

Work/Family Demands, Work Flexibility, Work/Family Conflict, and Their Consequences at Work: A National Probability Sample in Taiwan

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The aim of this research was to explore relations between work/family demands, work flexibility, work/family conflict, and work-related outcomes in the cultural context of Chinese society, using a national probability sample. For Taiwanese employees, work demands were positively related to work/family conflict, whereas both work and family demands were positively related to family/work conflict. Work/family conflict was negatively related to job satisfaction and family/work conflict to organizational commitment. More importantly, the authors found that organizational policies and practices such as work flexibility could alleviate feelings of work interfering with family, further enhancing job

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satisfaction and organizational commitment. It is recommended that various family-friendly company policies be reformulated taking into account core cultural values such as individualism-collectivism.

Keywords: work/family conflict (WFC/FWC), work demands, family demands, work flexibility

The potential impact that work and family issues have on employees, family members, and organizations has caused a rising interest among researchers based in the developed Western countries. For instance, it has been found that the more time a person spends on the job, the more conflict there is between work and family (Bruck, Allen, & Spector, 2002). It is also argued that work and family issues are at least as important to organizational functioning as family functioning (Barnett, 1998). Much of the research on these issues has been from the occupational stress perspective, focusing on stressors such as work/family conflict and its effects on strains and well-being both at work and at home. A clear connection between work and family stressors and employee strain has now been established (e.g., Allen, Herst, Bruck & Sutton, 2000). Despite the rather large literature concerning work- and family-related concepts, the vast majority of studies have been done in the United States and other Western countries. Nevertheless, a major limitation in this literature is its decidedly Western focus.

Elsewhere, work and family issues are only beginning to gain attention in developing societies such as Taiwan, the Republic of China. Taiwan in recent decades has undergone fundamental transformations of industrial structures from labor-intensive to high-tech, as well as rapid social modernization in both work and lifestyles (Lu, Cooper, Kao, & Zhou, 2003; Siu, Spector, Cooper, Lu, & Yu, 2002). As one of the Asian Tigers, Taiwan has attracted a vast number of multinational companies to make investments, and Taipei, the capitol city, is one of the well-established headquarters for business in East Asia. Consequently, Taiwanese employees are becoming more than ever exposed to stressful Western and industrialized work situations. Further, with the rising proportion of females in the workforce, more and more Taiwanese people are now caught between the demands of work and family (Hsu, Chou, & Wu, 2001; Lu, Huang, & Kao, 2005), especially as family life is traditionally highly valued in a Chinese society (Hsu, 1985; Lee, 1988). As most work/family research has been conducted in North America and Europe, we cannot be sure that these Western findings will generalize to Chinese people who have rather different cultural traditions, societal institutions, and family structures. Thus, in order to establish generalizability of aforementioned Western findings, the thrust of the present study was to use a national probability sample of cultural Chinese in Taiwan to systematically examine antecedents and consequences of work/family con-

flict. A national representative sample is advantageous in ruling out various participants biases, allowing us to draw strong conclusions. Such a design is nonexistent in the field of work and family issues, not to mention with non-Western populations.

WORK/FAMILY CONFLICT: A STRESS PERSPECTIVE

Work/family conflict is by far the most popular work/family construct being studied within the occupational stress paradigm. It is defined as “a form of interrole conflict in which the role pressures from the work and family domains are mutually incompatible in some respects” (Greenhaus & Beutell, 1985, p.77). More recently, researchers have begun to recognize the duality of work/family conflict by considering both directions: work interference with family and family interference with work (Carlson, Kacmar, & Williams, 2000; Frone, Russell, & Cooper, 1992; Frone, 2003), and it has been asserted that both forms of work/family conflict need to be examined.

In the present study, we conceptualized work/family conflict (WFC) as conflict due to work interfering with family, and family/work conflict (FWC) as conflict due to family interfering with work. Both WFC and FWC are interrole conflicts within the work/family interface, the distinction lies in the direction or the cause and effect of the conflict. The present study focused on Chinese experiences of work/family conflict of both directions.

ANTECEDENTS OF WFC/FWC

So conceptualized, both forms of WFC result from work and family responsibilities that make both emotional and physical demands and compete with each other for limited personal resources. To fully understand the impact of WFC and FWC on employees, antecedents in work and family domains need to be examined simultaneously.

