

Work-family Conflict and Burnout among Chinese Doctors: The Mediating Role of Psychological Capital

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Abstract: Work-family Conflict and Burnout among Chinese Doctors: The Mediating Role of Psychological Capital: Yang WANG, et al. Department of Social Medicine, School of Public Health, China Medical University, P.R. China—Objectives: The aim of this study was to investigate the relation between work-family conflict and burnout, and the mediating role of psychological capital (PsyCap) in the relation between work-family conflict and burnout, among Chinese doctors. **Methods:** This cross-sectional study was performed during the period of September/October 2010. A questionnaire that comprised work-family conflict assessed by the work-family conflict scale, PsyCap assessed by the PCQ-24 scale and burnout assessed by the Maslach Burnout Inventory-General Survey (MBI-GS), as well as age and gender, was distributed to 1,300 doctors in Liaoning Province, China. A total of 1,011 effective respondents became our final study subjects. Hierarchical linear regression analyses were performed by using SPSS 17.0 to explore the mediating role of PsyCap in the relation between work-family conflict and burnout. **Results:** Both work interfering family conflict (WIF) and family interfering work conflict (FIW) were positively related with emotional exhaustion and cynicism among both male and female doctors. However, WIF was positively related with professional efficacy only among male doctors, whereas FIW was negatively related with professional efficacy among both male and female doctors. PsyCap partially mediated the relation between WIF and professional efficacy among male doctors and partially mediated the relations of FIW with emotional exhaustion, cynicism and professional efficacy among female doctors. **Conclusions:** Work-family conflict was associated with burnout among Chinese doctors. PsyCap was a mediator between work-family conflict and burnout. PsyCap might be a positive resource to reduce the

negative effect of work-family conflict on burnout of doctors, especially female doctors, in China. (J Occup Health 2012; 54: 232–240)

Key words: Burnout, Doctors, Psychological capital, Work-family conflict

Burnout is a term used to describe a state of physical, emotional and mental exhaustion that occurs after long-term exposure to situations that are emotionally demanding¹⁾. It is characterized by emotional exhaustion, cynicism and decreased professional efficacy²⁾ and has been recognized as an occupational hazard for various people-oriented professions³⁾. Burnout is associated with many symptoms and possible consequences, ranging from anxiety to absenteeism⁴⁾. Doctors are primarily involved in people work, and the relationship between doctors and patients involves high interpersonal or emotional demands, which can lead doctors to high levels of burnout¹⁾. The huge population base and increasing health consciousness in recent years in China have led to overload of patients for Chinese doctors. In China, the ratio of doctors to the general population is 1 : 735, which is considerably lower than that in western countries (1 : 280–1 : 640)⁵⁾. Chinese doctors experience work overloads and extra shifts quite often⁶⁾. Wu *et al.* reported that 57.5% of Chinese doctors work more than 40 h per week⁷⁾. Doctors are more likely to experience time and energy deficiency, which can lead to burnout.

Work and family are two important focal points of adult life. However, the role expectations of these two domains are not always compatible, creating conflicts between work and family. Work-family conflict is a bidirectional conflict that includes both work interfering family conflict (WIF) and family interfering work conflict (FIW)^{8,9)}. WIF is “a form of interrole conflict in which the general demands of, time devoted to and strain created by the job interfere with performing family-related responsibilities,” and FIW is “a form of interrole conflict in which the general demands of,

