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Jaepil CHOI Singapore Management University, jaepilchoi@smu.edu.sg

Chao C. CHEN
Rutgers University - Newark

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Gender Differences in Perceived Work Demands, Family Demands, and Life Stress among Married Chinese Employees

Jaepil Choi and Chao C. Chen¹

Hong Kong University of Science and Technology, China and ¹Rutgers, The State University of New Jersey, USA

ABSTRACT Although gender-based division of labour and the identity theory of stress suggest that the relationship between work and family demands and life stress may vary as a function of gender, it is largely unknown whether these arguments are also valid in China. To address this gap in the existing literature, the current study investigates the gender differences in perceived work and family demands, and the effects of these perceived demands on the life stress of Chinese male and female employees. The study of 153 married Chinese employees found that Chinese women perceived a higher level of family demands than did Chinese men, whereas there was no significant gender difference in the perception of work demands. In addition, while perceived family demands were similarly related to life stress differently for men and women, perceived work demands were associated more strongly with the life stress of men than that of women.

INTRODUCTION

The different roles of men and women in work and family life affect the levels of their psychological and physical well-being (Frone, Russell, and Cooper, 1992a; Schwartzberg and Dytell, 1996; Shelton and John, 1996; Williams and Alliger, 1994). In particular, experiences within the work domain have been found to be crucial to men's well-being, whereas experiences within the family domain are regarded as the primary determinants of women's well-being (Parasuraman, Greenhaus, and Granrose, 1992). Such a notion of the separate worlds of men and women built on gender-based role differentiation has long been prevalent among researchers in the work–family nexus and life stress. Pleck thus commented that 'what is perhaps most surprising is that the view that men are obsessed with their work and oblivious to their families has persisted so long' (1985, p. 134).

Recently, however, some researchers have begun to cast doubt on prevailing assumptions about the segregated worlds of men and women. Several studies based on the notion of role convergence between men and women have found that the key stressors that influence the well-being of men and women have become more similar (Barnett, Marshall, and Pleck, 1992; Schwartzberg and Dytell, 1996). Thus, it was suggested that men and women no longer live in segregated worlds, and that the role demands of the work and family domains affect the well-being of men and women to a similar extent. Both genders' similar susceptibility to both work and family demands represents a shift from gender-based role differentiation to gender equality in Western societies (Baxter, 1997; Bielby, 1992).

In addition to such inconclusive evidence on whether work and family demands similarly influence the well-being of men and women, another limitation of the existing literature is that most of the studies have been conducted in Western settings. Although a few recent studies have examined the influence of work and family demands on work–family conflict among Chinese employees (Spector et al., 2004; Yang, Chen, Choi, and Zou, 2000), these studies did not provide evidence on gender differences in perceived work and family demands. Therefore, little is known about whether work and family demands are felt similarly by male and female employees in China, which has experienced turbulent changes in the workplace and in family structures. Furthermore, although some researchers (Lai, 1995; Xie, 1996, 2002) have demonstrated that the work and family demands of employees in China affect their life stress, it is unknown whether the effects of perceived work and family demands on life stress vary between the two genders.

This study was conducted to address the above-mentioned limitations in the current literature on work-family conflict and life stress. In particular, we examine perceived work and family demands and life stress among married employees in China. For the past few decades, Chinese employees have experienced great changes in the workplace as a result of economic reform, and in family structures as a result of mothers entering the workforce and the one-child policy (Liu, Comer, and Dubinsky, 2001). Such dramatic changes over the past 30 years provide us with an appropriate setting to address the following questions. First, do married Chinese men and women experience different amounts of work and family demands? By answering this question, we attempt to demonstrate whether men and women in China perceive equivalent pressures from the domains of work and family, which is noticeably occurring in developed Western societies (Baxter, 1997; Bielby, 1992; Schwartzberg and Dytell, 1996). Second, do perceived work and family demands have differential effects on the life stress of Chinese men and women? Thus, we seek to provide evidence of the moderating role of gender in employee stress in China, an increasingly important economy in the world.

THEORETICAL BACKGROUND AND HYPOTHESES

Demands in the work and family domains can be defined in two ways. First, they could be defined by objective characteristics such as occupational titles, which show task complexity of each occupation measured in terms of the functional requirements of jobs (Xie and Johns, 1995), the quantitative workload (Fox, Dwyer, and Ganster, 1993), and the number of hours expended on paid and family work (Gutek, Searle, and Klepa, 1991). Second, they could also be defined as subjective feelings and perceptions such as role overload (Karasek, 1979), role conflict (Kahn, Wolfe, Quinn, Snoek, and Rosenthal, 1964), and role pressure (Fox et al., 1993). This study focused on subjective perceptions of role overload and role pressure in the work and family domains, involving cognitive and emotional processes.