Work Demands

One of the major causes of work and family stress has to do with individuals not having sufficient time to dedicate to both domains (Greenhaus & Beutell, 1985). Several studies have found that working hours are positively related to WFC, although these relations are generally weak (Bruck et al., 2002; Spector et al., 2004; Yang, Chen, Choi, & Zhou, 2000). Working overtime and shift work are also related to WFC (Byron, 2005). It seems that

working hours and quantitative workload are important indicators of work demands and may be antecedents of WFC. Past research has shown that domain-specific antecedents were related to different directions of WFC (Adams, King, & King, 1996; Frone, Yardley, & Markel, 1997; Thomas & Ganster, 1995); therefore, working hours and workload can also be expected as antecedents of FWC. We thus hypothesized that work demands would be positively related to WFC and FWC (Hypothesis 1). However, no consistent *direct* relation of work demands with strains have been found (Major et al., 2002; Sparks, Cooper, Fried, & Shirom, 1997); we thus did not hypothesize a direct relation between work demands and consequence variables.

Family Demands

Family demands mainly involve caring and providing for children of married employees. Number of dependent children is an objective indicator of the level of family demands (Rothausen, 1999). For example, past research has shown that married employees experience higher FWC than their single counterparts, and parents experienced higher FWC than nonparents (Herman & Gyllstrom, 1977). Furthermore, parents with young children experience higher FWC than those with grown children (Pleck et al., 1980; Beutell & Greenhaus, 1980).

Household maintenance is another aspect of family responsibilities, especially salient in societies with high rates of female employment and dual career families. In a survey of Taiwanese working women, "having too many household chores to do" topped the list of various role stressors (Fong, 1992). In a marital alliance, and partly as a result of societal progression toward gender equality in all realms of life, more and more is now expected of husbands in the sharing of responsibilities for family maintenance. Keith and Schafer (1980) noted that husbands' working hours (less time allowance for home care) was positively related to wives' FWC. Similarly, husbands of female managers or professionals experienced higher FWC (Greenhaus & Kopelman, 1981), presumably because these women devoted more time to their careers, thus forcing their spouses to share more home care responsibilities.

As a whole, existing research has established connections between family demands (e.g., number of dependent children and working spouses) and FWC. However, no consistent *direct* connection has been established between family demands and strains (Major, Klein, & Ehrhart, 2002; Noor, 1999). We thus hypothesized that family demands would be positively related to WFC and FWC (Hypothesis 2). Again, no direct relation between family demands and consequence variables was expected.

Work Resources

From the occupational stress perspective, identifying and eliminating stressors are important, whereas identifying and cultivating resources may be vital for well-being. In fact, companies in the West have recently been developing so-called family-friendly policies and practices in order to alleviate tensions between these two central life domains. However, it is clear from research in human resource management that with the exception of a few universally valid best practices, a contingent approach is necessary to address varying needs of the employees. Even within the United States, for example, flextime has been found to be useful to most employees, but benefits such as childcare only appeal to a small subset (e.g., Allen, 2001; Thomas & Ganster, 1995).

We expect that childcare centers may be less relevant in the Chinese context where the support of extended families is still available (Lu, 2006) and relatively inexpensive paid help is accessible. Instead, providing flexibility at work, such as giving workers autonomy in deciding when to start and finish work everyday and the freedom to take brief leaves to attend to family matters, may be more practical and useful for Chinese employees for two reasons. First, flexibility at work implies autonomy and personal control over one's work schedule and routine, which has been shown to be universally beneficial for employees (e.g., Karasek, 1979) and particularly for Chinese workers who normally have very few opportunities to exercise control at work (Lu, Wu, & Cooper, 1999). Second, allowance for flexibility at work is likely to be perceived by employees as care and support from management, especially direct supervisors. Such gestures of good will are consistent with a core Chinese cultural value: "interpersonal benevolence" (Chinese Culture Connection, 1987). Research has shown that the endorsement of such "human-heartedness" is beneficial for well-being (Lu, Gilmour, & Kao, 2001). We thus hypothesized that work flexibility would be negatively related to WFC, FWC and work-related outcomes (Hypothesis 3).

CONSEQUENCES OF WFC AND FWC

Research on WFC has found that this variable influences a variety of outcomes, including psychological well-being—depression, marital satisfaction, and life satisfaction (Greenhaus & Beutell, 1985; Gutek, Searle, & Klepa, 1991; Voydanoff, 1988), job satisfaction, organizational commitment, burnout, and turnover (Frone et al., 1992; Greenhaus, 1988; Pleck et al., 1980). For instance, Major et al. (2002) found that work interference with family was related to depression and somatic health symptoms. In a more

recent meta-analysis synthesizing research published between 1977 and 1998, Allen et al. (2000) linked WFC to three categories of outcomes: work-related (e.g., job satisfaction), nonwork-related (e.g., life satisfaction), and stress-related (e.g., depression).

