

IMPACT OF OCCUPATIONAL STRESS AND COPING STYLES ON BURNOUT AMONG PHYSICIANS IN YUN NAN, CHINA

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Abstract: This study was conducted to investigate the impact of occupational stress and coping styles on burnout among physicians in Yun Nan province, China. The sample consisted of 208 participants, consisting of 80 male and 128 female in-service physicians, recruited from different public hospitals. They voluntarily filled in a survey questionnaire consisting of the Occupational Stress Indicator-2 (OSI-2), the Maslach Burnout Inventory-Human Services Survey (MBI-HSS), and the Coping Inventory for Stressful Situations (CISS). The results revealed that the Chinese physicians' reported level of occupational stress directly influenced their reported level of burnout. It was also found that the more they applied emotion-focused coping, the higher was their reported level of burnout. Their reported level of occupational stress was not found to have any significant influence on their employment of either problem-focused or avoidance-focused coping style. All three coping styles were found to be associated with burnout. The more the participants employed problem-focused coping style as well as emotion-focused style, the higher was their reported level of burnout. On the other hand, the more they employed avoidance-focused coping style the lower was their reported level of burnout.

Keywords: Burnout, Coping Style, Problem-Focused Coping, Emotion-Focused Coping, Avoidance-Focused Coping, Occupational Stress.

Introduction

Today, people pay too much attention to their jobs more than their health or disposition (Maslach & Leiter, 2008). High levels of stress are so pervasive in our modern career-work commitment that burnout has been described as a global state of chronic pandemic (Aiken et al., 2001; Golembiewski, Boudreau, Sun, & Luo, 1998). Bradley first identified the phenomenon of 'burnout' in 1969 (Muheim, 2013). Freudenberger and Richelson (1980) further identified the work environment and work situation as precipitating factors that lead to symptoms of burnout. Essentially, burnout results from prolonged interpersonal work-related stressors, and mediated by the individual's characteristics; this syndrome affects the person not only in the

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workplace but also in his/her family (Golembiewski et al., 1998; Golembiewski, Munzenrider, & Stevenson, 1986; Maslach & Leiter, 2008).

In China at present, Chinese doctors represent the high-tech, high-risk and high-stress occupational group. With the advent of new diseases and new medical interventions, their work and life pressures continue to increase; most troublesome is the perception that their situation cannot be effectively improved in the long-term. It can be said that this problem stems primarily from the lack of government policies and limited support and protection afforded to medical doctors' interests. It is not surprising, then, that the problems experienced by doctors may have a major negative impact on the doctor-patient relationship. The Chinese Hospital Association reported that from 2008 to 2012, violence/assaults against doctors in hospitals increased significantly from 20.6% to 27.3% (MengQang, 2009).

A major problem that continues to plague the medical profession in China is the severe shortage of human resources. According to the Chinese statistical yearbook (China, 2011), Chinese physicians accounted for only 0.025% of the total population, or only 25 physicians per 100,000 people. By comparison, the UK has 164 physicians per 100,000 people, and the USA has over 279 physicians per 100,000 (Hagopian, Thompson, Fordyce, Johnson, & Hart, 2004). It is easy to see that due to the low number of medical doctors in China, the existing workforce faces daily workload beyond the normal range. It is not surprising to hear about increasing number of physicians suffering from *occupational stress* and, consequently, *job burnout*.

Burnout

The earliest studies on burnout were developed from research about occupational stress. Some of the earliest studies on burnout were conducted by Freudenberger and Richelson (1980) who noticed an occupational phenomenon characterized by symptoms of exhaustion, emotional distress, and frustration. He labeled this phenomenon "burn out" (Freudenberger & Richelson, 1980). This phenomenon describes practitioners in the human service industry who exude an overall negative picture of depleted psychological and physiological condition. The study of burnout developed rapidly and research projects conducted outside the field of psychology contributed significantly toward further understanding of the phenomenon (Cooper, Dewe, & O'Driscoll, 2001).