Work demands are psychological stressors in the workplace, such as having a great deal of work to do, or having too much responsibility (Fox et al., 1993). Family demands refer to commitments and pressures to assume responsibilities associated with fulfilling family-related role obligations, such as spending energy, time, and effort discharging family responsibilities (Yang et al., 2000). Having defined both demands in terms of subjective feelings of role strain, we controlled for the objective characteristics of both domains in our empirical study in order to test the net effects of subjective perceptions of demands.

Gender Differences in Perceived Work and Family Demands in China

To the extent that division of labour in a society is largely gender based (Bielby, 1992; Shelton and John, 1996), men and women should have their own exclusive turf. Household work such as child rearing and day-to-day life chores is generally regarded as women's work. In contrast, men assume the role of a breadwinner working outside the household to deliver income to the family, while their role in household work is limited to 'helping' their wives.

Such gender-based division of labour is deeply rooted in the history of China (Bu and McKeen, 2000; Yi and Chien, 2002). Confucianism, which has moulded Chinese values and behaviours, explicitly stipulates different gender roles at home and outside the home: 'men are primarily outside the home, and women are primarily inside the home' (nan zhu wai, nu zhu nei: 男主外女主内; Leung, 2003, p. 360). Although Mao's political ideology and social policies promoted gender equality and female participation in the workplace, there is also some evidence that economic reforms to boost economic efficiency since 1979 have, to some extent, revived the traditional gender-based division of labour in China (Summerfield, 1994; Zuo and Bian, 2001). For example, one of the objectives of the economic reforms during the 1990s was to reduce the number of surplus workers on the state's payroll (Summerfield, 1994). In this situation, women were often considered as redundant workers, and they were either encouraged or forced to return to their homes (Bu

and McKeen, 2000; Yi and Chien, 2002). As a result, more working women began seeking to restore their identity by performing their role inside the home.

Despite disadvantages in employment, many women are still entering the workforce as a result of a rapid increase in job opportunities during the economic reform. However, it has been observed that even with participation in the labour force, Chinese women continue to bear substantially more responsibilities for housework and child-rearing than do their husbands (Bu and McKeen, 2000; Lai, 1995). The one-child-per-family policy, which may have decreased the total amount of child-caring, has nevertheless not significantly reduced the role overload for Chinese mothers, because they now have to do much more for the single child, and they can no longer receive help from older children or other sources (Zhang and Farley, 1995). The economic reform also caused a substantial cut in welfare facilities, including day-care centres (Leung, 2003). Consequently, the burden of child-care shifted onto the shoulders of the family, particularly mothers, thereby aggravating role overload for women. In addition, in the stem family arrangement in which adult children live with their old parents, which is one of the popular living arrangements in China, women are supposed to bear the responsibility of taking care of the elderly (Lai, 1995). Therefore, such a living arrangement also contributes to perceived family demands on Chinese women.

Chinese men are increasingly seeking employment in small, private companies around the metropolitan areas (Entwisle, Henderson, Short, Bouma, and Zhai, 1995). The uncertainty of employment and career success in those companies forces men to be more concerned about their work performance and to bear a greater workload (Davis, 1999). Furthermore, in employment processes, men are expected to shoulder more of the tasks that require greater mental and physical effort. For example, while simple and repetitive tasks are assigned to women employees, male workers are in charge of more complex tasks (Davis, 1999; Liu et al., 2001) which also increase men's work demands.

In summary, as a result of both the legacy of traditional gender role differentiation in Chinese society and the conditions generated by the economic reform and push for efficiency, contemporary Chinese men and women still preserve a gender-based division of labour. Thus, we propose the following hypotheses:

Hypothesis 1: Perceived work demands are greater for Chinese men than for Chinese women.

Hypothesis 2: Perceived family demands are greater for Chinese women than for Chinese men.

The Moderating Effect of Gender in Life Stress among Chinese Employees

There is ample evidence to demonstrate that chronic exposure to excessive work and family demands causes psychological and physical distress (Frone et al., 1992a;

Williams and Alliger, 1994). In particular, Xie (1996, 2002) showed that heavy work demands yielded a high level of anxiety, psychological depression, and psychosomatic health problems among Chinese employees. Several authors (Lai, 1995; Xie, 2002) further noted that family-related demands, including excessive housework and housing problems, caused significant psychological distress among Chinese employees. However, it is still unknown whether or not perceived work and family demands have differing impacts on life stress as experienced by Chinese men and women. Based on the identity theory of stress (Burke, 1991; Thoits, 1986, 1991), we argue that the relationships between perceived work and family demands, and life stress may vary in relation to gender.

The identity theory of stress contends that fulfilling a role identity is a major source of stress. More specifically, an individual usually identifies more strongly with salient roles conducive to forming a socially acceptable identity and is more willing to invest resources to fulfill the obligations of such roles (Lobel and St. Clair, 1992). As a result, deeper involvement in ensuring successful performance of the salient roles is more likely to cause the individual to be mentally drained and physically exhausted, thereby generating stress. To the extent that men and women internalize gender-based, work–family role separation, the performance of roles at home and outside the home will have varying salience for men and women, and will require them to invest different amounts of resources to deal with work versus family demands (Bielby, 1992; Rothbard and Edwards, 2003). Consequently, differential engagement in the domains of work and family causes men and women to be vulnerable to differing work- and family-related role stressors.