Various family related stressors have been linked to strains, too. For example, Vinokur, Pierce, and Buck (1999) found that measures of family stress (conflict among family members) and of family distress (strength of negative emotional reactions to family members) were related to depressive symptoms for American working women. Stress due to parental roles was related to suppressed happiness (Lu & Lin, 1998) and inflated psychological symptoms for Chinese workers (Lu, 2004). In the present study, we focused on work-related consequences—job satisfaction and organizational commitment—as outcomes of WFC and FWC. Specifically, we hypothesized that WFC and FWC would be negatively related to job satisfaction and organizational commitment (Hypothesis 4).

WFC and FWC in a Cultural Context

The above literature review on work and family issues is largely based on studies conducted in the developed West. As pointed out by Spector et al. (2004), such countries share a number of important characteristics in terms of economic development, family structure, and perhaps most importantly, cultural individualism as opposed to collectivism. Although the negative effects of WFC and FWC on individual well-being (e.g., decreased job satisfaction and life satisfaction) and organizational performance (e.g., decreased organizational commitment) now seem to have been clearly demonstrated, the generic framework: work/family demands → WFC/FWC → work/family consequences still needs to be tested systematically in non-Western developing countries, ideally with large representative samples. Spector et al. (2004) have attempted an extensive review of the limited number of work/family studies outside of individualist countries, mostly in Asia, noting that most of these studies focused on a rather small range of variables with potentially biased small and convenient samples. For instance, in Hong Kong, Japan, and Singapore, researchers have generally found a nonsignificant relationship between WFC and strains (e.g., Aryee, Luk, Leung, & Lo, 1999); family demands were found to be significantly related to FWC, but FWC was not linked to strains (Matsui, Ohsawa & Onglatco, 1995). Such inconsistencies in research results between Western and Asian countries need to be clarified adopting more rigorous methodology (for instance ruling out sample biases) and using more comprehensive research frameworks (for instance including demands, conflict, and consequences in both work and family domains).

Yang et al. (2000) suggested that Americans and Chinese may view work and family differently, due in large part to differences in their individualism/collectivism values. More recently, Spector et al. (2004) analyzed data collected for a large scale international collaborative project on work stress. They demonstrated that Anglos manifested a stronger positive relationship between work hours and work/family stressors than Chinese and Latinos, although in all three samples work/family stressors were related to decreased job satisfaction and reduced psychological health.

Within a much broader theoretical framework, Lu, Gilmour, Kao, and Huang (2006) examined links between both work and family demands with WFC and FWC, as well as negative effects of WFC/FWC on individual well-being, contrasting Taiwan (collectivist) with the United Kingdom (individualist). For both Chinese and British individuals, work and family demands were related to WFC and FWC; WFC was further related to job satisfaction. Compared to the British, the Chinese worked longer hours, reported greater feelings of WFC and FWC, and lower job satisfaction. In agreement with Yang et al.'s proposition (2000), the division between work and family realms seemed less rigid for the Chinese, allowing more spillover across the two. For instance, family demands were directly related to job satisfaction for the Chinese but not the British. The zero-order correlation between job satisfaction and family satisfaction was stronger for the Chinese ($r = .30$) than for the British ($r = .19$).

Synthesizing these few cross-cultural studies on the work/family issues, an emerging pattern seems to indicate that both work and family demands are important antecedents of WFC and FWC, though they may bestow greater impact on employees in an individualist society than in a collectivist one. Unfortunately, the limited number of studies conducted in collectivist societies and their potential methodological pitfalls (e.g., small sample sizes, limited research variables) prevent us from drawing any stronger conclusions at the moment. It is therefore a pressing need to clearly demonstrate negative effects of work and family demands on WFC and FWC, as well as those of WFC and FWC on various outcome variables in large representative samples in collectivist societies. Such empirical evidence can then serve to raise awareness of individuals, organizations, and the wider society, and to move toward better achieving work/family balance in transitional societies, such as Taiwan. Our research framework is presented in Figure 1.

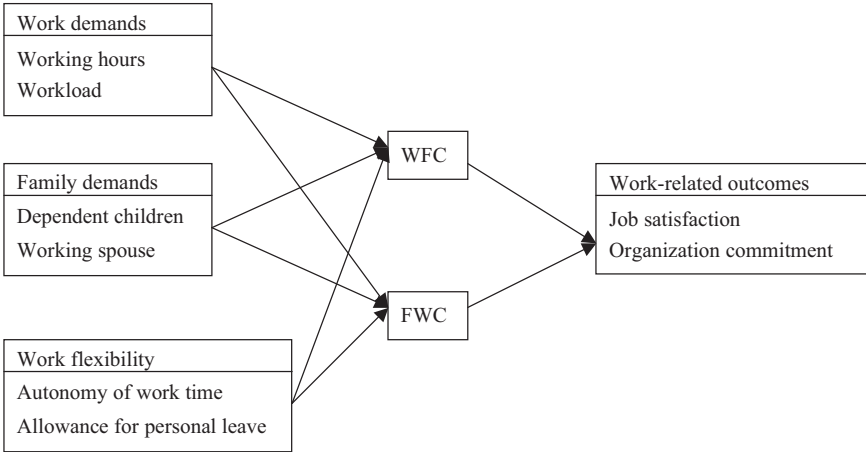


Figure 1. The research framework.