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time devoted to and strain created by the family interfere with performing work-related responsibilities⁸⁾. Work-family conflict has been found to be positively associated with turnover⁹⁾, burnout¹⁰⁾ and psychological distress¹¹⁾ and negatively associated with job satisfaction¹²⁾ and life satisfaction¹³⁾. In China, most families are dual career, which means male and female doctors are both involved in work and home responsibilities. We hypothesize that both WIF and FIW have associations with burnout among Chinese doctors and have included both of them in our study. Gender differences in the relations between work-family conflict and related outcomes have been observed. For example, Yavas reported a stronger effect of WIF on turnover intentions for women and a stronger effect of WIF on job performance for men⁹⁾. In China, although dual-career families are common, cultural values and norms with respect to traditional gender roles still have their influence. Chinese women take on substantially more household responsibilities and tasks than their husbands. Bu *et al.* reported that Chinese female employees spent an average of 3.7 h per day on housework compared to 2.2 h per day for male employees¹⁴⁾. In a study investigating the work-family expectations of business students in China, 57.8% of Chinese men expected the wife would do a disproportional larger share of housework¹⁴⁾. Therefore, we examined the association between WIF/FIW and burnout separately among male and female doctors to investigate the role of gender as a moderator of the posited relations.

Since Luthans *et al.* identified the definition of positive organizational behavior¹⁵⁾, many researches have focused on the constructs of positive organizational behavior and its positive effects. Luthans and colleagues¹⁶⁻¹⁸⁾ identified the constructs of self-efficacy, hope, optimism and resilience as initially best meeting the inclusion criteria of positive organizational behavior and in combination termed them “psychological capital (PsyCap).” According to Luthans and colleagues, PsyCap lies beyond human and social capital and is open to development^{19, 20)}. PsyCap is reported to be a positive resource for improving employee job performance²⁰⁾, organizational commitment²¹⁾ and employee well-being over time²²⁾ and for combating employee stress and turnover²⁴⁾.

Both the association between work-family conflict and burnout and the association between PsyCap and burnout have been confirmed by previous studies. Montgomery *et al.* identified work-family conflict as a predictor of burnout¹⁾, and Luo and Hao reported that PsyCap was negatively associated with burnout²⁴⁾. However, the role of PsyCap as a mediator between work-family conflict and burnout has not been examined to our knowledge. Theoretically, PsyCap is

state-like, and the PsyCap of employees who experience a high level of work-family conflict might decrease over a prolonged period and further result in a high level of job burnout of employees. This paper aims to explore, for male and female doctors separately, (1) the relation between WIF/FIW and burnout and (2) whether PsyCap mediates the effect of the WIF/FIW on burnout or, in other words, whether WIF/FIW affects burnout to some extent via PsyCap. Specifically, the study hypotheses are as follows:

Hypothesis 1: Work-family conflict is positively associated with burnout.

Hypothesis 2: PsyCap mediates the relations between the dimensions of work-family conflict and the dimensions of burnout.

Methods

Subjects and data collection

A cross-sectional study was conducted in Liaoning Province, which has an estimated population of about 43 million. Based on the geographic regions of Liaoning Province (eastern, western, southern, northern and central), one city in each region was randomly selected. One large general hospital (>500 beds) was randomly selected in each sampled city, and if the sampled city was a megalopolis, one more large general hospital was randomly selected. A total of six large general hospitals were selected eventually. Half of the doctors were randomly selected from each sampled hospital. After obtaining informed consent to conduct this survey, a self-administered questionnaire was distributed to these participants during September/October 2010. The questionnaire was sent to 1,300 eligible doctors and was returned by 1,042 of them. All study subjects were pooled together due to the comparable conditions among different hospitals. Effective responses were obtained from 1,011 doctors (effective response rate: 77.8%), with 447 (44.2%) males (mean age=37.1 yr, standard deviation [SD]=7.9 yr) and 564 (55.8%) females (mean age=35.3 yr, standard deviation [SD]=8.3 yr). The procedures followed were in accordance with the ethical standards of the Committee on Human Experimentation of China Medical University.

Measurement of burnout

Burnout was measured with the Maslach Burnout Inventory-General Survey (MBI-GS)^{25, 26)}. It consists of three dimensions: emotional exhaustion (EE), cynicism (CY) and professional efficacy (PE). The total scale consists of 15 items, and the EE dimension is measured by five items, the CY dimension is measured by four items, and the PE dimension is measured by six items. Each of the items is scored on a Likert scale from 0 to 6. The score are defined

according to how often the statement is experienced, from “never” (0) to “every day”(6). Higher scores on the EE and CY dimensions and lower scores on the PE dimension indicate higher level of burnout.