In the traditional Chinese society, the husband-wife relationship is one of the five fundamental human relationships (wu lun: 五伦). Men and women each have their own ideals in this relationship. A model man is one who succeeds in the world and spreads fame (li shen yang ming: 立身扬名) not only for himself but also for his family through success outside the home. A man who is not successful outside the home is criticized as 'incapable' and 'lacking ambition', no matter how good a family person he is (Zuo and Bian, 2001). In contemporary China, this ideal is realized through success in the workplace, which connotes not only personal achievement but also contributes to the honour and prosperity of their families (Redding, 1993; Yang et al., 2000). Experiences in the work domain, therefore, will have a more significant impact on the self-conceptions of Chinese men than on those of Chinese women. Consequently, as the identity theory of stress suggests, men will react more sensitively to perceived work demands than women, and will experience greater stress from meeting work demands.

The traditional model for a Chinese woman is that of a virtuous wife, a good mother (xian qi liang mu: 贤妻良母), and a good daughter-in-law who shows deference to her husband's parents (Leung, 2003). A woman who is far from this ideal gets a derogatory label as 'selfish', 'unfeminine', and 'irresponsible to household needs [sic]', even if she brings in substantial earnings to the family by working

outside the home (Zuo and Bian, 2001). Although many women are in paid employment, self-conceptions of women may still be mainly centred on the traditional 'family' role. Indeed, many Chinese women are willing to sacrifice their professional career for the sake of their families (Yi and Chien, 2002). Experiences in the family domain will therefore have a more significant impact on the self-conceptions of Chinese women than on those of Chinese men. As a result, women will react more sensitively to perceived family demands than men and be more anxious about successfully meeting those demands, thereby experiencing greater stress from satisfying family demands.

In summary, the identity theory of stress (Burke, 1991; Thoits, 1986, 1991) suggests that to the extent that roles in the work and family domains are deeply internalized by men and women, the main stressor for both genders will differ. In the Chinese context, we expect that because gender-based division of labour has long been accepted, the sources of stress experienced by Chinese men and women will differ. Thus, we propose the following hypotheses:

Hypothesis 3: Gender moderates the effect of perceived work demands on life stress among married Chinese employees such that the effect of perceived work demands on life stress will be stronger for men than for women.

Hypothesis 4: Gender moderates the effect of perceived family demands on life stress among married Chinese employees such that the effect of perceived family demands on life stress will be stronger for women than for men.

METHOD

Sample

The data for this study were collected from respondents from various organizations. With the support of several managers and personal networks of a Chinese business professor, 153 married Chinese employees were identified. All of them agreed to participate in the study voluntarily and were fully assured of complete anonymity. About a quarter of the respondents (n = 40) were recruited from an evening business training programme offered by the Municipal Bureau of a metropolitan city in northern China. The rest came from five small- to medium-sized companies in manufacturing and service industries located around the same city. The use of employees from a number of companies provided variance in work demands. A Chinese business professor introduced the study to the respondents in both the training programme and in the companies. Trained research assistants administered and collected the questionnaires at the training programme classes and working sites.

The average age of all participants was 37.2 years (s.d. = 7.9), and 69% were female. On average, the respondents have been working for about 11.8 years (s.d.

= 7.3) in their current positions. Nineteen percent of them were line-level workers, and the rest were managers (24%), professionals (15%), or staff members (43%). About half of the respondents (n = 75) took care of fewer than two dependants at home, excluding their spouse. The average paid working hours per week were 39.1 hours (s.d. = 8.1). The respondents spent about 25 hours per week on house-hold work, including cooking, laundry, cleaning, shopping, home maintenance, and caring for children and the elderly.

From the comparison between men and women in the sample, we found a difference in age ($M_{\rm men} = 39.52$, $M_{\rm women} = 36.14$, t(149) = 2.47, p < 0.05). However, of more importance, we found no significant differences in reported household working hours between men and women ($M_{\rm men} = 24.37$, $M_{\rm women} = 25.81$, t(141) = -1.53, ns.). Furthermore, there were no significant differences in terms of their number of dependants ($M_{\rm men} = 1.63$, $M_{\rm women} = 2.04$, t(150) = -1.59, ns.), employment paid working hours ($M_{\rm men} = 39.70$, $M_{\rm women} = 38.90$, t(106) = 0.61, ns.), and the number of months in their current positions ($M_{\rm men} = 107.17$, $M_{\rm women} = 84.47$, t(139) = 1.39, ns.).