METHOD

Data and Participants

Data for the present article came from the 2005 “Taiwan Social Change Survey” (TSCS), which is the largest nationwide social survey in Taiwan (also incorporated into the International Social Survey Program, ISSP, which involves 40 countries in the world). The TSCS series is operated by the Academia Sinica Taiwan, which has conducted 37 surveys as of 2006. With more than 80000 interviews over the past 22 years, the TSCS has become the largest survey series among all of the general social surveys in the world (Smith, Kim, Koch, & Park, 2005, p. 74). Highly reputed for its methodological rigor (e.g., nationwide 3-stage stratified PPS sampling using household registration data, well-trained interviewers making home visits, strict supervision, postinterview verification and data checking), its high quality database is widely used for academic research and cross-cultural comparisons under the banner of the ISSP. The 2005 survey had a theme of “work orientation” with core items forming the ISSP module that year. The response rate for the 2005 survey was 45.7%. In the present article, we selected for analysis only those respondents holding full-time jobs, to maximize the potential effects of work/family conflict. Consequently, the current national sample was composed of 1122 respondents. The entire sample was 57.0% male and 43.0% female, with a mean age of 40 ($SD = 10.94$, range = 20–77), and mean job tenure of 8.54 years ($SD = 8.97$). Mean years of formal education was 12.70 ($SD = 3.63$). Over a quarter of the respondents (29.1%) were managers at various levels. An almost equal proportion of

respondents worked for small businesses (fewer than 10 employees, 26.9%) and large corporations (more than 250 employees, 26.8%). The majority (70.1%) was married, having on average 1.06 ($SD = 1.23$) dependent children aged under 18 years of age. (Numbers of children per family were not obtained in the survey.) Among the respondents, 40.4% had a working spouse.

Measures

Questionnaires were administered in face-to-face home interviews by trained interviewers. The first author was a member of the TSCS research group, but the present article is essentially based on a secondary data analysis. The data analyzed in the present article mainly came from the following parts of the survey.

Work Demands

Two areas were surveyed: (1) working hours, in which respondents were asked how many hours they worked in a typical week; and (2) workload, in which four statements were listed describing aspects of working conditions—hard physical work, stressful work, dangerous work—and coming home from work exhausted (presumably due to physical and psychological exertion at work). Five-point rating scales were used to measure how often these conditions applied to participants' work, 1 (*always*) to 5 (*never*). After reverse scoring, a higher score represented high levels of workload. The internal consistency of this 4-item scale was .60 in the current sample. We concede that this level of reliability is less than desirable; however, experts of psychometrics regard the range .50 – .90 to be acceptable, especially for scales with fewer items (Nunnally, 1978; Royle, 1991). In the present study, additional analysis revealed that deleting any single item did not improve reliability.

Work Flexibility

The presence of two family friendly company policies regarding work time arrangement was surveyed: (1) autonomy in deciding *work time* phrased as “the times you start and finish work” was addressed. Participants chose from three descriptions: cannot change (coded 1), within certain limits (coded 2), and entirely free to decide (coded 3), representing ascending degrees of

autonomy or flexibility in work time. (2) Allowance for *personal leave*, phrased as “how difficult would it be for you to take an hour or two off during working hours to take care of personal or family matters” was questioned. Participants chose from four descriptions: not difficult at all (coded 1), not too difficult (coded 2), somewhat difficult (coded 3), and very difficult (coded 4). After reverse scoring, a higher score represented a higher degree of autonomy or flexibility in taking personal leave during work time.

Family Demands

The survey queried (1) number of dependent children living in the home (under age 18), and (2) whether there was a working spouse, 0 (*no*) or 1 (*working*). Thus, a high score represented a high level of family demands in terms of having to contribute more to home care due to having more dependent children and/or a working spouse.