The Chinese version of the MBI-GS has been used widely in the Chinese population²⁷⁻²⁹. Wu *et al.* demonstrated good reliability and validity of the Chinese version of the MBI in a study administrated to 495 nurses in China²⁹. Cronbach's alpha coefficients of EE, CY and PE were reported to be 0.874, 0.801 and 0.711²⁹. A confirmatory factor analysis (CFA) supported the three-factor structure ($\chi^2/df=2.18$, RMSEA=0.06, RMR=0.05, NFI=0.89, RFI=0.87, IFI=0.94, CFI=0.93)²⁹, which indicated good structural validity.

In the present study, the Cronbach's alpha coefficients of EE, CY and PE were 0.948, 0.936 and 0.944, respectively, for male doctors and were 0.944, 0.929 and 0.933, respectively, for female doctors.

Measurement of work-family conflict

Work-family conflict was measured by two scales: the WIF scale and FIW scale. The WIF scale measures the extent to which work demands interfere with family-related obligations, while the FIW scale measures the extent to which family demands interfere with work-related obligations⁸. The total scale consists of 18 items, and each of the two dimensions is measured by nine items. Each of the items is scored on a 5-point Likert scale in which 1 indicates never and 5 indicates always. Responses for each of the two subscales (WIF and FIW) were summed and averaged to get an average score for WIF and FIW, respectively. Higher values indicate higher levels of WIF or FIW. Results of previous studies demonstrated good reliability and validity of the Chinese version of the work-family scale^{30, 31}. Cronbach's alpha coefficients of the WIF scale and FIW scale were reported to be 0.855 and 0.777 in a study administrated to 480 nurses in China³⁰. Factor analysis results showed that principle factors accounted for 65.3% of the total variance, which indicated good structural validity³¹.

In the present study, the Cronbach's alpha coefficients of WIF and FIW were 0.905 and 0.907 for male doctors and were 0.883 and 0.907 for female doctors.

Measurement of PsyCap

PsyCap was measured with the PCQ-24 questionnaire which was developed by Luthans *et al.*³². The reliability and validity of the PCQ-24 questionnaire have been demonstrated in previous research^{18, 33}. The PCQ-24 questionnaire consists of four dimensions: self-efficacy, hope, resilience and optimism. The total scale consists of 24 items, and each of the four

dimensions is measured by six items. Each of the items is scored on a Likert scale in which 1 indicates strongly disagree and 6 indicates strongly agree. All questions ask the participants how they feel “right now.” Higher values indicate higher levels of experienced PsyCap.

The Chinese version of the PCQ-24 has been used in Chinese studies, and it has demonstrated satisfactory reliability and validity^{21, 34}. In the present study, the Cronbach's alpha coefficients of self-efficacy, hope, resilience and optimism were 0.895, 0.890, 0.831 and 0.820, respectively, for male doctors and were 0.885, 0.882, 0.855 and 0.843, respectively, for female doctors. In this study, we aimed to test the mediating role of the overall PsyCap instead of each construct of the PsyCap, so we summed up the responses for the 24 questions and averaged to get an average score as the indicator for overall PsyCap.

Demographic characteristics

Gender, age, marital status and education were obtained in this study. “Education” was categorized as “junior college or under”, “undergraduate” and “graduate or above”. “Marital status” was categorized as “single”, “married/cohabitation” and “divorced/separated/widow”.

Statistical analysis

All analyses were conducted using SPSS 17.0 for Windows. Pearson's Chi-square (χ^2) tests were used to compare differences in demographic characteristics between male and female doctors. Study variables were compared among age groups, education groups and marital status groups by one-way ANOVA analyses. *T*-tests were performed to examine the differences in continuous variables between males and females. All statistical tests were two-sided ($\alpha=0.05$).

