accepting and respecting extra requirements of people with higher status and authority are regarded as good manners and is highly valued. Working in such a cultural environment, Chinese nurses may get used to the extra requirement beyond job description to them. Chinese culture also has a collective orientation. Chinese nurses have considered the achievement of the whole group, not just an individual's, and have no excuse to refuse to do a task, irrespective of who should be taking responsibility. Consequently, role ambiguity might not exist in their minds.

Role conflict, resulting from trying to meet the various requirements from the difference ranks, will more readily affect Chinese nurses' level of burnout. From a review on the burnout literature, it can be concluded that there has been limited previous research on nurses' burnout within a particular cultural context (Mizuno-Lewis and McAllister, 2008). In contrast, individualism of Western work values develops managerial practice and employee expectation of the clear role definitions. The nurses' perception of burnout is deeply affected by role ambiguity in such a cultural environment. Our study contributes to the literature of the burnout of nurses in the context of the Chinese culture, which has a dominant influence not only on China but also in many other Asian countries, such as Japan, Korea and Singapore. The findings of this study increase the understanding of key organizational factors related to the burnout of hospital nurses in the system reform of an emerging economy.

### ***Practical implication***

In this study, we discuss the relationships between burnout and its associated factors with the Chinese national culture, especially "Confucianism" in this case. The relationship between social support and burnout are not supported. It does not mean that there is no need for social support in China. Rather, it shows that Chinese nurses do not obtain social support or actively seek social support when suffering job burnout. This can be explained by the Chinese culture which highly believes in the social values of 'face'. When burnout is seen as a psychological problem, Chinese employees regard it as personal illness or inability. They may take personally emotional exhaustion as a very private issue and would feel "loss of face" when revealing it to others. Therefore, many Chinese nurses might prefer not to reveal their real feelings or "disease" to others, no matter how close they are to friends or family. That may be why the number of people searching help from psychological professionals is obviously fewer than the number in western countries. However, as Martinez-Inigo et al (2007) found, employees' health and well-being are extremely harmed when they hide their real feelings and pretend to be happy at workplace.

### ***Limitations and future research***

Although the findings of this study contribute to the burnout literature on Chinese nurses in China, there are limitations. The sample used in the study was not representative of all geographic sections of China, and therefore the generalization of the results to other regions

must be done with caution. All measurements used in the questionnaires in this study are based on ones developed in Western cultures and were originally written in English. More appropriate measures might be obtained if they were developed and validated within a Chinese context. Additionally, burnout is a complex psychological result and can be caused by multiple factors within a dynamic context. Our study only investigated some of them and is not able to reflect a comprehensive picture.

Despite these limitations, the present study definitely provides avenues for future research. Burnout issues are not only limited to the nurses in the Chinese hospitals, but also to Chinese employees spread throughout other industries and sectors in China. These include high-tech firms, multinational corporate enterprises and factories. Further research can apply a similar model to other parts of China to examine the relationships between burnout and various organizational factors. Further, future research may also examine how the relative importance of the various factors affecting burnout might vary across different national cultures.

## Conclusion

While there are no private clinics in China's health-care system, public hospitals are the only channel that the patients from the overpopulated urban areas can rely on for treatment. The burnout of nurses in Chinese hospitals thus is inevitable and phenomenal. A side-effect of China's health-care system reform is that it has the potential of worsening the level of burnout of Chinese nurses. Our study increases understanding of what factors, both demographic and organizational, contribute to burnout in nurses working in China.

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