WFC and FWC

To correspond to our dual-direction conceptualization of work/family conflict, two separate items were used concerning participants’ feelings that “the demands of your job interfere with your family life” (WFC) and “the demands of your family life interfere with your job” (FWC). Five-point rating scales were used to measure how often participants had such feelings, 1 (*always*) to 5 (*never*), with high scores representing high levels of WFC or FWC after reverse scoring. It is regrettable that the TSCS research group did not adopt established multi-item measures of WFC/FWC (e.g., Carlson et al., 2000), mainly due to space constraints in the module. Fortunately, previous research has shown that a global rating scale is indicative as a summation of facets in cases of job satisfaction (Scarpello & Campbell, 1983; Wanous, Reichers, & Hudy, 1997) and perceived dyadic conflict (Hunsley, Pinsent, Lefebvre, James-Tanner, & Vito, 1995; Kao & Lu, 2006). As our WFC and FWC were conceptualized as personal evaluations of interference or perceived conflicts between work and family domains, global measures should have been able to tap the core of these constructs as demonstrated by the aforementioned research.

Consequences at Work

Also in the survey, (1) participants were asked to rate their global job satisfaction on the question: “How satisfied are you in your job?” 1 (*com-*

pletely dissatisfied) to 7 (completely satisfied). (2) Organizational commitment was measured with three items based on a 3-component model tapping affective, normative, and continuance commitment (Meyer & Allen, 2001). Five-point rating scales were used, 1 (*strongly disagree*) to 5 (*strongly agree*), with high scores representing high levels of organizational commitment. The internal consistency of this 3-item scale was .67 in the current sample. As with the measure of workload, above, due caution should be advised in interpreting relevant results.

In addition, information on gender [coded 1 (*male*), 2 (*female*)], age, marital status [coded 1 (*married*), 2 (*never married*)], education attainment, income, tenure on the job, rank [coded 1 (*managers*), 2 (*employees*)], and size of organization were recorded.

RESULTS

Hypothesis Testing

Pearson correlations among the main research variables were calculated to provide a preliminary test of Hypotheses 1 to 4. As can be seen in Table 1, in agreement with Hypothesis 1, working hours and workload were positively correlated with WFC and FWC. Having dependent children was positively correlated with WFC and FWC, though having a working spouse was not related to either WFC or FWC. Hence, Hypothesis 2 was partially supported. Allowance for personal leave at work was negatively correlated with WFC, but autonomy in deciding work time was positively correlated with FWC. Hypothesis 3 was thus tentatively supported, though the direction of effects needs further clarification. As for Hypothesis 4, both WFC and FWC were negatively correlated with job satisfaction and organizational commitment. The overall picture is that work demands and some of the family demands were related to both WFC and FWC, while work flexibility was related to WFC or FWC. Finally, WFC and FWC were related to work outcomes.

Note that in the present study, WFC and FWC had a strong positive correlation of .68, which might be attributed to content confound introduced by single-item measures. To control for potential overlap and provide “clean” effects involving WFC and FWC, we performed a further series of partial correlation analyses. Specifically, WFC was controlled while various variables were correlated with FWC, and vice versa. Results revealed a clearer pattern: (1) working hours and workload were positively correlated with WFC but not FWC; (2) having dependent children was positively correlated with FWC but not WFC; (3) both autonomy in deciding work time and

Table 1. Zero-Order Correlations Among Main Research Variables, and Partial Correlations Involving WFC and FWC

Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Sex	—	—	1																
2. Age	40.00	14.94	-.12***	1															
3. Education	12.70	3.63	.03	-.39***	1														
4. Marital status	—	—	.03	-.61***	.23***	1													
5. Income	4.84	3.36	-.22**	.16***	.31***	-.16***	1												
6. Rank	—	—	.13***	-.10***	-.14***	.11***	-.36***	1											
7. Seniority	8.54	8.97	-.09**	.59***	-.18***	-.34***	.19***	-.12***	1										
8. Working hours	48.96	14.11	-.11***	.12***	-.17***	-.08**	.09**	-.08	.02	1									
9. Workload	10.83	2.93	-.11***	-.07*	-.06*	-.02	-.01	-.03	-.07*	.16***	1								
10. Dependent children	1.00	1.04	-.01	.06	-.03	-.40***	.08**	-.07*	.06*	.02	.10***	1							
11. Working spouse	—	—	.36***	-.26***	.22***	.05	-.05	-.02	-.10**	-.14***	-.10***	.05	1						
12. Autonomy (work time)	1.71	0.79	-.13***	.19***	-.10***	-.11***	.18***	-.22***	.16***	.21***	-.06	-.01	-.10***	1					
13. Personal leave	2.90	1.04	-.10**	.11***	-.09**	-.09**	.11***	-.13***	.12***	.05	-.21***	.01	-.03	.41***	1				
14. WFC (controlling FWC)	2.01	0.96	-.04	-.00	.18***	-.10***	.20***	-.13***	-.00	.18***	.38***	.13***	.01	.04	—	1			
15. FWC (controlling WFC)	—	—	-.04	-.05	(.10**)	(.01)	(.16**)	(-.12**)	(-.02)	(.16**)	(.32**)	(-.03)	(.00)	(-.06)	(-.17**)	(1)	—	(-.20**)	(-.01)
16. Job satisfaction	1.72	0.80	-.04	.01	.12***	-.14***	.14***	-.11***	.01	.10***	.29***	.20***	.03	.09***	-.04	.63***	1		
17. Organizational commitment	—	—	(.00)	(-.08*)	(.09*)	(-.05)	(-.01)	(.02)	(-.05)	(-.05)	(.18**)	(.02)	(.18**)	(.11*)	(.08**)	—	(1)	(.02)	(-.08**)
16. Job satisfaction	5.02	1.02	-.06**	.07**	.08**	-.09**	.17***	-.12***	.16***	-.11***	-.24***	.05	-.02	.07**	.19***	-.21***	-.11***	1	
17. Organizational commitment	10.38	2.06	-.11***	.24***	-.01	-.18***	.21***	-.22***	.26***	.08***	-.11***	.04	-.07	.27***	.27***	-.06*	-.06*	.46***	1