The analysis technique used for testing the hypothesis concerning the mediating effect of PsyCap in the relations between the dimensions of work-family conflict and the dimensions of burnout was based on Baron and Kenny's³⁵ technique. According to Baron and Kenny, the following are the conditions for establishing mediation: (1) the independent variable (WIF/FIW) is significantly related with the dependent variable (EE/CY/PE); (2) the independent variable (WIF/FIW) is significantly related with the mediator (PsyCap); and (3) the mediator (PsyCap) is significantly related with the dependent variable (EE/CY/PE), with the effect of the independent variable (WIF/FIW) on the dependent variable (EE/CY/PE) diminishing (partial mediator) or becoming statistically insignificant (full mediator) upon the addition of the mediator (PsyCap) to the model.

Before performing the regression analyses, all the

continuous variables were centralized in order to avoid multicollinearity³⁶. In addition, two measures, tolerance and variance inflation factor, were used to check for multicollinearity. We performed Pearson correlation, linear regression and one hierarchical linear regression analysis for each of the three burnout dimensions to test the mediating effect. In step 1 of the hierarchical linear regression analyses, the control variable, age, was used as a predictor because it was assumed to be related to study variables. In step 2, WIF and/or FIW were added. In step 3, PsyCap was added. Following the preceding approach, we tested each of the mediator hypotheses. In addition, the statistical significance of the mediation effect was calculated using the Sobel test.

In all analyses, male doctors and female doctors were analyzed separately because of possible gender differences.

Results

Demographic characteristics of the subjects are shown in Table 1. There were significant differences

in age ($\chi^2=21.57, p<0.001$) and marital status ($\chi^2=13.28, p=0.001$) between male and female doctors. Mean emotional exhaustion score ($p<0.001$) and mean WIF score ($p=0.003$) differed across age groups in female doctors. But there were no significant differences in study variables across education groups and marital status groups, among both male and female doctors. No significant differences were observed between male and female doctors with respect to work-family conflict, PsyCap and burnout. The results for hypotheses 1 can be seen in Table 2. For both males and females, except for the correlation between WIF and PE, the correlations between the two work-family conflict dimensions and the other two burnout dimensions were statistically significant and went in the expected directions. For males, WIF had a significantly positive relation with PE. For females, there was no significant relation between WIF and PE.

In this study, the associations between the two work-family conflict dimensions and PsyCap were different among male doctors and female doctors. For male doctors, WIF had a positive association

Table 1. Demographic characteristics of study subjects

Variable	Males (n=447) n (%)	Females (n=564) n (%)	<i>p</i>
Age (yr)			<0.001
≤30	107 (23.9%)	211 (37.4%)	
31–39	181 (40.5%)	177 (31.4%)	
≥40	159 (35.6%)	176 (31.2%)	
Education			0.584
Junior college or under	47 (10.5%)	64 (11.3%)	
Undergraduate	268 (60.0%)	319 (56.6%)	
Graduate or above	132 (29.5%)	181 (32.1%)	
Marital status			0.001
Single	82 (18.3%)	159 (28.2%)	
Married/cohabitation	358 (80.1%)	395 (70.0%)	
Divorced/ separated / widow	7 (1.6%)	10 (1.8%)	

Table 2. Means, standard deviations (SD) and correlations of all variables

Variable	Males (n=447)									Females (n=564)	
	Mean	SD	1	2	3	4	5	6	7	Mean	SD
1. Age (yr)	37.08	7.93	–	–0.062	–0.042	0.107*	0.024	0.002	0.110**	35.33	8.25
2. Emotional exhaustion	12.93	7.21	–0.018	–	0.667**	0.148**	0.528**	0.200**	–0.233**	13.51	7.22
3. Cynicism	7.74	6.06	–0.026	0.684**	–	–0.136**	0.330**	0.407**	–0.344**	7.61	6.01
4. Professional efficacy	23.03	9.39	0.061	0.172**	–0.056	–	0.070	–0.241**	0.277**	23.14	8.72
5. Work interfering family conflict	3.33	0.83	0.011	0.560**	0.342**	0.185**	–	0.449**	–0.026	3.38	0.75
6. Family interfering work conflict	2.65	0.81	–0.045	0.402**	0.500**	–0.161**	–0.056	–	–0.111**	2.57	0.39
7. Psychological capital	4.19	0.78	0.057	–0.091	–0.258**	0.386**	0.133*	–0.043	–	4.16	0.76

* $p<0.05$, ** $p<0.01$ (two-tailed).