The concept of burnout was further researched and refined by Maslach and her colleagues. At first, these researchers perceived burnout as the by-product of the reality of lived experiences in the workplace and the ever-increasing incidents of social problems arising from work-related phenomena. Later, however, based on their research, Maslach and her colleagues provided a clearer conceptualization of job burnout as a psychological syndrome in response to chronic interpersonal stressors on the job (Maslach et al., 2001). More specifically, the concept can now be best understood from the point of view of two differing schools of thought. One school of thought considers burnout as a fatigue reaction to work; furthermore, it is a dynamic process of an individual's professional attitudes and behaviors at work in the form of negativity and change (Cherniss, 1980; Etzion, 1987). A second school of thought regards burnout as a prolonged response to chronic interpersonal stressors on the job (Maslach, 1998; Pines & Aronson, 1988). The combination of these two schools of

thought redefined burnout as a state of physical, emotional, and mental exhaustion, typically occurring as a result of working with people over long periods of time, in situations that are emotionally demanding (Pines & Aronson, 1988). More recently, Maslach (2003) defined burnout as a syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur among individuals who do 'people-work' of some kind.

Relationship between burnout and coping styles

Past studies have shown that burnout is closely related to choice of coping style (Garrosa, Rainho, Moreno-Jiménez, & Monteiro, 2010; Tartas, Walkiewicz, Majkowicz, & Budzinski, 2011). It has been demonstrated that burnout is negatively correlated with problem-focused coping, and positively correlated with emotion-focused coping (Pienaar & Willemse, 2008). Additionally, past research has shown that positive coping styles help improve one's sense of personal achievement, such that the higher the degree of liking for one's work and the higher the job satisfaction and passion for job involvement, the lower the level of burnout (Byrne, 1998). Thus, an individual's preferred coping style affects the occurrence and development of burnout, resulting in a certain level of predictability on burnout.

In the health care industry, physicians experience a stressful career as front-line hospital personnel with heavy workload, unstable work hours, and other multi-stress work situations, making them prone to burnout. Researchers and administrators are increasingly recognizing the problem of burnout in the field of medicine and occupational health (Wright, Khetani, & Stephens, 2011). In particular, studies have found that burnout may lead to increased rates of absenteeism and turnover, and decreased job performance, commitment, career satisfaction, and productivity among health workers (Alacacioglu, Yavuzsen, Dirioz, Oztop, & Yilma, 2009). Furthermore, the relationship between doctors and patients often involves high interpersonal and/or emotional demands; this can also elevate the risk of burnout (Wright et al., 2011).

In China, concern over burnout among health care workers, particularly physicians, started late and it was only towards the end of the 20th century when hospital administrators gradually began to pay attention to the phenomenon. Since then, Chinese-based research on burnout among medical/health care workers gradually increased. A study by Li, Shi, Luo, Li, and Yang (2003) showed that 42.1% of health care workers reported having a certain degree of emotional exhaustion, 22.7% had a certain degree of depersonalization, and 48.6% had diminished personal accomplishment. Yongxin and Yimin's (2007) study on burnout among hospital staff showed that out of 175 nurses, 121 reportedly experienced some degree of burnout. The detection rate was 69.1%, including 61 (34.8%) people having mild burnout, 53 people (30.3%) having moderate burnout, and 7 (4.0%) having severe burnout. Chinese doctors frequently experience work overload and extra shifts and, at times, disputes occur because of patient dissatisfaction with care (Liu, Sun, & Jiang, 2009). Doctors, most likely, experience time pressures and energy deficiencies which seem to exacerbate the threat of burnout. Thus, with Chinese medical personnel, burnout is a serious problem. The reasons are diverse but from a macro point of view, heavy

workload, tensions in doctor-patient relationships, as well as unfair policies have the most adverse impact on physicians' well-being.

The present study has been designed to investigate the direct and indirect influences of occupational stress experienced by Chinese physicians on their reported level of burnout, being mediated by the coping styles of problem-focused coping, emotion-focused coping, and avoidance-focused coping. Figure 1 presents the burnout model with its hypothesized direct and indirect structural linkages between the exogenous predictor variable of occupational stress, the mediator variables of coping styles, and the criterion variable of burnout.