Note. Sex: 1 = male, 2 = female; Marital status: 1 = married, 2 = never married; Rank: 1 = managers, 2 = employees; Working spouse: 0 = not working, 1 = working. Partial correlations controlling for WFC or FWC as appropriate are presented in parentheses.
 * $p < .05$. ** $p < .01$. *** $p < .001$.

allowance for personal leave at work were positively correlated with FWC, while allowance for personal leave at work also negatively correlated with WFC; (4) WFC retained its negative correlation with job satisfaction, while FWC retained its negative correlation with organizational commitment. These partial correlations are incorporated into Table 1, showing in brackets.

Overall, it seems that domain specificity effects were salient, that is, work demands were related to WFC, whereas family demands were related to FWC. Work flexibility may alleviate feelings of work interfering with family, although feelings in the reverse direction may be heightened.

While correlations indicated potential tendencies of significant effects, more stringent tests of hypotheses were conducted using hierarchical multiple regression techniques. By regressing WFC and FWC on work demands, family demands, and work flexibility in sequence, personal background variables (i.e., marital status, education, income, rank) were entered into the equation first to control for their possible contributions. These demographic variables significantly correlated with WFC and FWC (see Table 1). For parsimony, the analysis was repeated taking out insignificant variables until all variables remaining in the final equation were significant predictors. By regressing work outcomes on WFC and FWC, the first seven personal background variables listed in Table 1 were entered at the first step, followed

Table 2. Predicting WFC, FWC, and Work-Related Outcomes: Final Regression Models

	Predictors	β	ΔR^2	R^2	$F(df)$
WFC	+Education	.15***	.06***	.06	71.42 (4, 1063)***
	Income	.17***			
	+Workload	.38***	.15***	.21	
	+Personal leave	-.06*	.00*	.21	
FWC	+Education	.16***	.02***	.01	45.84 (4, 1107)***
	+Workload	.29***	.09***	.10	
	+Dependent children	.16***	.02***	.12	
	+Autonomy (work time)	.13***	.02***	.14	
Job satisfaction	+Income	.15***	.05***	.04	26.89 (6, 1058)***
	Rank	-.07*			
	Seniority	.09*			
	+Workload	-.13***	.05***	.09	
	+Personal leave	.10***	.01***	.10	
	+WFC	-.18***	.03***	.13	
	+FWC	-.10*	.12***	.12	
Organizational commitment	+Marital status	-.10*			34.81 (7, 1000)***
	Income	.10*			
	Rank	-.11***			
	Seniority	.15***			
	+Autonomy (work time)	.16***	.06***	.18	
	Personal leave	.16***			
	+FWC	-.11***	.01***	.19	

Note. + indicates a new step in hierarchical regression. β and F are taken from the final equation.

* $p < .05$. *** $p < .001$.

by work demands, family demands, and work flexibility in sequence. The same procedure for streamlining the models was followed.

As presented in Table 2, higher education, income, and workload were associated with heightened feelings of WFC, while more allowance for personal leave at work was associated with lessened feelings of WFC. As for FWC, higher education, workload, more demands for caring for dependent children, and autonomy in deciding work time were all associated with heightened feelings of conflict. Hence, our Hypotheses 1, 2, and 3 were largely supported. Regarding work outcomes, WFC was negatively related to job satisfaction, whereas FWC was negatively related to organizational commitment. Hence, our Hypothesis 4 was partially supported.

Group Differences

To take advantage of our national representative sample, we explored potential differences in work/family issues across gender and marital status. The first series of *t* tests revealed that compared to females, males were older, more senior, earned more, worked longer hours, were under higher workload, perceived more autonomy in deciding work time, had more freedom in taking personal leave at work, reported higher job satisfaction, and had stronger organizational commitment. However, there were no differences in either WFC or FWC between the two genders. These results are presented in Table 3.