Results for male doctors are below the diagonal and for female doctors are above the diagonal.

with PsyCap ($\beta=0.139$, $p=0.003$), and the association between FIW and PsyCap was not statistically significant after adjusting for age. But for female doctors, FIW had a negative association with PsyCap ($\beta=-0.113$, $p=0.008$), and the association between WIF and PsyCap was not statistically significant after adjusting for age. Therefore, we only tested the mediating role of PsyCap in the relations between WIF and the dimensions of burnout among male doctors and only tested the mediating role of PsyCap in the relations between FIW and the dimensions of burnout among female doctors. In step 2 of the hierarchical linear regression analysis, WIF was added for male doctors and FIW was added for female doctors separately.

Regression analyses with emotional exhaustion as the criterion variable

As shown in Table 3, age was not significantly related to EE in the two gender groups.

For male doctors, WIF was positively associated with EE, explaining 31.0% of the variance in the criterion variable, and the effect of PsyCap on EE was negative and statistically significant, accounting for an additional 2.6% of the variance. However, PsyCap did not have a mediating in the relation between

WIF and EE among male doctors. As can be seen in Table 3, the regression coefficient for WIF did not diminish when PsyCap was added.

For female doctors, FIW was positively associated with EE, explaining 4.2% of the variance in the criterion variable, and the effect of PsyCap on EE was negative and statistically significant, accounting for an additional 5.2% of the variance. PsyCap had a mediating effect in the relation between FIW and EE among female doctors. As shown in Table 3, the regression coefficient for the FIW diminished when PsyCap was added (from $\beta=0.204$ to $\beta=0.178$; Sobel test, $z=2.41$, $p<0.05$).

Regression analyses with cynicism as the criterion variable

As shown in Table 4, age was not significantly related to CY in the two gender groups.

For male doctors, WIF was positively associated with CY, explaining 11.3% of the variance in the criterion variable, and the effect of PsyCap on CY was negative and statistically significant, accounting for an additional 9.4% of the variance. However, PsyCap did not have a mediating role in the relation between WIF and CY among male doctors. As can

Table 3. Hierarchical linear regression analysis results, with emotional exhaustion as the criterion variable

	Emotional exhaustion					
	Males			Females		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
Age (yr)	-0.018	-0.024	-0.015	-0.062	-0.062	-0.037
Work interfering family conflict		0.557**	0.580**		-	-
Family interfering work conflict		-	-		0.204**	0.178**
Psychological capital			-0.165**			-0.230**
R ²	0.000	0.310	0.337	0.004	0.045	0.097
ΔR^2	0.000	0.310**	0.026**	0.004	0.042**	0.052**

* $p<0.05$, ** $p<0.01$ (two-tailed).

Table 4. Hierarchical linear regression analysis results, with cynicism as the criterion variable

	Cynicism					
	Males			Females		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
Age (yr)	-0.026	-0.030	-0.013	-0.042	-0.043	-0.008
Work interfering family conflict		0.336**	0.379**		-	-
Family interfering work conflict		-	-		0.411**	0.376**
Psychological capital			-0.310**			-0.317**
R ²	0.001	0.113	0.207	0.002	0.171	0.269
ΔR^2	0.001	0.113**	0.094**	0.002	0.169**	0.098**

* $p<0.05$, ** $p<0.01$ (two-tailed).