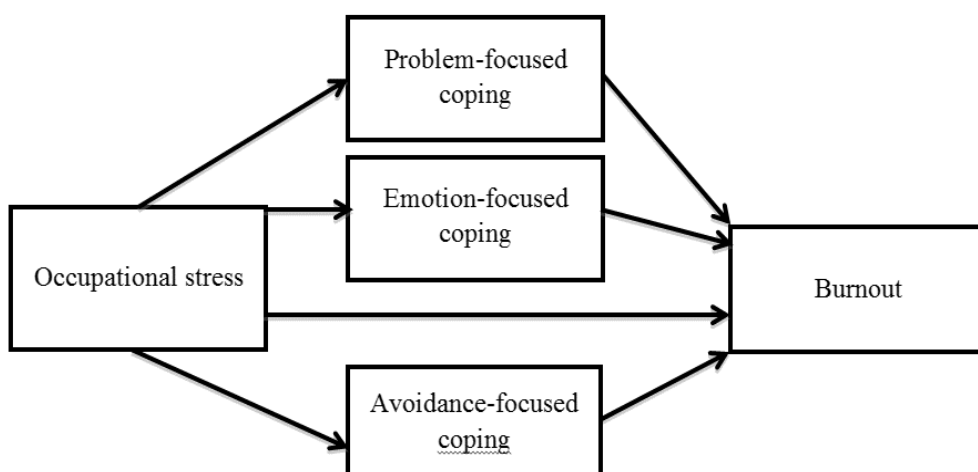


Figure 1: Burnout among Chinese Physicians as A Function of The Direct and Indirect Influences of Occupational Stress, Being Mediated by Their Coping Styles (Problem-Focused Coping, Emotion-Focused Coping, Avoidance Focused Coping)

Research Questions

Based on the conceptual framework and within the context of the targeted population of the study, the following research questions are raised:

1. What are the levels of occupational stress and burnout among physicians in Yun Nan province, China?
2. What coping styles are used predominantly by physicians in Yun Nan province, China?
3. What are the direct and indirect influences, being mediated by coping styles of occupational stress on the level of burnout among physicians in Yun Nan province, China?

Method

Participants

The sample consisted of 208 Chinese physicians of whom 80 (38.5%) were males and 128 (61.5%) were females. Their ages ranged from under 25 years to 55 years and above.

Material

The study's participants responded to a questionnaire which consists of four sections. *Section 1* consisted of four items written to tap the participants' gender, age, marital status, and service years.

Section 2 consisted of the 40-item *Occupational Stress Indicator-2 (Chinese Version)* developed to measure job satisfaction, physical and mental health, Type A personality, locus of control, sources of stress, and coping strategies. Inasmuch as the present investigation was concerned only with specific workload stress experienced by physicians, only those items that measured occupational stress were adopted. Each item was to be rated on a 6-point Likert-type scale ranging from 0 = *Not extremely stressful*, 1 = *Not very stressful*, 2 = *Generally not stressful*, 3 = *Generally stressful*, 4 = *Very stressful*, and 5 = *Extremely stressful*.

Section 3 Consisted of the 22-item *Maslach Burnout Inventory–Human Services Survey*, developed to measure perceived level of burnout.

Each item was to be rated on a 7-point Likert scale where 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*, and 6 = *Every day*. High scores reflect high level of reported burnout.

Section 4 consists of the 48-item *Coping Inventory for Stressful Situations (CISS)* developed by Norman Endler, James Parker, Denise de Ridder, and Guus van Heck in 2004. The CISS is a self-report measurement inventory designed to measure emotion-focused coping, problem-focused coping, and avoidance-oriented coping. The task-oriented coping factor includes 16 item statements that measure conceptually distinct aspects of problem-focused coping or purposeful task-oriented efforts aimed at solving the problem, cognitively restructuring the problem, or attempts to alter the situation; the main emphasis is on the task or plan and on attempts to solve the problem (Endler & Parker, 1990). The emotion-oriented coping factor, likewise, includes 16 item statements that measure aspects of what might be viewed as emotion-focused coping aimed at reducing stress (e.g., blame myself for being too emotional, get angry, becoming tense, self-preoccupation, and fantasizing (daydreaming reactions)). Avoidance coping factor includes 14 item statements that measure behavior based on trying to avoid or escape particular thoughts or feelings (e.g., *thinking about the good times I've had or watching TV*). Each item was to be rated on a 5-point Likert scale where 1 = *Not at all*, 2 = *Seldom*, 3 = *Sometimes*, 4 = *Often*, and 5 = *Very much*, with high scores indicating higher frequency of usage of that coping style.

Procedure

Participants were recruited from China using the convenience sampling method in which the survey questionnaire was distributed in two modes: (1) paper-and-pencil (written) questionnaire, and (2) Internet-based/online questionnaire. For the paper-and-pencil method, the researcher distributed the questionnaire at targeted public hospitals, and invited potential participants to fill in the questionnaire. For the Internet-based/online method, the questionnaire was uploaded to www.wenjuan.com, and potential participants were invited to visit this website and to fill in the questionnaire.

