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# The tug of work and family

## Direct and indirect domain-specific determinants of work-family conflict

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**Abstract** *Examines the influence of family- and work-specific determinants of multiple forms of family interference with work (FIW) and work interference with family (WIF) conflict. Using a Hong Kong university sample (including both academic and non-academic staff), finds that parental demands and hours spent on household work were important determinants of FIW conflict and that role conflict, role overload, and hours spent on paid work influenced WIF conflict. Differential gender effects for FIW and WIF conflict support the traditional gender roles embedded in Confucian ethics. Moderating effects of spouse support, supervisor support and domestic support were also found, although the latter was opposite to the direction hypothesized. Implications for future researchers and managers are discussed.*

Family and work are the two most important domains of life for most adults (Andrews and Withey, 1976). When conflicts between these two domains occur, there are adverse consequences for both individuals and organizations. Individuals who experience work-family conflict may incur increased health risks, inadequate performance as a marital partner and parent, reduced life satisfaction and poor marital adjustment (e.g. Greenhaus and Beutell, 1985; Near *et al.*, 1978; Suchet and Barling, 1986). Inability to deal with the demands of the two domains may also manifest itself in the form of increased absenteeism and turnover, reduced organizational commitment, and lower productivity (Fernandez, 1986; Schultz and Henderson, 1985). To avoid the costs associated with work-family conflict, it is incumbent upon human resource professionals to help employees strike a balance between work and family. Playing a more dynamic and pivotal role in meeting this challenge, however, requires an understanding of the variables that trigger such conflicts.

Traditionally, researchers have viewed work-family conflict as a uni-directional construct. Recently, however, the bi-directional nature of work-family conflict has been recognized by many researchers (e.g. Adams *et al.*, 1996; Duxbury *et al.*, 1992; Frone *et al.*, 1992; Gutek *et al.*, 1991). Conflicts originating in the family may have negative organizational consequences, such as when the illness of an elderly parent prevents attendance at work (Gutek *et al.*, 1991). Similarly, those stemming from the work domain may impinge on the family, such as when long hours in paid work prevent the performance of domestic tasks. Recent studies report that the two directions of work-family conflict, WIF and FIW, have unique antecedents, with those for FIW coming

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from the family domain and those for WIF from the work domain (Adams *et al.*, 1996; Thomas and Ganster, 1995).

Multi-dimensional facets of work-family conflict have also been identified. According to Greenhaus and Beutell (1985), there are three forms of work-family conflict: time-based, strain-based, and behavior-based. Time-based conflict occurs when the time demands of one role are incompatible with those of another (e.g. working overtime forces the cancellation of a family outing). When strain experienced in one role intrudes into and interferes with participation in another role, strain-based conflict results (e.g. the stress of tending to a sick child affects one's ability to concentrate at work). The third form, behavior-based conflict, occurs when behaviour patterns appropriate to one domain are inappropriate in another (e.g. emotional restrictions at work are incompatible with the openness expected by family members).

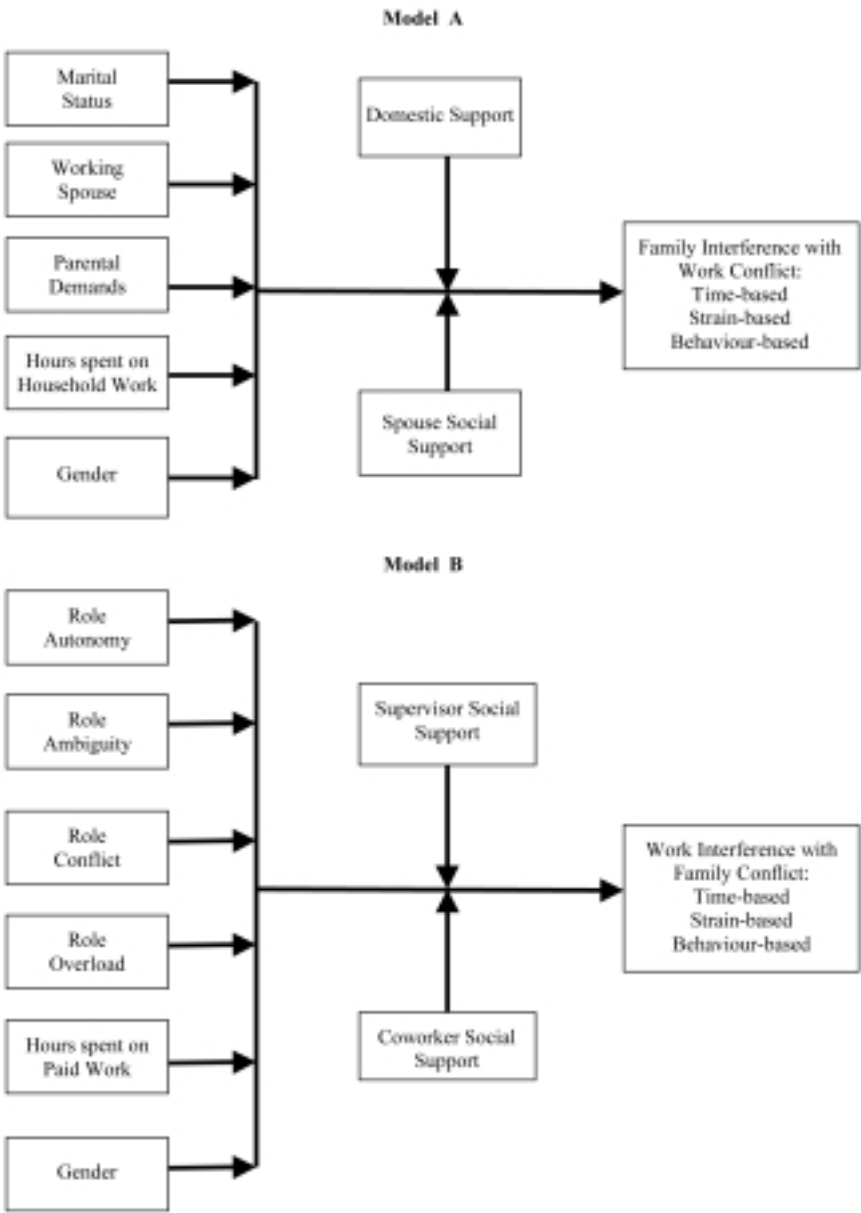
Integrating the bi-directional and multi-dimensional aspects of work-family conflict, Carlson *et al.* (1998) proposed six dimensions of work-family conflict. Family interference with work (FIW) and work interference with family (WIF) each have three sub-dimensions: time-, strain-, and behavior-based forms of conflict. Based on this bi-directional and multi-dimensional conceptualization, we investigate the direct and indirect domain-specific determinants of work-family conflict. In particular, our objectives are to:

- develop and test two models of the determinants of work-family conflict by considering the effects of family-specific variables on family interference with work (FIW) and the effects of work-specific variables on work interference with family (WIF);
- consider the effects of gender on both FIW and WIF;
- assess the moderating effects of domain-specific support; and
- discuss the implications of the findings for managers and researchers.

In contrast with most studies of work-family conflict, we test our models with a sample of Hong Kong Chinese employees. As a highly industrialized city that was under UK rule for 150 years, Hong Kong's economic, legal, and educational systems are grounded in western principles. Yet, Chinese Confucian values still prevail, and family, rather than the individual, is the focus of all social and economic roles (Chiu and Kosmski, 1995). According to recent research by Aryee *et al.* (1999b), the central importance of the family in Chinese society has implications for differences in the nature of work-family conflict for western and Chinese employees. However, their comparison of the pattern of effects for US and Hong Kong Chinese employees indicated that the domain-specific antecedents on FIW and WIF conflict were similar for both groups. Thus, drawing upon evidence from primarily western studies, we develop hypotheses about the family-specific and work-specific determinants of time-, strain-, and behavior-based forms of FIW and WIF conflict, respectively.

**Domain-specific determinants of work-family conflict**

As depicted in Figure 1, we are proposing two separate models for work-family conflict. Model A postulates that there are several family-related determinants of family interference with work (FIW) conflict. For work interference with family (WIF) conflict, as shown in Model B, the determinants are work-related.



**Figure 1.** Models of the determinants of family interference with work (FIW) and work interference with family (WIF) conflict

For both models, we consider the direct effects of gender and the moderating effects of domain-specific support variables. In the next sections, we review the relevant literature and provide supporting evidence for each of the proposed relationships.

### *Family-specific determinants of FIW conflict*

For Model A, we predict that there are four family-specific variables that affect FIW conflict. These are:

- (1) marital status;
- (2) working spouse;
- (3) parental demands; and
- (4) hours spent on household work.

According to Herman and Gyllstrom (1977), married individuals experience more work-family conflict than those who are unmarried. Single persons tend to have more flexibility in the use of their time and energy, and they have fewer familial obligations. Thus, they are less likely to experience FIW conflict. For those who are married, the employment status of their spouse is also a potentially important influence on FIW conflict. Greenhaus *et al.* (1989) proposed that the number of hours worked per week by spouses was positively associated with conflict between work and family. Non-working spouses are usually the pillars of the family, and they assume most of the family responsibilities. This frees the employed partner to more fully concentrate on his/her work. In contrast, in families with both partners working full-time (or part-time), individuals face dual demands from work and family activities, resulting in increased levels of FIW conflict.

In a similar vein, parents are more likely to experience work-family conflict than non-parents (Herman and Gyllstrom, 1977). Both the number and age of children have been found to influence work-family conflict (Bedeian *et al.*, 1988; Loerch *et al.*, 1989; Voydanoff, 1988). Parental demands increase with the number of children, and parents of younger children (who are likely to be particularly demanding of their parents' time) experience more conflict than the parents of older children (Beutell and Greenhaus, 1980; Greenhaus and Kopelman, 1981; Pleck *et al.*, 1980). In addition to parental demands, the hours spent on household work may also affect work-family conflict. According to the rational view proposed by Gutek *et al.* (1991), there is a simple, main-effect relationship between hours and perceived conflict. The more time one spends on the roles associated with one domain, the less time will be available for the other domain (Keith and Schafer, 1984; Staines *et al.*, 1978). Because time is a limited resource, spending more time on household chores means that less time is available for work. The result is an increased level of FIW conflict.

Based on the above arguments, we propose the following:

- H1a-d.* Marital status (a), working spouse (b), parental demands (c), and hours spent on household work (d), will be positively related to

*Work-specific determinants of WIF conflict*

Researchers have tended to focus on work-specific variables as a source of work-family conflict, because individuals have relatively less control over their work lives than their family lives (Higgins and Duxbury, 1992). As presented in Model B, these variables include the four role stressors of autonomy, ambiguity, conflict, and overload, as well as the hours spent on paid work.

According to Hackman (1977), autonomy is the degree to which the job provides substantial freedom, independence and discretion to the individual in scheduling the work and in determining the procedures to be used in carrying it out. In this regard, autonomous individuals will perceive that work outcomes depend substantially on their own efforts, initiatives and decisions; they will feel a strong personal responsibility for the successes and failures of their work. Individuals who have control over their work activities have more flexibility in allocating their limited resources at work and at home. As such, the degree of interference from work to family is minimized (Voydanoff, 1988).