Measures

Because work and family demands are defined in terms of subjective perceptions, the participants' subjective experiences in the work and family domains were measured through self-reports. The specific items for each construct are listed in Table 1. All the measures were initially prepared in English, and then were translated into Chinese using a back-translation method (Brislin, 1970) by competent bilingual translators.

Perceived work demands. Three items adapted from Spector (1975) were used to measure the work demands of the respondents on a five-point Likert scale, ranging from 1 (very little) to 5 (very much). The coefficient Cronbach's alpha for this scale was 0.76.

Perceived family demands. Four new items were developed for this study to uncover family demands in terms of time, energy, and role pressure. The respondents indicated the degree of their family demands on a five-point scale, ranging from 1 (very little) to 5 (very much). The coefficient Cronbach's alpha for this scale was 0.83.

Life stress. Life stress was assessed through eight items measuring physical and psychological stress adapted from Quinn and Staines (1979). The inclusion of items pertaining to physical health problems is consistent with most prior research on organization stress (Edwards, 1992). Each item was rated on a four-point scale, ranging from 1 (never) to 4 (often). The coefficient Cronbach's alpha for this scale was 0.87.

Table 1. Results of confirmatory factor analysis of perceived work and family demands, and life stress^a

Factors and Items	Factor loading
1. Perceived work demands	
Given too much work to do	0.88
Too much work responsibility	0.77
Reasonable work demands	0.61
2. Perceived family demands	
Energy spent on family responsibilities	0.90
Time on family responsibilities	0.91
Tired out by family demands	0.60
Effort required for family responsibilities	0.52
3. Life stress	
Trouble staying asleep	0.72
Trouble getting to sleep	0.68
Spells of dizziness	0.76
Tired in a short time	0.69
Feeling nervous	0.71
Trouble breathing or shortness of breath	0.67
Pains in the back	0.62
Heart pounding	0.53
χ^2	166.45
df	87
RMSEA	0.07
IFI	0.91
CFI	0.91

Notes: a RMSEA stands for Root Mean Square Error of Approximation; IFI stands for Incremental Fit Index; CFI stands for Comparative Fit Index. All factor loadings are from the completely standardized solution of LISREL 8.

A confirmatory factor analysis (CFA) was performed using LISREL 8 (Jöreskog and Sörbom, 1993) to examine the discriminant validity of perceived work and family demands, and life stress. A three-factor model in which work demands have three items, family demands have four items, and life stress has eight items produced an acceptable fit with the data ($\chi^2 = 166.45$, df = 87, p < 0.01; RMSEA = 0.07; IFI = 0.91; CFI = 0.91). All items were loaded significantly on their underlying latent constructs (see Table 1).

In addition, we also conducted CFAs for two alternative measurement models to compare the three-factor model with them: (1) a two-factor model in which seven items of work and family demands were loaded onto one factor which represents role demands, and eight items onto another factor which represents life stress ($\chi^2 = 275.84$, df = 89, p < 0.01; RMSEA = 0.12; IFI = 0.80; CFI = 0.79); and (2) a one-factor model in which all 15 items were loaded onto a single factor (χ^2)

= 473.36, df = 90, p < 0.01; RMSEA = 0.17; IFI = 0.59; CFI = 0.58). Overall, as seen in the fit indices of the models, the two alternative measurement models generated a poor fit with the data. In addition, a chi-square difference test between the two-factor model and the three-factor model ($\Delta \chi^2$ = 109.39, Δdf = 2, p < 0.01) and a chi-square difference test between the one-factor model and the three-factor model ($\Delta \chi^2$ = 306.91, Δdf = 3, p < 0.01) also confirmed that the three-factor model is better than the other two alternative models. Thus, we conclude that perceived work demands, perceived family demands, and life stress as assessed by the above-mentioned measurement represent distinguishable constructs.

Control variables. To control for the objective characteristics of the work and family domains, factual information pertaining to both domains was also collected (cf. Gutek et al., 1991). In particular, variables that were found to cause stress in previous studies were controlled for: demographic characteristics (Frone et al., 1992a; Kahn et al., 1964) such as age, job level, and position tenure; and objective characteristics of the work and family domains (Gutek et al., 1991; Jick and Mitz, 1985) such as the number of dependants, and the number of hours spent on employment and on household chores.

Analyses

To test H1 and H2 regarding the gender differences in perceived work and family demands, we conducted hierarchical regression analyses controlling for other individual backgrounds, and the objective characteristics of the workplace and home. The results of the regression analyses were supported by those of the *t*-tests of perceived work and family demands. To test H3 and H4 concerning the moderating role of gender, we also used the hierarchical regression analyses. In these analyses, the block of control variables was entered at step 1. The terms of work demands, family demands, and gender were added in the second step. To reduce multicollinearity because of high correlations between perceived work and family demands and their productive terms with gender, we centred the element terms of the interaction terms (Aiken and West, 1991). Two interaction terms were entered at step 3. Lastly, to diagnose the potential multicollinearity problem, we calculated the variance inflation factor (VIF) of all independent and control variables included in the final moderated regression model.