Results

Path Analysis

In order to test the hypothesized direct and indirect relationships represented by the path model depicted in Figure 2, path analysis via regression analysis was conducted.

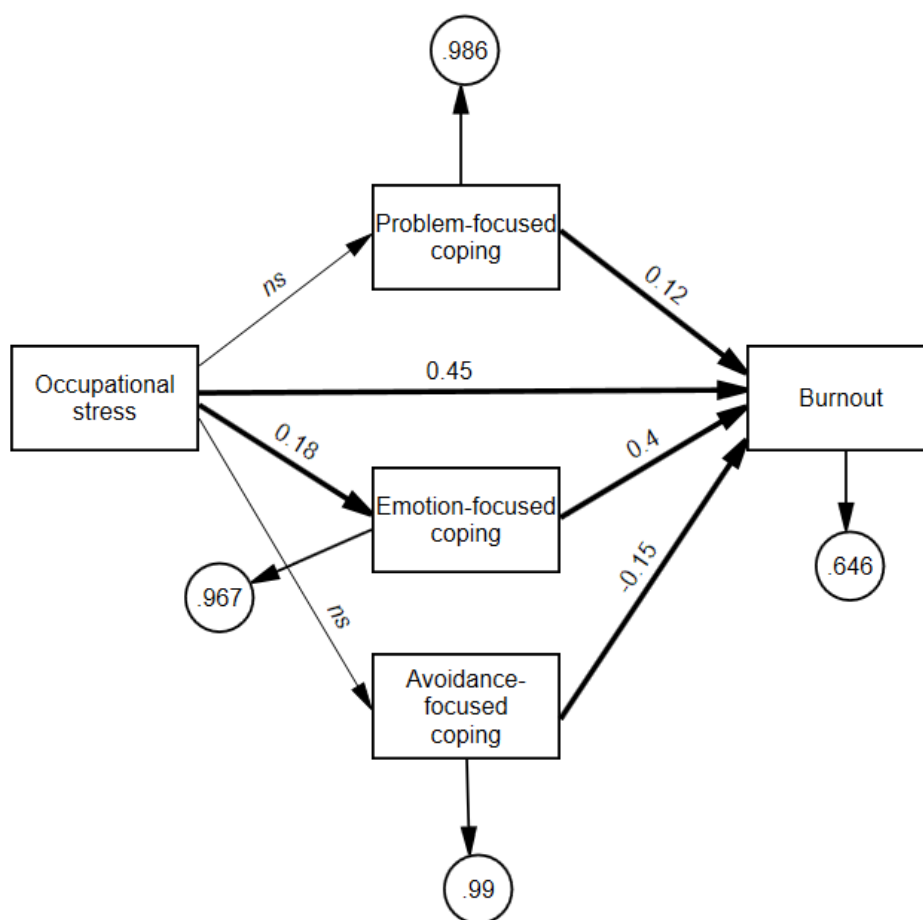


Figure 2: Path Model of Chinese Physicians' Level of Burnout as A Function of The Direct and Indirect Influences of Their Level of Occupational Stress, Being Mediated by Their Coping Styles

The results showed that for the Chinese physicians in the present study, their reported level of occupational stress has both direct and indirect influences on their reported level of burnout. Thus, the higher their reported level of stress associated with their work, (1) the higher their reported level of burnout (Beta=0.45), and (2) the more they employed an emotion-focused style of coping (Beta=0.18) and,

subsequently, the higher their reported level of burnout ($\text{Beta}=0.40$). Their reported level of occupational stress was not found to have any significant influence on their employment of either the problem-focused coping style or the avoidance-focused coping style. Nevertheless, all three coping styles were found to be associated significantly with the criterion variable of burnout. Thus, the more the Chinese physicians employed a problem-focused style of coping as well as an emotion-focused style, the higher their reported level of burnout ($\text{Beta}=0.12$, $\text{Beta}=0.40$, respectively); however, the more the Chinese physicians employed an avoidance-focused style of coping, the lower their reported level of burnout ($\text{Beta}=-0.15$).

Figure 1 also reports the standardized residual for each dependent variable for the path model. These coefficients provide an estimate of the proportion of variance in each dependent variable not predicted by the model. Alternatively, subtracting these values from 1.00 indicates the proportion of variance predicted by the model. These coefficients indicated that the path model accounted for 1.4% of the variance in problem-focused coping, 3.3% of the variance in emotion-focused coping, 1% of the variance in avoidance-focused coping, and 35.4% of the variance in burnout.