Role ambiguity occurs when an individual does not have clear information about what is expected on the job or how the reward system works (Kahn *et al.*, 1964). Those who suffer from role ambiguity experience lower levels of job satisfaction, high job-related tension, greater futility and lower self-confidence (Kahn *et al.*, 1964). It is also likely that individuals who have ambiguous jobs will have higher levels of WIF conflict. Resources needed to deal with the ambiguity may be shifted from the family domain to the work domain (Greenhaus and Beutell, 1985).

Role conflict is the simultaneous occurrence of two or more sets of pressures, such that compliance with one makes compliance with the other more difficult (Kahn *et al.*, 1964). Beehr and McGrath (1992) state that role conflict occurs when an employee is expected, as part of the job, to do something that would conflict with other job or non-job demands or with his or her personal values. Thus, conflict at work may draw resources away from the family domain, resulting in higher levels of WIF conflict (Greenhaus and Beutell, 1985).

Role overload occurs when the total demands on time and energy are too great for an individual to perform the roles adequately or comfortably (Greenhaus and Beutell, 1985). Individuals who perceive their workload to be more than they can handle experience negative emotions, fatigue, tension, and other mental health symptoms (Cooper and Hensman, 1985). It is also likely that they will experience higher levels of WIF conflict, because time and energy are limited resources (Gutek *et al.*, 1991). When excessive demands are made in one domain (e.g. work), resources may be borrowed from another domain (e.g. family). Similarly, as the actual hours spent at work increase, less time will be available for family activities (Greenhaus and Beutell, 1985). Thus, just as increasing hours spent on household work will affect FIW conflict, we expect to

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also find a direct relationship between the number of hours spent on paid work and WIF conflict.

From this discussion of work-specific variables, we derive the following:

- H2a-e.* Role autonomy (a) will be negatively related to time-, strain-, and behavior-based work interference with family (WIF conflict) and (b) role ambiguity, (c) role conflict, (d) role overload, and (e) hours spent on paid work will be positively related to time-, strain-, and behavior-based WIF conflict.

*Direct effects of gender on FIW and WIF*

There is a significant body of research linking work-family conflict with gender (e.g. Duxbury and Higgins, 1991). Although opposing theoretical arguments have been offered regarding the effects of gender on work-family conflict (see Gutek *et al.* (1991) for a discussion), the job-strain role model (Karasek, 1979) is consistent with our general stress-based perspective for understanding work-family conflict. Karasek (1979) identified two key operating forces: role demand and control, and postulated that it is the combination of low control and heavy role demands that is consistently associated with high levels of stress. This model suggests that the amount of work-family conflict perceived by an employee will be associated with the employee's work and family-role demands and the amount of control he or she has over these demands. Such perceptions of work and family roles are influenced by gender-role stereotypes (Pleck, 1984).

The traditional division of labor is gender based, with the wife responsible for the family and the husband assuming the breadwinner role (Higgins *et al.*, 1994). Despite the fact that women are now more educated, participate more in the work force, and have more equal employment opportunities, evidence continues to suggest that women still carry the primary responsibility for family work (Berardo *et al.*, 1987; Grant *et al.*, 1990). This is especially true for women in Hong Kong, where traditional Chinese values still prevail. The Chinese culture is family-centered, and child-rearing, home-making and domestic work are the responsibility of women, while men are the primary income providers (Chiu and Kosmski, 1995). In response to these differential role demands, women are more likely to allow family demands to intrude into the work domain. In contrast, men will be more inclined to let work demands intrude into the family domain (Pleck, 1984; Voydanoff, 1988). To the extent that these gender-role demands are an integral part of their identities, individuals will perceive less control over them and more conflict will result (Lent *et al.*, 1987; Thoits, 1991; Williams *et al.*, 1992). Thus, we anticipate that women will experience more interference from the family domain, and that men will experience more interference from the work domain. Formally, this is stated as follows:

- H3a-b.* Gender is associated with work-family conflict, such that (a) women experience more time-, strain-, and behavior-based FIW

*Moderating effects of domain-specific support*

Although there is substantial evidence for the buffering effect of social support on stressor-strain relationships (Cohen and Willis, 1985), limited studies (e.g. Burke, 1988) have considered the moderating effects of support on work-family conflict and its determinants. In line with the growing consensus that support can emanate from both work and non-work sources (Adams *et al.*, 1996), we contend that first, family-specific support variables will moderate the relationship between the family-related determinants and FIW conflict, and second, work-specific support variables will moderate the relationship between the work-related determinants and WIF conflict. These relationships are depicted in Figure 1.

In this study, we consider two forms of family-specific support: domestic support and spouse support. The majority of families in Hong Kong rely on family members such as parents or domestic servants as their major sources of child care and domestic assistance. There is a Chinese motto that says "having an elder person in the family is just like having a treasure", indicating that parents are the most preferred source of reliable and unfailing support. Nevertheless, many Hong Kong families employ domestic servants from the Philippines and Indonesia. The number of such workers increased from 25,500 in 1986 to 118,200 in 1996 (Hong Kong Census and Statistics Department, 1996). These domestic support resources, including both elderly parents and domestic helpers, may help to alleviate the stress within the family domain.

Spouse social support refers to the instrumental and emotional support that a spouse provides (Beehr and McGrath, 1992; Caplan *et al.*, 1975). Instrumental support includes suggesting ways, or actually lending a hand, to complete a task. Emotional support includes caring, listening sympathetically as well as providing empathy. Family social support is strongly related to general health and wellbeing (Adams *et al.*, 1996), as well as work-family conflict (Aryee *et al.*, 1999a; Burke, 1988). To avoid any overlap between domestic support and family social support, we restrict our focus on family support to spouses only. As with domestic support, we expect that this form of support will help to reduce the impact of the family-related determinants on FIW conflict.