RESULTS

The means, standard deviations, and zero-order correlations of all the variables are presented in Table 2. As expected, perceived work and family demands were significantly associated with life stress perceptions. The positive correlation between perceived family demands and gender suggests that women reported a

Table 2. Description statistics and correlations of all variables

Variables	Mean	s.d.	I	2	es.	4	5	9	7	8	6
1. Perceived work demands	2.87	0.84	(0.76)						· :		
2. Perceived family demands	3.18	0.86	0.12	(0.83)							
3. Life stress	2.01	0.67	0.27**	0.36**	(0.87)						
4. Age	37.17	7.87	0.03	0.16*	0.13	1					
5. Job level	0.81	0.39	-0.11	-0.19**	-0.21*	-0.01	1				
6. Number of dependants ¹	1.90	1.46	0.05	0.29**	0.18*	0.01	0.11				
7. Household working hours ²	25.20	17.32	0.11	0.45**	0.16	0.16	0.00	0.33	í		
8. Weekly paid working hours	39.09	8.08	-0.05	0.16	-0.02	0.17	90.0-	0.23*	0.50*	}	
9. Number of months in position	91.07	88.23	-0.00	-0.01	-0.02	0.43**	-0.09	-0.19	-0.09	90.0	ı
10. Gender	69.0	0.46	-0.03	0.27**	0.15	-0.20*	-0.11	0.13	0.15	-0.03	-0.12

Notes: Reliability coefficients are in parentheses along the diagonal.

 $^{*}p < 0.05; ^{**}p < 0.01.$

The coding scheme was as follows: Gender: 0 = Male, 1 = Female; Job level: 0 = Workers, 1 = Staff, professionals, and managers.

Dependants include children and the elderly under the respondent's care. A spouse was not considered a dependant.

Household working hours refer to time spent on housework (cooking, laundry, cleaning), shopping, home maintenance, child care, and elderly care.

higher level of perceived family demands than men. However, perceived work and family demands were not significantly correlated with each other. Perceived family demands were positively related to age, number of dependants, and household working hours. Perceived work demands were not correlated with any control variables. In addition, the more dependants the respondents had, the more life stress the respondents felt.

The results for the hypotheses testing are presented in Table 3. After controlling for demographic characteristics and workplace- and family-related variables, it was found that gender was not a significant predictor of perceived work demands (Model 2). This indicates that men and women, on average, did not report different levels of perceived work demands. The result of the *t*-test of the mean difference between work demands as perceived by men and women ($M_{\text{men}} = 2.90$, $M_{\text{women}} = 2.85$, t(149) = 0.36, ns.) also confirmed the results from the regression analysis. Therefore, H1 was not supported. Gender was positive and significant in predicting perceived family demands (Model 4), suggesting that women perceived a higher level of family demands than did men. The result of the *t*-test of the mean difference between family demands as perceived by men and women ($M_{\text{men}} = 2.82$, $M_{\text{women}} = 3.33$, t(150) = -3.47, p < 0.01) was also in line with that from the regression analysis. Gender explained an additional 5% of the variance in perceived family demand. Thus, H2 was supported.

The results for H3 and H4 regarding the prediction of the level of stress are presented in Models 6 and 7 of Table 3. These main effects of work and family demands and gender (Model 6) accounted for a significant proportion of the variance in employee stress ($\Delta R^2 = 0.10$), p < 0.05. In particular, perceived work demands were a significant predictor of life stress, whereas perceived family demands were not. Gender was not significantly associated with life stress, suggesting that Chinese men and women in this study reported a similar amount of life stress. Model 7 shows the moderating effect of gender, which was the main interest of H3 and H4. Two interaction terms accounted for a significant proportion of the variance in life stress (ΔR^2 = 0.07), p < 0.05. However, only the interaction effect of perceived work demands by gender was significant. Figure 1 shows the relationship between perceived work demands and life stress, separately for men and woman. We followed a procedure suggested by Aiken and West (1991) by separately computing a simple linear regression of life stress on perceived work demands for each gender. The higher the work demands Chinese men perceived, the greater their life stress (simple regression slope = 0.55, p < 0.01). The effect of work demands on life stress among Chinese women, however, was not significant (simple regression slope = 0.16, ns.). Thus, H3 was supported. On the other hand, the interaction effect of family demands by gender was not significant, indicating that H4 was not supported.