Discussion

The current results showed that for the Chinese physicians working in Yun Nan Province, China, their reported level of occupational stress has a direct influence on their reported level of burnout; that is, the higher their reported level of stress associated with their work, the higher their reported level of burnout. Thus, for these physicians who are exposed to difficult work conditions and high level of work pressure, they tend to be more prone to experience burnout. This finding is consistent with those obtained from past research which have shown that prolonged and excessive occupational stress is a direct cause of burnout (Matteson & Ivancevich, 1982). Similarly, in a related study on stress, coping, and burnout among mental health workers, Fagin et al., (1996) found that 31% of the participants suffered significant psychological distress (burnout) due mainly to a shortage of staff, heavy workload, environmental degradation, and poor morale. Moreover, this finding is consistent with the assumption that the antecedents for and the experience of burnout is 'culture free.' That is, within any culture, regardless of the nature of work, individuals who work under extreme work and environmental pressure will inevitably suffer from burnout and may display physical and mental chronic symptoms.

The findings from the path analysis also showed that for the Chinese physicians in the present study, their reported level of occupational stress also has an indirect influence on their reported level of burnout. Thus, the higher reported level of stress associated with their work, the more they employed an emotion-focused style of coping, and subsequently the higher reported level of burnout. These findings are in line with Safarino's (1998) suggestion that when people consider themselves as having available resources but cannot meet internal demands, they may employ the emotion-focused coping style. This is typical of the Chinese physicians' working conditions where the hospitals/clinics they work in may provide sufficient resources, yet the internal and external demands of their work (e.g., the number of patients they are required to see per day; conflict with patients; ineffective management style) still far outstrip their ability to cope effectively. Failure to cope effectively could have

forced these physicians to fall back on an emotion-focused style of coping. As the literature has suggested, such a cognitive-emotive style of coping provides no positive solution to their work problems but merely acts to change their emotional perception of a stressful situation, rather than the situation itself. From the study's obtained findings, it is clear that in the face of excessive work pressure and emotional burnout, the individual needs to mobilize resources for positive and effective coping. When an individual employs rational and mature coping strategies, occupational stress may well be adjusted to become a more positive, effective motive, driving the incentive for work. Conversely, employing a negative, emotional and immature coping style, may serve as a barrier to effective problem solving, perpetuating the current problem.

The results indicated that the physician's reported level of occupational stress did not exert any significant influences on their employment of either the problem-focused coping style or the avoidance-focused coping style. Nevertheless, all three coping styles were found to be associated significantly with the criterion variable of burnout. Thus, the more the Chinese physicians employed a problem-focused style of coping as well as an emotion-focused style, the higher their reported level of burnout. The finding that the Chinese physicians' employment of a problem-focused coping style is associated with their higher level of reported burnout is compelling. The literature clearly shows that the problem-focused coping style is more proactive and positive in dealing with stressful situations than the affective-based emotion-focused and avoidance coping styles. Yet, contrary to this theoretical perspective, the present study's findings showed that the Chinese physicians' employment of a problem-focused coping style is associated with a higher level of reported burnout. This finding may be indicative of the unique work situation that Chinese physicians find themselves in. While problem-focused coping, in general, can be effective in lowering burnout, in the Chinese healthcare environment, both inadequate government policies and extreme negative work conditions conspire to work against the physicians' best intentions. That is, there is the perception among Chinese physicians that despite their best effort to cope with an inadequate and highly stressful medical/healthcare work environment, stressors exist resulting in high level of burnout.

In conclusion, concern over burnout among Chinese health care workers, particularly physicians began to take on an air of urgency when hospital administrators gradually began to pay attention to the phenomenon. The present study represents a small step towards the understanding of the concept of burnout as applied to the Chinese medical context, its antecedents and its sequelae. Through a quantitative path analytic approach, the present study demonstrated clearly that for Chinese medical practitioners, their reported level of burnout is a direct function of their reported level of occupational stress. The design of the study also indicated how the employment of different coping styles might mediate the quality of this relationship. It is hoped that these findings may contribute in some way to the overall understanding of the concept of burnout as well as to the more practical understanding of this concept within the high stress work-related situation that many Chinese physicians find themselves in on a daily basis.

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