Within the work domain, social support may emanate from either the supervisor or coworkers. Evidence from a sample of health-care providers indicates that social support from supervisors helps to reduce work-family conflict (Thomas and Ganster, 1995). Other evidence indicates that, under ambiguous, conflicting work roles with limited autonomy and work overload, social support from the immediate supervisor and coworkers will alleviate the adverse effects of work-stressors on work-related outcomes (e.g. Beehr and McGrath, 1992). We expect that the same alleviating effect will operate on the relationship between the work-related determinants and WIF conflict.

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Based on the above discussion, we propose testing the following:

- H4a-b.* Family-specific support, including both (a) domestic support and (b) spouse social support, will have a negative moderating effect on the relationship between the family-related determinants and time-, strain-, and behavior-based FIW conflict. That is, we expect family-specific support variables to weaken the relationship between family-related determinants and the various forms of FIW conflict.
- H5a-b.* Work-specific social support from (a) immediate supervisors and (b) coworkers will have a negative moderating effect on the relationship between the work-related determinants and time-, strain-, and behavior-based WIF conflict. That is, we expect work-specific social support to weaken the relationship between work-related determinants and the various forms of WIF conflict.

## Method

### *Data collection and sample*

For this study, we collected data from a random sample of academic, administrative, and general grade staff of a university in Hong Kong. To eliminate possible confounding effects of culture, we targeted only local, non-expatriate staff. Using a computerized random generator, 800 employees from 29 academic departments and 34 administrative offices were selected to participate in this research. We distributed questionnaires to each of the 800 employees, and provided them with a self-addressed envelope in which they could return the survey through the university's internal mail system. Of the 279 questionnaires that were returned, 267 were usable, for a response rate of 33 per cent. Given the notoriously low response rates to surveys in Hong Kong (Harzing, 1997), this response rate is quite good.

A comparison of the demographic profile of the respondents with that of the population indicates that they are representative of the university's local employee population. For example, 42 per cent of the respondents were female and 58 per cent were male. Corresponding percentages for the university's population are 40 per cent females and 60 per cent males. The mean age of the respondents was 38.74 years, with 3 per cent under 35, 29 per cent 25-34 years of age, 43 per cent 35-44, 23 per cent 45-54, and 2 per cent over 54. Respondents were well-educated: 20 per cent completed secondary education, 2 per cent matriculated, 19 per cent obtained a certificate/diploma, 18 per cent a bachelor's degree, 25 per cent a master's degree, and 16 per cent a PhD. Only 6 per cent of the respondents had fewer than five years of work experience, and 17 per cent had more than 25 years. Most of the respondents (46 per cent) had ten to 20 years of experience. Other demographic information, such as marital status, working status of the spouse, and parental demands, is provided in Table I.



**Table 1.**  
Descriptive statistics  
and zero-order  
correlations

Variables	Mean	s.d.	1	2	3	4	5	6	7	8	9
1. Time-based FIW	9.86	4.35	(0.84)								
2. Strain-based FIW	8.21	3.83	0.55***	(0.89)							
3. Behavior-based FIW	11.30	3.43	0.33***	0.34***	(0.85)						
4. Time-based WIF	11.37	5.12	0.57***	0.30***	0.12	(0.92)					
5. Strain-based WIF	11.70	4.60	0.53***	0.47***	0.32***	0.68***	(0.90)				
6. Behavior-based WIF	11.80	3.68	0.40***	0.38***	0.63***	0.31***	0.44***	(0.79)			
7. Marital status	1.74	0.44	0.27***	0.03	0.09	0.15*	0.10	0.09	–		
8. Working spouse	1.13	0.97	0.18**	0.03	0.03	0.10	0.09	0.02	0.69***	–	
9. Parental demands	2.87	1.71	0.30***	0.11	0.01	0.13*	0.08	0.07	0.58***	0.35***	–
10. Hours spent on household work	19.52	17.47	0.18**	0.09	0.08	–0.12*	–0.03	0.05	0.38***	0.32***	0.54***
11. Gender	0.42	0.49	0.20***	0.10	0.11	–0.28***	–0.08	–0.19**	–0.18**	0.11	–0.11
12. Role autonomy	14.46	3.76	–0.13*	–0.18**	–0.28***	–0.09	–0.19**	–0.23***	0.04	0.04	0.09
13. Role ambiguity	17.93	5.41	0.28***	0.23***	0.20***	0.27***	0.21***	0.23***	0.00	–0.01	–0.10
14. Role conflict	30.27	9.54	0.40***	0.32***	0.24***	0.47***	0.50***	0.31***	0.11	0.13*	–0.07
15. Role overload	12.37	4.05	0.41***	0.26***	0.07	0.62***	0.52***	0.21***	0.02	0.02	0.03
16. Hours spent on paid work	51.37	7.54	0.21***	–0.01	–0.13*	0.52***	0.30***	–0.00	0.08	0.03	0.05
17. Domestic support	3.99	3.08	0.12*	0.03	–0.10	0.14*	0.09	0.01	0.20***	0.24***	0.51***
18. Spouse social support	11.28	5.29	–0.16**	–0.02	0.00	0.07	0.06	0.02	0.62***	0.48***	0.32***
19. Supervisor social support	8.21	3.13	–0.27***	–0.32***	–0.27***	–0.25***	–0.30***	–0.24***	–0.12*	–0.10	–0.07
20. Coworker social support	10.33	2.47	–0.14*	–0.14*	–0.24***	–0.15*	–0.19**	–0.26***	–0.13*	–0.02	–0.09

(continued)