The VIF values for Model 7 show that the largest value was 3.59 (see Table 3), and this value is far smaller than 10, which is a cut-off point to indicate that multicollinearity may be unduly influencing the least squares estimates (Neter,

Table 3. Results of regression analyses for perceived work and family demands, and life stress*

Predictors	Work c	Work demands	Family .	Family demands			Life stress	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	VIF for Model 7
Step 1						j		
Âge	0.14	0.13	0.23*	0.27*	0.12	0.08	0.01	1.76
Job level	-0.15	-0.17	-0.25*	-0.18	-0.27*	-0.14	-0.13	1.50
Number of dependants ¹	0.12	0.13	0.29**	0.26*	0.31*	0.22	0.20	1.44
Household working hours ²	0.12	0.13	0.33**	0.31	0.10	0.02	-0.00	1.49
Weekly paid working hours	-0.16	-0.16	-0.00	0.02	-0.18	-0.12	-0.12	1.17
Number of months in position	-0.07	-0.07	90.0-	-0.05	0.05	0.09	0.11	1.48
Step 2								
Gender		90.0-		0.23*		0.18	0.18	1.40
Perceived work demands						0.27*	0.62**	3.44
Perceived family demands						0.13	-0.08	3.59
Step 3								
Perceived work demands × Gender							-0.41*	3.35
Perceived family demands × Gender							0.27	3.27
ĨŦ	0.92	0.82	6.62***	6.80**	2.32*	2.72**	3.00**	
d.f.	6, 70	7, 69	6, 70	7, 69	6, 70	9, 67	11, 65	
Standard error	0.82	0.83	0.70	0.68	0.57	0.55	0.53	
Adjusted-R ²	0.00	0.00	0.31	0.35	0.10	0.17	0.22	
\mathbb{R}^2	0.07	0.08	0.36	0.41	0.17	0.27	0.34	
$\Delta \mathbb{R}^2$		0.01		0.02*		0.10*	0.07*	

Notes: "Regression coefficients are standardized ones. * p < 0.05; **p < 0.05; **p < 0.01; VIF stands for variance inflation factor.

The coding scheme was as follows: Gender: 0 = Male, 1 = Female; Job level: 0 = Workers, 1 = Staff, professionals, and managers.

¹Dependants include children and the elderly under the respondent's care. A spouse was not considered a dependant.

² Household working hours refer to time spent on housework (cooking, laundry, cleaning), shopping, home maintenance, child care, and elderly care.

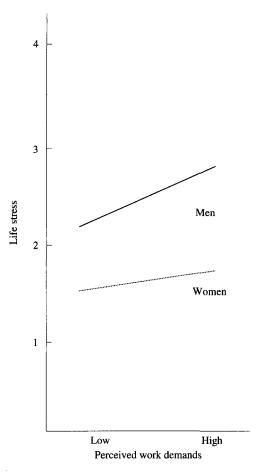


Figure 1. Interaction between perceived work demands and gender in predicting the life stress of married Chinese employees

Wasserman, and Kutner, 1990). Therefore, this suggests that multicollinearity cannot pose a serious problem in this study.

Some interesting results emerged on the control variables. While they were not significant in predicting work demands (Model 1), they were significant in predicting family demands (adjusted- $R^2 = 0.31$), p < 0.01 (Model 3). Older workers and those holding lower-level jobs reported a higher level of perceived family demands; and the greater the number of dependants and the number of household working hours, the higher the perceived family demands. The block of control variables at step 1 of Model 5 was significant (adjusted- $R^2 = 0.10$), p < 0.05, indicating that the control variables accounted for a significant proportion of variance in life stress. More specifically, the number of dependants was positively associated and job level was negatively associated with life stress. These variables, however, became non-significant in the models including the perceived work and family demands variables (Models 6 and 7).

DISCUSSION

The data show that consistent with what we expected, Chinese women perceived higher family demands than did Chinese men. However, they did not perceive any lower work demands than did their male counterparts. Furthermore, while gender did not significantly moderate the effect of perceived family demands on life stress, it significantly moderated the effect of perceived work demands on life stress.

These findings suggest that the convergence of roles among men and women is not yet firmly fixed in the Chinese society. Schwartzberg and Dytell (1996) presented some evidence for a trend in the USA toward role convergence in the family domain by showing that American working mothers and fathers reported equivalent levels of family demands. However, this study with married Chinese employees demonstrated that, despite the absence of a significant difference in household working hours between men and women, Chinese women on average still perceive higher family demands than do Chinese men.

Two potential reasons may explain the findings. First, although Chinese men and women reported spending similar amounts of time on household work, the type and the intensity of the work may differ. Family chores performed by the wives could be more psychologically demanding than those performed by the husbands. For example, taking care of a sick child, which is usually a mother's job, could be much more taxing than playing sport with a healthy child, which is usually a father's job. Furthermore, as explained earlier, as a result of different self-conceptions and role identity, the same family work could be more meaningful and important for Chinese women than for Chinese men (Zuo and Bian, 2001). Under these circumstances, it is possible that Chinese women may perform either more demanding types of family tasks or may experience more subjective demands even for the same family tasks.