Table 5. Hierarchical linear regression analysis results, with professional efficacy as the criterion variable

	Professional efficacy					
	Males			Females		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
Age (yr)	0.061	0.058	0.039	0.107	0.102	0.082
Work interfering family conflict		0.197**	0.147**		–	–
Family interfering work conflict		–	–		–0.240**	–0.214**
Psychological capital			0.361**			0.228**
R ²	0.004	0.042	0.170	0.011	0.069	0.120
ΔR ²	0.004	0.039**	0.127**	0.011	0.058**	0.051**

* $p < 0.05$, ** $p < 0.01$ (two-tailed).

be seen in Table 4, the regression coefficient for WIF did not diminish when PsyCap was added.

For female doctors, FIW was positively related to CY, explaining 16.9% of the variance in the criterion variable, and the effect of PsyCap on CY was negative and statistically significant, accounting for an additional 9.8% of the variance. PsyCap had a mediating effect between FIW and CY. As shown in Table 4, the regression coefficient for FIW diminished when PsyCap was added (from $\beta = 0.411$ to $\beta = 0.376$; Sobel test, $z = 2.56$, $p < 0.05$).

Regression analyses with professional efficacy as the criterion variable

As shown in Table 5, age was not significantly related to PE in the two gender groups.

For male doctors, WIF was positively associated with PE, explaining 3.9% of the variance in the criterion variable, and the effect of PsyCap on PE was positive and statistically significant, accounting for an additional 12.7% of the variance. PsyCap had a mediating effect between WIF and PE. As shown in Table 5, the regression coefficient for WIF diminished when PsyCap was added (from $\beta = 0.197$ to $\beta = 0.147$; Sobel test, $z = 2.77$, $p < 0.05$).

For female doctors, FIW was negatively related to PE, explaining 5.8% of the variance in the criterion variable, and the effect of PsyCap on PE was positive and statistically significant, accounting for an additional 5.1% of the variance. PsyCap had a mediating effect between FIW and PE. As shown in Table 5, the regression coefficient for FIW diminished when PsyCap was added (from $\beta = -0.240$ to $\beta = -0.214$; Sobel test, $z = -2.42$, $p < 0.05$).

Discussion

This study explored the relation between work-family conflict and burnout and the mediating role of PsyCap in the relation between work-family conflict and burnout among Chinese doctors. A large sample

from Liaoning Province, which has the same average income level as the average national level in China and had a high effective response rate (77.8%), seemed to be able to provide a good representation of our study population and increase the generalization of our study conclusion.

In the present study, we examined the relations of both WIF and FIW with the dimensions of burnout. WIF and FIW of doctors were found to be positively related to emotional exhaustion and cynicism, respectively, among both male and female doctors. These results were correspondent with our hypothesis and also were in accordance with the results of previous studies^{9, 13}. Unexpectedly, the effects of WIF and FIW on professional efficacy dimension were different. While WIF depicted a positive relation with professional efficacy, FIW had a detrimental impact on professional efficacy. The observations of van Dyne *et al.*³⁷ and Yavas⁹ might provide one possible explanation for the positive relation between WIF and professional efficacy. According to these authors, people who experienced conflict and tension at work tended to focus specially on their work activities to protect themselves from further tension, thus producing higher levels of performance, which may result in higher levels of professional efficacy. An alternative explanation for this finding can be offered based on the concept of professional efficacy. In the present study, professional efficacy was self-assessed based on work roles rather than family roles. Doctors who were experiencing more WIF devoted more time and energy to work at the expense of interfering family-related obligations. Conflicts originating from WIF made them physically and mentally exhausted. However, appreciation from patients, praise from leaders and more opportunities for promotions resulting from overloaded work would increase the sense of professional efficacy. With regard to the negative relation between FIW and professional efficacy, this result was congruent with our expectation. This find-

ing can also be explained by the previous discussion on professional efficacy. Doctors who were experiencing more FIW devoted more time and energy to their families at the expense of interfering work-related obligations, which might deprive doctors of opportunities to achieve more professional efficacy. An alternative explanation can be offered based on the special work culture in China. Helping doctors to perform more family obligations is regarded as a kind of benefaction, in both doctors' and their leaders' opinions in China²⁷. Employees sometimes even regard family responsibilities as burdens and obstacles to obtain more work accomplishment. Therefore, when doctors are engaged in more family obligations that may interfere with their work demands, sense of professional efficacy might be depleted.