Variables	10	11	12	13	14	15	16	17	18	19	20
1. Time-based FIW											
2. Strain-based FIW											
3. Behavior-based FIW											
4. Time-based WIF											
5. Strain-based WIF											
6. Behavior-based WIF											
7. Marital status											
8. Working spouse											
9. Parental demands											
10. Hours spent on household work	–										
11. Gender	0.18**	–									
12. Role autonomy	–0.05	0.04	(0.87)								
13. Role ambiguity	–0.06	–0.07	–0.59***	(0.78)							
14. Role conflict	–0.06	–0.20***	–0.37***	0.46***	(0.88)						
15. Role overload	–0.10	–0.09	–0.13*	0.33***	0.52***	(0.77)					
16. Hours spent on paid work	–0.18**	–0.21***	0.15*	0.03	0.19**	0.44***	–				
17. Domestic support	0.15*	0.12	0.17**	–0.01	–0.03	0.11	0.13*	–			
18. Spouse social support	0.26***	–0.10	–0.02	0.01	0.07	–0.01	–0.04	0.13*	(0.96)		
19. Supervisor social support	–0.05	0.18**	0.26***	–0.33***	–0.38***	–0.22***	–0.01	0.02	–0.10	(0.84)	
20. Coworker social support	0.03	0.15*	0.16**	–0.13*	–0.18**	–0.10	–0.06	0.02	–0.02	0.47***	(0.75)

**Notes:** \*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$ . Owing to missing data,  $N$  ranges from 257-267 with a median of 262. Coefficient alphas indicating scale reliabilities are in parentheses. For marital status, single = 0 and married = 1; for gender, male = 0 and female = 1; for working spouse, unemployed = 0, working part-time = 1 and working full-time = 2. FIW = family interference with work; WIF = work interference with family

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*Measures*

English is an official language of Hong Kong, and adequate English-language skills are a requirement of the university. Nevertheless, to avoid any possible misinterpretations, we developed a bilingual questionnaire (in Chinese and English). The English version was prepared first, and then translated into Chinese. A back translation was conducted to ensure comparability (Brislin *et al.*, 1973), and this was checked by a professional translator.

*Work-family conflict.* To assess this multi-dimensional construct, we used the subscales developed by Carlson *et al.* (1998). Each subscale consisted of three items that tapped into time-based, strain-based, and behavior-based dimensions of both family interference with work (FIW) and work interference with family (WIF). Examples of the time-, strain-, and behavior-based FIW items are, respectively: "The time I spend on family responsibilities often interferes with my work responsibilities"; "Owing to stress at home, I am often preoccupied with family matters at work"; "The behaviors that work for me at home do not seem to be effective at work". Corresponding items for the WIF subscales are: "My work keeps me from my family activities more than I would like"; "When I get home from work, I am often too frazzled to participate in family activities/responsibilities"; "The problem-solving behaviors I use in my job are not effective in resolving problems at home". Responses were on a seven-point agree/disagree scale.

*Family-specific variables.* Marital status was measured by asking respondents to indicate whether they were married (coded 1) or single (coded 0). Respondents who had a spouse were asked to indicate the employment status of their spouse. Three working spouse categories were provided: working full-time (coded 2), working part-time (coded 1), and not working (coded 0). Parental demands were measured with the five-level scale developed by Bedeian *et al.* (1988). Based on the ages and presence or absence of children, respondents were placed into one of five categories:

- (1) no children;
- (2) one or more children older than the age of 22 but none under the age of 19;
- (3) one or more children between 19 and 22 but none under the age of 19;
- (4) one or more children between six and 18 but none under six; and,
- (5) one or more children under six.

Higher numbers represent greater parental demands. To assess the hours spent on household work, we used questions developed by Carlson *et al.* (1995). Respondents were asked to estimate the hours they spent each week on four tasks:

- (1) child-care activities;
- (2) shopping for household necessities, such as food;
- (3) household chores, such as cooking and cleaning; and
- (4) household maintenance, such as repairs.

*Work-specific variables.* Role autonomy, role ambiguity, and role conflict were measured with scales developed by Rizzo *et al.* (1970). All responses were on a seven-point agree/disagree scale. The role autonomy scale consisted of three items. A sample item is “My job lets me decide how I go about my work”. The role ambiguity scale had six items; a sample item was “I feel certain about how much authority I have”. A sample item of the eight-item role conflict scale was “I work under incompatible policies and guidelines”. Role overload was assessed with a three-item scale from Seashore *et al.* (1982). A sample item is “The amount of work I am asked to do is fair”. The hours spent on paid work were measured with a single item: “What is the average number of hours you work each week?”

*Gender.* To assess gender, respondents indicated whether they were male (coded 0) or female (coded 1).

*Domain-specific support variables.* Domestic support was operationalized by first asking respondents to indicate who assisted them with child care and other domestic activities. They were then asked to indicate the percentage of relief that they received from these individuals in these two areas. Social support was measured with a scale developed by Caplan *et al.* (1975). Respondents were asked to indicate how much support they received from (1) spouse/partner; (2) supervisor; and, (3) coworkers. For each source of support, there were four items, rated on a five-point scale (0 = no such person, 1 = not at all, 2 = just a little, 3 = a moderate amount, 4 = very much). A sample item is “How easy has it been to talk with each of the following people?”

## Results

Descriptive statistics, including means, standard deviations, Cronbach’s alphas, and zero-order correlations, are presented in Table I. All of the constructs demonstrate sound psychometric properties. To test the hypotheses, we conducted multiple hierarchical (moderated) regressions on each of the six dimensions of work-family conflict. To test Hypotheses 1-3, we entered the proposed domain-specific direct effects into the regression equations for the different dimensions of FIW and WIF. To test the moderating effects of domain-specific support, we first created interaction terms by multiplying each of the support variables by each of the domain-specific direct determinants. We then entered the main effect for support and the interaction terms into the six regression equations used to test the direct effects of domain-specific determinants. The results of the regression analyses testing the direct and interaction influences on family interference with work (FIW) are presented in Table II. The results for work interference with family (WIF) are depicted in Table III.