Second, this finding could result from women's new expectations arising out of changes in the Chinese society and economy. The data in our sample suggest that women are spending as much time in the workplace as are men. Under these circumstances, women may find it hard to satisfy traditional expectations that require women to spend more time at home than at work. Given that they are not able to spend more time at home than they are expected to (Bu and McKeen, 2000), they might feel more burdened or frustrated because of the inability to fulfill their role expectations at home.

Parasuraman and her colleagues (1992) found that gender moderates the effect of family demands on life stress. In particular, family demands were unrelated to life stress among American men, but were positively related to life stress among American women. However, we did not find this moderating effect of gender on perceived family demands and life stress. One possible reason is that Chinese women were more able to find social support than American women in coping with family demands, which helped buffer some of the negative effects of family demands on

life stress. Previous research also demonstrated that women make better use of social support than men (Cohen and Willis, 1985; Greenglass, 2002). Thus, it could be the case that even though Chinese women in our study perceived a higher level of family demands, they were able to obtain and rely on support from the extended family and from friendship networks, which may have reduced the negative impact of perceived family demands on life stress. Of course, future research needs to test our explanation based on the differing abilities to find social support to cope with family demands between Chinese women and American women. Conversely, although it appears that Chinese men are participating in housework as much as men in the USA, housework is not Chinese men's traditional turf. Thus, they are less adept in handling family demands, which exacerbates the negative impact of those demands, and which may equalize the potential moderating effect of gender on the relationship between family demands and life stress.

The identity theory of stress (Burke, 1991; Thoits, 1986, 1991) alluded to the possibility that because roles in the workplace have a significant implication for men's identity, Chinese men are likely to experience higher stress from work demands than Chinese women. Our finding provides supportive evidence for this argument. However, because we did not explicitly measure role identity (i.e., to what extent successful role performance is important for identity), there may be several possible explanations for this finding. One possible reason is that the measurement of role-based work demands used in this study did not fully capture women's crucial stressors in the work domain, as previous studies have found that women are more sensitive to relationship-based stressors than role-based stressors (Lai, 1995; Parasuraman et al., 1992).

The other explanation may lie in what is called the spillover effect between work and family life. It has been shown that there is an asymmetrical permeability in the linkage between work and family roles (Frone, Russell, and Cooper, 1992b): work role demands are more likely to intrude into the family domain than the other way. Such spillover suggests that it is more likely for men to have work demands interfere with family life, causing work-family conflict, which in turn increases life stress. This could be particularly the case with Chinese men in view of the Chinese family-based work ethic (Redding, 1993), which allows Chinese men to bring their work home, interfering with their family life. However, we expect that such a spillover from work to home may not occur significantly for Chinese women, because some previous studies found this spillover effect to be weak for women (Kanter, 1977; Pleck, 1977).

A third possible reason is the high number of unpaid work hours that men might have spent in their jobs, which were not included in our analyses. In fact, one item in the questionnaire asked the respondents to report their unpaid work hours, such as overtime. Unfortunately, because only a limited number of respondents (n = 48) responded to this item, we could not use this information in the analysis. However, it may be reasonable to believe that men could have spent more hours working

overtime than women, and that this might have accounted for the significant influence of perceived work demand on life stress. This possibility should be more systematically explored in future research by measuring unpaid work hours.

Our study makes an additional contribution to employee-stress research by expanding the list of moderators that affect the relationship between perceived work demands and life stress. Following the work of Karasek (1979), past employee-stress research has explored the two-way interaction between work demands and decision latitude on life stress. Furthermore, recent stress research has started to explore new moderators on the interaction between work demands and decision latitude (i.e., three-way interactions) such as self- and collective-efficacy (Schaubroeck, Lam, and Xie, 2000), individual socio-economic differences (Xie, 1996), and perceived ability—job fit (Xie, 1996, 2002). This study used gender or gender-role identity as the moderator to further our knowledge on the effect of work demands on life stress.

Limitations

This study has several limitations. First, the respondents in this study were not randomly selected. Therefore, the findings should be taken as exploratory, with limited generalizability. In addition, because our sample included only urban employees working in a metropolitan area located in northern China, caution should be exercised in generalizing the results of this study to other regions. There is some anecdotal evidence indicating that men from northern or southern China have different reputations regarding their involvement in housework. This may contribute to different patterns of Chinese men's perceptions of family demands, and to the effect of family demands on their life stress from those found in this study. To increase the external validity of the findings of this study, future studies need to sample their respondents from diverse regions.

Second, the cross-sectional design of the study prevents drawing any causal inferences. It is possible that employees who experience life stress may feel that they have too heavy a demand from either the work or the family domain (Pittman, Solheim, and Blanchard, 1996). However, given that most prior research validates the effects of both demands on stress, the problem of reversed causality may not be serious. Nevertheless, future research employing a longitudinal design is desirable to further substantiate the causal direction of the hypothesized relationships.