Gender difference was also observed in the relation between WIF and professional efficacy. While WIF had a positive relation with professional efficacy among male doctors, there was no statistically significant association between WIF and professional efficacy among female doctors. This might be explained by the traditional values and norms with respect to gender roles in China. Although males are more involved in household responsibilities at home today, career development is still the most important thing for them. Personal achievement at work is the main criteria to judge success for males. Therefore, compared with females, when males devoted more time and energy to work, they were more likely to achieve professional efficacy.

Recent research has indicated that PsyCap was positively related to performance³³) and job satisfaction³⁸) and negatively related with turnover intention²³). In the present study, we found significant negative relations of PsyCap with emotional exhaustion and cynicism, respectively, and a significant positive relation between PsyCap and professional efficacy among both male and female doctors. These findings contribute to the understanding that PsyCap has a positive effect on combating burnout among doctors. While most concern and focus has been on keeping up with advancing medical technology and the need for financial capital in China, very little attention has been given to human resources²⁰). As we mentioned, PsyCap is defined as state-like and is open to development²³). Therefore, developing human resource management (HRM) programs targeted toward developing doctors' self-efficacy, hope, resilience and optimism in hospitals is critical. Short PsyCap training interventions designed to enhance components of PsyCap have been introduced in previous studies^{17, 19, 23}). However, to our knowledge, no PsyCap training interventions have been conducted yet in China.

PsyCap has been reported to be a mediator in the relation between supportive organizational climate and employee performance¹⁸). However, this is the first study to examine the role that PsyCap may play in relation between work-family conflict and burnout. We found that the relations of PsyCap with the two dimensions of work-family conflict, WIF and FIW, were different among male and female doctors. Thus, we explored the mediating role of PsyCap in the relation between WIF and the dimensions of burnout among male doctors and the mediating role of PsyCap in the relation between FIW and the dimensions of burnout among female doctors, respectively. For male doctors, PsyCap was found to partially mediate the relation between WIF and professional efficacy. Male doctors who perceived more WIF would be more likely to experience higher levels of PsyCap, which in turn would positively impact their professional efficacy. For female doctors, PsyCap was found to partially mediate the relation between FIW and all of the three dimensions of burnout. Female doctors who perceived more FIW may be more likely to experience lower levels of PsyCap, which in turn would lead to higher levels of emotional exhaustion, higher levels of cynicism and lower levels of professional efficacy. FIW had both direct and indirect effects on burnout among female doctors. PsyCap might be a positive resource to reduce the negative effect of FIW on burnout among female doctors. However, due to the cross-sectional design of the present study, we were unable to draw any causal conclusions. All findings obtained in the present study need to be confirmed in future prospective studies.

Several limitations of the present study have to be mentioned. First, this study had a cross-sectional design. It is impossible to draw causal relations among work-family conflict, PsyCap and burnout. The direction of causality has not been established with this study, and the possibility of an alternative hypothesis cannot be ruled out. Second, there is potential for inflated relations because of common method bias. We did try to minimize this potential problem by following the recommendations of Podsakoff *et al.*³⁹): to allow the respondents' answers to be anonymous and to assure respondents that there are no right or wrong answers and that they should answer questions as honestly as possible. Moreover, we conducted this study in large general hospitals because medical staff in these hospitals are more likely to experience burnout compared with staff in community health centers²⁸). Therefore, we initially focused our attention on doctors from large general hospitals, and doctors from small hospitals will be studied in further research.

To summarize, our findings revealed that both

WIF and FIW of doctors were positively related with emotional exhaustion and cynicism, respectively, among both male and female doctors. PsyCap partially mediated the relation between WIF and professional efficacy among male doctors and partially mediated the relation between FIW and all of the three dimensions of burnout among female doctors. It might be important for health administrators to note that strategies of to decrease FIW of female doctors and developing programs to enhance doctors' PsyCap seem to be crucial to enhancing the health of doctors in China.

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