### *Family-specific determinants of FIW conflict*

Hypotheses 1a-d predicted that four family-specific variables (marital status, working spouse, parental demands, and hours spent on household work) would influence family interference with work (FIW) conflict. As a block, these variables were only significant predictors of time-based FIW conflict (see

**Table II.**  
Results of regression  
analyses predicting  
family interference  
with work (FIW)  
conflict

Predictors	Standardized regression coefficients		
	Time-based FIW ( <i>n</i> = 261)	Strain-based FIW ( <i>n</i> = 261)	Behavior-based FIW ( <i>n</i> = 261)
<i>Predicted direct effects</i>			
Marital status	0.06	-0.11	0.15
Working spouse	0.06	0.04	-0.07
Parental demands	0.19*	0.10	-0.15
Hours spent on household work	0.08	0.10	0.15*
Gender	0.19**	0.14*	0.13
<i>R</i> <sup>2</sup>	0.14**	0.03	0.04
<i>Predicted interaction effects</i>			
Domestic support	-0.40*	-0.12	-0.24
Domestic support × marital status	-0.22	0.01	0.08
Domestic support × working spouse	0.25	0.30	-0.02
Domestic support × parental demands	0.61*	-0.00	0.15
Domestic support × hours spent on household work	-0.06	-0.09	-0.04
Domestic support × gender	0.05	0.01	0.11
$\Delta R^2$	0.02	0.02	0.01
<b>Notes:</b> * $p < 0.05$ ; ** $p < 0.01$ ; *** $p < 0.001$			

Table II). In support of Hypothesis 1c, parental demands emerged as an important determinant of time-based FIW ( $\beta = 0.19, p < 0.05$ ). Hours spent on household work were a significant predictor of behavior-based FIW, providing support for Hypothesis 1d. No support was found for the effects of marital status or working spouse; thus Hypotheses 1a and 1b were not supported.

#### *Work-specific determinants of WIF conflict*

According to Hypotheses 2a-e, four role-stressor variables and hours spent on paid work would be significant determinants of WIF conflict. These variables did explain a significant amount of variance in time-based ( $R^2 = 0.52$ ) and strain-based WIF conflict ( $R^2 = 0.37$ ), but not behavior-based WIF conflict (see Table III). Role conflict was an important determinant of all three forms of WIF conflict ( $\beta = 0.17, p < 0.01$  for time-based WIF;  $\beta = 0.34, p < 0.001$  for strain-based WIF;  $\beta = 0.18, p < 0.05$  for behavior-based WIF). Role overload had an important influence on both time-based ( $\beta = 0.37, p < 0.001$ ) and strain-based ( $\beta = 0.32, p < 0.001$ ) WIF conflict. Hours spent on paid work were also influential predictors of these two forms of WIF conflict ( $\beta = 0.219, p < 0.01$  for time-based WIF;  $\beta = 0.12, p < 0.05$  for strain-based WIF). Thus, Hypotheses 2c,d and e were supported; Hypotheses 2a and b were not.

#### *Direct effects of gender on FIW and WIF*

As predicted by Hypotheses 3a and 3b, gender was an important predictor of both family interference with work (FIW) and work interference with family (WIF) conflict (see Tables II and III). The positive significant coefficient

Predictors	Standardized regression coefficients			Work-family conflict
	Time-based WIF	Strain-based WIF	Behavior-based WIF	
	( <i>n</i> = 265)	( <i>n</i> = 265)	( <i>n</i> = 265)	
<i>Predicted direct effects</i>				
Role autonomy	0.02	−0.09	−0.09	<b>515</b>
Role ambiguity	0.06	−0.10	0.06	
Role conflict	0.17**	0.34***	0.18*	
Role overload	0.37***	0.32***	0.11	
Hours spent on paid work	0.29***	0.12*	−0.11	
Gender	−0.14**	−0.05	−0.15*	
<i>R</i> <sup>2</sup>	0.52***	0.37***	0.14***	
<i>Predicted interaction effects</i>				
Supervisor social support	0.90*	0.85	0.97	<b>Table III.</b> Results of regression analyses predicting work interference with family (WIF) conflict
Supervisor social support × role autonomy	−0.07	−0.18	−0.64	
Supervisor social support × role ambiguity	−0.05	0.21	−0.11	
Supervisor social support × role conflict	−0.12	−0.56*	−0.73**	
Supervisor social support × role overload	−0.14	0.27	0.33	
Supervisor social support × hours spent on paid work	−0.73	−0.81	−0.12	
Supervisor social support × gender	0.05	−0.01	0.19	
$\Delta R^2$	0.02	0.04	0.04	
<b>Notes:</b> * <i>p</i> < 0.05; ** <i>p</i> < 0.01; *** <i>p</i> < 0.001				

( $\beta = 0.19$ ,  $p < 0.05$ ) for time-based FIW indicates that females experience significantly more FIW conflict. In contrast, males experience significantly more time-based ( $\beta = -0.14$ ,  $p < 0.05$ ) and behavior-based ( $\beta = -0.15$ ,  $p < 0.05$ ) WIF conflict. All of these results are in the directions hypothesized.