The second series of *t* tests revealed that compared to the never married employees, married workers were older, had fewer years of formal education, were more senior, earned more, worked longer hours, perceived more autonomy in deciding work time, had more freedom in taking personal leave at

Table 3. Gender Differences

	Males			Females			<i>df</i>	<i>t</i>
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>		
Age	639	41.11	10.98	483	38.54	10.72	1120	3.91***
Education	639	12.60	3.59	482	12.84	3.68	1119	-1.08
Income	615	5.48	3.85	471	4.01	2.34	1034	7.77***
Seniority	634	9.25	9.59	481	7.60	8.00	1102	3.13**
Working hours	634	50.36	14.49	482	47.11	13.39	1114	3.84***
Workload	635	11.10	3.02	481	10.46	2.77	1074	3.66***
Autonomy (work time)	636	1.80	.82	481	1.59	.73	1084	4.50***
Personal leave	634	2.99	1.03	474	2.78	1.05	1106	3.31**
WFC	635	2.04	1.01	480	1.97	.89	1113	1.19
FWC	635	1.75	.84	479	1.68	.73	1090	1.41
Job satisfaction	636	5.07	1.04	481	4.95	.99	1115	2.04*
Organizational commitment	589	10.58	2.00	459	10.12	2.10	1046	3.55***

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 4. Marital Status Differences

	Married			Never married			<i>df</i>	<i>t</i>
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>		
Age	786	44.35	9.23	336	29.83	7.27	794	28.17 ^{***}
Education	785	12.16	3.82	336	13.98	2.72	873	-9.04 ^{***}
Income	757	5.19	3.72	329	4.05	2.11	1012	6.40 ^{***}
Seniority	779	10.56	9.55	336	3.85	4.94	1077	15.39 ^{***}
Working hours	783	49.70	15.11	333	47.19	11.25	829	3.06 ^{**}
Workload	781	10.86	2.96	335	10.76	2.86	1114	.53
Autonomy (work time)	782	1.76	.83	335	1.58	.68	762	3.81 ^{***}
Personal leave	777	2.96	1.05	331	2.76	1.01	1106	2.93 ^{**}
WFC	780	2.07	.97	335	1.85	.92	1113	3.48 ^{**}
FWC	779	1.79	.80	335	1.55	.75	1112	4.65 ^{***}
Job satisfaction	782	5.08	1.03	335	4.88	.97	1115	2.87 ^{**}
Organizational commitment	723	10.63	2.05	325	9.82	1.96	1046	6.01 ^{***}

** $p < .01$. *** $p < .001$.

work, reported higher job satisfaction, and had stronger organizational commitment. Married workers reported both higher WFC and FWC. These results are presented in Table 4.

DISCUSSION

The crucial impact of work/family issues on the well-being of employees, their families, and their organizations has been recognized and responded to with a growing amount of research in Western countries. However, very little systematic research has been conducted in non-Western countries. The purpose of our study was to make the best use of a national probability sample to draw firm and generalizable conclusions through systematic examination of work/family demands, work resources as antecedents, and work outcomes as consequences of WFC/FWC. More importantly, we obtained these results in a collectivist Chinese culture in contrast to individualistic Western cultures where almost all existing research has been conducted. Our hypotheses were largely supported in our representative Chinese sample.

Specifically, we noted that work demands (workload) predicted WFC, FWC, and job satisfaction. This finding corroborates one previous study in Taiwan; Lu, Huang and Kao (2005) found that quantitative workload contributed to heightened feelings of WFC. However, objective working hours do not seem to be a vital antecedent of WFC, FWC, and work outcomes for Taiwanese workers. This is consistent with Spector et al.'s (2004) finding that working hours had a stronger impact on work/family stressors for Anglos than for Chinese and Latinos. The fact that the Taiwanese worked an average of 48.96 hours ($SD = 14.11$) per week, longer than the statutory 44 hours,

makes our findings rather intriguing. Traditionally, Taiwanese workers are expected to put job before family, and working long hours is a show of diligence, a very highly rated virtue. In reality, with fast rising cost of living in the developing Taiwanese society, working hard is now more than just a demonstration of traditional virtues, it is also a necessity for maintaining or improving living standards. Furthermore, persistent economic depression and widespread downsizing in recent years have forced many employees to “voluntarily” work overtime to sustain a satisfactory level of performance and to ensure job security. In fact, an increasing number of people are taking up two jobs in Taipei. Such “devotion” to work is usually tolerated by the family as a necessary evil, or even regarded as insurance for job security. However, as long working hours are the social norm for Chinese people, effects of overwork are more readily expressed through a pervasive negative impact of workload on work/family conflict and work morale.