Third, data on both the independent and dependent variables of this study were collected from the self-reports of the respondents, which may raise concerns regarding the problems of common method bias and multicollinearity. Some evidence, however, suggests that the biases might not be serious. The significant interaction effect of work demands and gender would be less likely to be found if common method bias exists (Evans, 1985). In addition, the two major predictors of life stress, work and family demands, were not significantly correlated with each

other. Lastly, the variance inflation factor test suggests that there is no multicolliearity problem between the independent variables.

Future Research Directions

The finding of a moderating effect of gender on the relationship between perceived work demands and life stress should motivate more research in this area, as it provides preliminary evidence that Chinese men and women may have different role identities regarding work. However, in order to truly establish the effect of role identities on relationships between perceived work demands and life stress, future research should directly incorporate and measure the work role identities of men and women. They could explore whether the moderating effect of gender is mediated by the difference in role identification between men and women, rather than using gender as a proxy for role identification.

Individual role identities with work and family in developing countries will change as these countries move to industrialization and modernization. Therefore, in future stress research in these countries, such as China, it would be interesting to investigate how the continuing societal and economic changes will impact individual self-identities and work-family relationships. For example, considering the gradual increase in the percentage of females in the labour force from 43% in 1980 to 45% in 1990 (Joplin, Francesco, Shaffer, and Lau, 2003) and to 46% in early 2000s (All-China Women's Federation, 2005), and the continuous growth of the Chinese economy, the number of women employees will continue to increase. Improving living standards, the extraordinary attention to the single child, and greater exposure to Western values and practices are all likely to have effects on the workplace and family structure, lifestyle, and gender role values and beliefs in China. These will definitely affect the extent to which gender influences both the demands and their effects on life stress. Longitudinal studies can be conducted to track changes in the role-related self-identities, family structure, and examine their impacts on life stress.

The importance of such gender-based role performance in both domains could vary according to a number of other factors, such as age, professionalism, and beliefs in traditionality. The effects of these factors certainly deserve future investigation. First, the importance of household work to women may change as women grow older. Role performance in the family domain would not be so critical to young women. When women have children, household work will be very central to their self-conceptions. Then as women enter middle age and their children grow up, the family role will become less critical again. Second, women's professional status and socialization may increase the centrality of work to their self-identity. This may elevate the impact of work demands on stress for professional women to a similar level as that for professional men. Lastly, to the extent that men or women endorse traditional values about gender inequality (Farh, Earley, and Lin,

1997), the moderating effect of gender could be even greater. The effect of traditionality was implicit in our role identity argument. However, as the Chinese economy and work organizations become more modernized and globalized, individual differences in traditionality could increase, making it an important individual variable for studying gender identity, work–family conflict, and psychological well-being. Future research needs to explore the reasons for the persistence of gender-based division of labour in the work and family domains, and the contexts when role convergence may occur.

Practical Implications

Our findings have some implications for organizational interventions to reduce the potential costs of employee stress. For example, family issues could be integrated into the human resource management programme. In particular, companies may consider providing employees with more family-friendly programmes such as job sharing, flexible work schedules, family leave, and child-care support programmes. These programmes have proved to be useful in the USA to ease the family demands (Baltes, Briggs, Huff, Wright, and Neuman, 1999; DeFrank and Ivancevich, 1998), and they could well be effective in the Chinese context as well.

Companies could also consider taking measures to reduce the negative effect of heavy work demands. Given the positive effect of decision latitude in reducing stress, as demonstrated in many previous studies (e.g., Karasek, 1979; Xie, 1996), Chinese managers may consider delegating more autonomy to their employees, especially the male employees. Furthermore, in view of the moderating effect of self-efficacy on life stress as found by Schaubroeck et al. (2000), on- and off-the-job training and organizational support to enhance individual efficacy may reduce the negative effect of heavy work demands.

CONCLUSION

This study presents preliminary evidence that gender-based division of labour within and between family and work domains, which has long moulded Chinese men and women's perceptions and behaviours, is both persistent and changing. Although women perceived higher family demands, there is some role convergence in terms of the perception of work demands. Furthermore, although perceived family demands have an equivalent effect on life stress across gender, perceived work demands still have a stronger effect on the life stress of Chinese men than of women. Of course, it would be premature to draw any strong conclusion on this issue based on a single study. Hopefully, this study has provided some insight on this issue, but has also raised many questions that would stimulate further research in this dynamic context.

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Jaepil Choi (mnjaepil@ust.hk) is an Assistant Professor of Organizational Behavior at the Hong Kong University of Science and Technology. He received his Ph.D. in Organizational Behavior from Rutgers, the State University of New Jersey. His research focuses on organizational justice, employee stress, leadership, corporate philanthropy, and corporate social performance.

Chao C. Chen (chaochen@business.rutgers.edu) is a Professor of Management and Global Business at Rutgers University. He received his Ph.D. in Organizational Behaviour and Human Resources Management at the State University of New York at Buffalo. His research interests include cross-cultural management, organizational justice, leadership, and functionality of social networks.

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