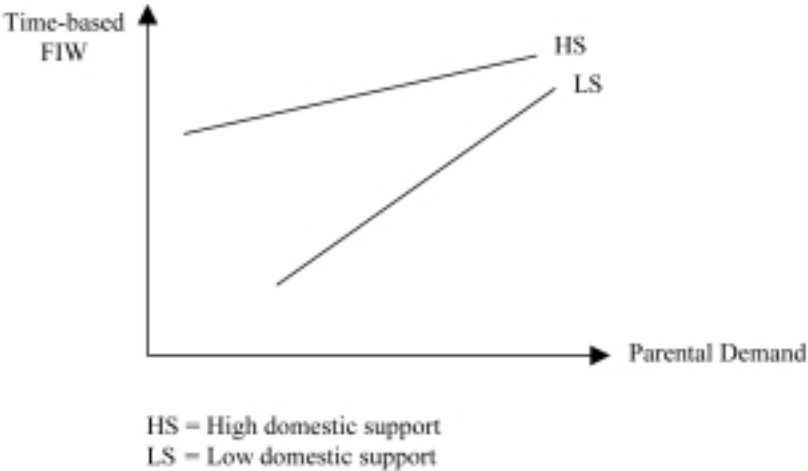
#### *Moderating effects of domain-specific support*

According to Hypotheses 4a-b and 5a-b, domain-specific support variables will reduce the strength of the relationship between the domain-specific determinants and work-family conflict. As predicted by Hypothesis 4a, domestic support interacted with parental demands to predict time-based FIW ( $\beta = 0.61$ ,  $p < 0.05$ ). However, this was in the opposite direction hypothesized (see Table II). None of the individual interaction terms involving spouse support was a significant unique predictor of FIW conflict. As a block, however, the addition of the interaction terms to the regression equations did result in a significant increase in  $R^2$  for strain-based ( $\Delta R^2 = 0.11$ ,  $p < 0.001$ ) and behavior-based ( $\Delta R^2 = 0.05$ ,  $p < 0.05$ ) FIW conflict (see Table II). Thus, Hypothesis 4b was also supported. Supervisor support, predicted by Hypothesis 5a, was involved in two significant interactions with role conflict

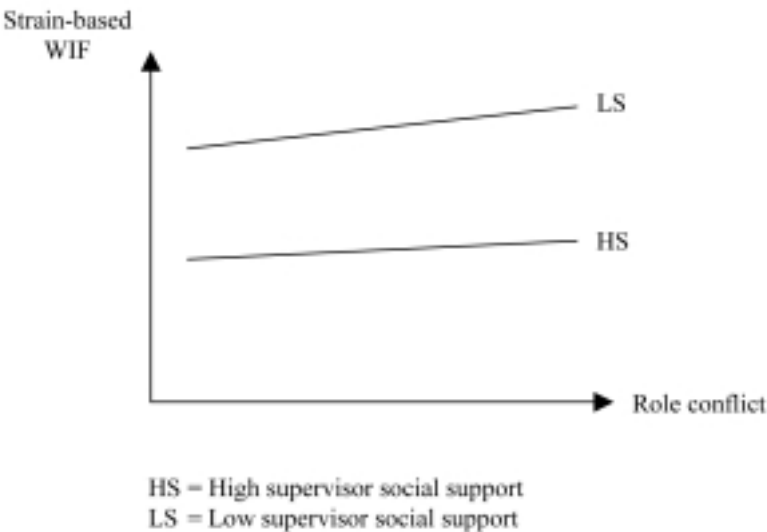
and WIF conflict (see Table III). It moderated the relationship between role conflict and strain-based WIF ( $\beta = -0.56, p < 0.05$ ) and behavior-based WIF ( $\beta = -0.73, p < 0.01$ ). No support was found for the moderating effects of coworker support, as predicted by Hypothesis 5b.

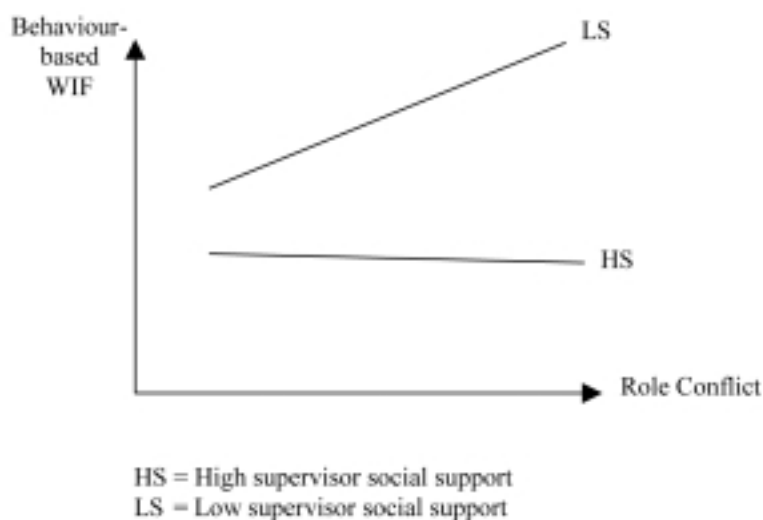
To facilitate interpretation of the significant moderators, plots of these relationships are presented in Figures 2-4. As depicted in Figure 2, respondents with high levels of domestic support experienced higher levels of time-based FIW conflict, regardless of levels of parental demands. In contrast, high levels of supervisor support reduced the effects of role conflict on strain-based (see Figure 3) and behavior-based (see Figure 4) WIF conflict.