We also found that family demands predicted FWC for the Chinese. However, only having dependent children, *not* having a working spouse, was a salient aspect of family demands. In Taiwan, over 40% of married women maintain a full-time job, mainly due to economic necessity (Executive Yuan, 2005). Having a working spouse may be too simplistic a measure for demands of home maintenance, as a previous study has found that sharing household chores was related to FWC (Lu et al., 2005). Thus, Western research showing that child care (Pleck et al., 1980; Beutell & Greenhaus, 1980) and home maintenance (Greenhaus & Kopelman, 1981) are important aspects of family life that interfere with work may apply to Chinese people as well, but more refined measures or indices of family demands may need to be developed.

More interestingly, we found that work resources, that is, flexibility, had a consistent protective effect for work outcomes, but an exacerbating effect for feelings that the family interfered with work. As we reasoned earlier, autonomy in deciding work time and allowance for brief leaves to attend personal and family matters may provide a sense of control for workers, and could also be interpreted as organizational or supervisory support. In the United States, flextime has been found to be useful for most employees (e.g., Allen, 2001; Thomas & Ganster, 1995), although no research in non-Western countries has looked into beneficial effects of work resources such as work flexibility. Our results thus have practical implications for management, especially in multinational companies. Some widely practiced policies in reducing work/family stress in Western societies may not be as effective or as necessary in a different culture. For example, in a culture with highly supportive extended families and readily available childcare, organizations may better focus on providing flexibility and enhancing autonomy at work. The two flexibility practices implicated in the present study are relatively easily and inexpensively implemented compared to providing on-site child-

care. Taiwanese workers may be further helped by reduction of long working hours, or better provision of work resources to relieve heavy workloads.

Finally, in the present study, WFC demonstrated a negative relationship with work satisfaction, whereas FWC demonstrated a negative relationship with organizational commitment. Hence, the Western research strategy of focusing on both directions of work/family conflict (Carlson et al., 2000; Frone et al., 1992; Frone, 2003) seems to work well in the Taiwanese context. In an earlier study with Taiwanese employees, researchers also noted that WFC and FWC were two discernable constructs that need to be considered simultaneously (Lu et al., 2005).

Overall, our results suggest that the main nexus of work/family demands, WFC/FWC, and consequences at work are applicable to Taiwanese workers. In other words, the general theoretical framework of Western work/family research can be applied to a large extent to the Chinese context. Our study is thus an initial endeavor in bridging the gap of knowledge in work/family issues in a collectivist cultural perspective, and our findings may be useful in informing effective organizational strategies for achieving work/family balance in such cultural context.

Although having a national probability sample and high quality data collection are rare in the field, the present study has certain limitations. First, the survey design was cross-sectional; thus, no causal conclusions are legitimate. For example, job satisfaction is often considered an outcome of work/family stressors, but it is possible that job satisfaction may act as a cause rather than effect. For instance, those who are satisfied with their jobs might tend to put more time and energy into work, to the detriment of family. Also, recently researchers have argued that WFC may be an outcome not a predictor of work variables, or the two may in fact have a reciprocal relationship (Demerouti, Bakker, & Bulters, 2004; Westman & Etzion, 2005).

Another limitation is that we only surveyed Chinese in Taiwan; thus, caution needs to be exercised in generalizing our conclusions to other Chinese societies, such as the People's Republic of China, which has its own political, economic, and social characteristics (Lu et al., 2003). Nevertheless, in terms of traditional collectivist values and family centered organization of social life, Taiwan is a good exemplar of the Chinese culture (Brindley, 1990).

Finally, the present study was essentially an exercise in secondary data analysis, which has inherent limitations. For instance, well-established and theory-based multi-item measures of workload, organizational commitment, and WFC/FWC should have been adopted. The relatively low reliability of measures for workload and organizational commitment as well as the use of single-item measures for job satisfaction and WFC/FWC may have hampered our systematic examination of the work/family issues, and due caution should

be exercised in interpreting results reported herein. Also, family related outcomes such as marital satisfaction and family well-being should have been included to broaden the research framework. These are opportunities for future research.

Despite these limitations, it is important to establish the existence of relationships among variables as a first stage in research. Future efforts should use a greater variety of methodologies to tease out exact mechanisms linking work/family demands and outcomes, including additional sources of data such as coworkers, supervisors, and family members. Conducting longitudinal studies to capture the direction of influence is also a pressing need.

Perhaps the more important implication of our study is that one cannot assume that Western findings will or will not generalize to culturally dissimilar societies. In the work/family area, organizations in collectivist societies need to develop new strategies to resolve work/family dilemmas taking into account cultural characteristics, distinct economic situations, social institutions, and family structures.

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