**Figure 2.**  
Plot of the moderating  
effects of domestic  
support and parental  
demands on time-based  
FIW conflict



**Figure 3.**  
Plot of the moderating  
effects of supervisor  
support and role conflict  
on strain-based WIF  
conflict





**Figure 4.**  
Plot of the moderating  
effect of supervisor and  
role conflict on behavior-  
based WIF conflict

## Discussion

In this study, we identified several family- and work-specific determinants of FIW and WIF conflict, respectively. Testing these across the three forms of conflict – time-, strain-, and behavior-based – we found that the family-specific variables were only effective in predicting time-based FIW conflict. Among the family-specific variables, only parental demands and hours spent on household work had a significant impact on FIW conflict. As a group, the work-specific variables had much stronger effects, and role conflict, role overload, and hours spent on paid work were especially influential in explaining both time- and strain-based forms of WIF conflict. The different predictive strengths of the determinants and the different patterns of effects across the three forms of FIW and WIF conflict indicate that these are distinct forms of work-family conflict. As hypothesized, we also found support for the differential effects of gender on work-family conflict. Despite the advances in equal employment opportunities for women, it seems that the stereotypes of female as primary caregiver for the family and the male as primary breadwinner still prevail. Women were associated with greater levels of FIW conflict, and men experienced greater WIF conflict.

Three of the proposed support variables were involved in significant interactions. As a block, the interactions involving spouse support explained a significant amount of incremental variance in strain- and behavior-based FIW conflict. However, none of the individual interaction terms was significant. In contrast, three interactions involving domestic and supervisor support were unique predictors but the incremental increase in *R*-squared was not significant. Although interpretations of these should be made with caution (Cohen and Cohen, 1983), we report the results because the hypotheses were based on a strong theoretical rationale (see Bobko (1995), for a discussion of



interpreting these individual coefficients). The moderating effect of domestic support was in the opposite direction hypothesized. According to our findings, when parental demands are low, employees who have high levels of domestic support experience more time-based FIW than those who have low levels of domestic support. One possible explanation for this reverse-buffering effect is that those who do not have children, or those who have older children (i.e. parental demands are low), perceive their elderly relatives or their domestic helpers to be a burden rather than an asset. Having a domestic helper requires time for making the contractual agreement, preparing daily or weekly task lists, and even arranging for her holidays. Thus, instead of a source of support, they become a source of conflict (Kaufmann and Beehr, 1986). Consistent with past research (e.g. Thomas and Ganster, 1995) and our hypotheses, however, supervisor social support reduced the influence of role conflict on both strain- and behavior-based WIF conflict.

#### *Limitations and future directions*

As with all research, this study has limitations. Although our focus on employees within one organization allowed us to control for possible industry and organizational effects, it does curtail the generalizability of our findings. Furthermore, even though we included administrative, general grade and academic staff in our study, the university employees in our sample were relatively well-educated, further restricting the applicability of our results to other work groups. As with all field studies such as ours, the cross-sectional design and common method variance are potential limitations. To overcome these, we recommend that future researchers consider longitudinal studies that collect data from multiple sources. For example, measures of work-family conflict could be collected from various family members. The fact that all of our measures were originally developed in western countries could also influence our findings. In particular, the strong correlations for cross-domain relationships (i.e. family-domain variables correlated with WIF conflict and work-domain variables correlated with FIW conflict) may be due to the fact that our sample was Chinese. Perhaps the borders between work and family are less distinct for Chinese populations. To address these issues, we recommend that future researchers develop indigenous measures of work-family conflict or conduct cross-cultural studies in which measurement equivalence is established and cross-cultural differences are tested.

Perhaps the major implication of our findings for future researchers is that work-family conflict is a multi-dimensional and bi-directional construct. Although our proposed determinants were influential in explaining time-based FIW and WIF conflict and strain-based WIF, they did not explain very much variance in the other forms of work-family conflict. In contrast with Greenhaus and Beutell (1985), who argued that the various forms of work-family conflict may share similar antecedents, our findings suggest otherwise. Therefore, we encourage future researchers to consider other determinants that might be unique to each of the six dimensions of work-family conflict. A first step in this

direction would be to consider various psychosocial variables in the family domain. Another research avenue would be to consider the direct influences of support on work-family conflict. Also, based on our surprising results involving domestic support, we encourage future researchers to consider the effects of family structure on work-family conflict.

### *Managerial implications*

The employer-employee relationship is an evolving one, with both parties recognizing the growing importance of the quality of work and family lives. In so far as these two domains are interconnected and possibly reciprocal (e.g. Greenhaus and Parasuraman, 1986; Near *et al.*, 1980), organizations should attend to both. To help alleviate family interference with work, many western organizations, including several universities, have adopted various family-friendly policies such as flexi-time and child-care facilities (Wilson, 1995). Such practices in Hong Kong, however, are still in their infancy (Ng and Chiu, 1997). With increasing numbers of women entering the workforce and the correspondingly larger numbers of dual-earner families, Hong Kong organizations would undoubtedly benefit from more family-friendly policies.

To reduce WIF conflict, organizations should focus on reducing role conflict and role overload. It is essential that employers provide employees with the resources needed to meet the demands of the job. In addition, family-supportive programs such as child-care facilities and flexible schedules can help employees balance the competing demands of work and family. Our findings also highlight the important influence of the supervisor, with supportive supervisors helping to alleviate the influence of role conflict on WIF conflict. With Hong Kong's relatively greater power distance (Hofstede, 1980), organizations may need to train and encourage supervisors to provide more instrumental and emotional support. A possible alternative is for organizations to introduce a mentoring program, so that employees get needed support from a mentor rather than from an immediate supervisor.

### **Conclusion**

Employing organizations and families are continuing to evolve, and balancing these two domains has become an increasingly important challenge for human resource professionals. In this study, we have extended the study of work-family conflict to consider its bi-directional nature and multi-dimensional forms. Although we have found strong support for the direct and indirect domain-specific determinants of some forms of work-family conflict, it is clear that further investigations involving different sets of determinants for various dimensions of work-family conflict are needed. By using a non-western sample to test our hypotheses, we have also opened a door to the consideration of cultural influences on work-family conflict. In particular, our findings with respect to gender suggest that cultural influences may play an important role in this process. To the extent that work and family are interconnected,

maintaining a harmonious relationship between the two will benefit both individuals and organizations.

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