



# CROSS-CULTURAL DIFFERENCES ON WORK-TO-FAMILY CONFLICT AND ROLE SATISFACTION: A TAIWANESE-BRITISH COMPARISON

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*The aim of this research was to explore relations between work and family demands and resources, work-to-family conflict (WFC), and work and family outcomes in a cross-cultural comparative context involving Taiwanese and British employees. Two-hundred and sixty-four Taiwanese employees and 137 British employees were surveyed using structured questionnaires. For both Taiwanese and British employees, work and family demands were positively related to WFC, whereas work resources were negatively related to WFC. Furthermore, WFC was negatively related to family satisfaction. More importantly, we found that nation moderated relationships between work resources and WFC, WFC and work, and family satisfaction. Specifically, work resources had a stronger protective effect for Taiwanese than British in reducing WFC, whereas WFC had a stronger detrimental effect on role satisfaction for British than Taiwanese. It is recommended that both culture-general and culture-specific effects should be taken into consideration in designing future WFC research and family-friendly managerial practices. © 2010 Wiley Periodicals, Inc.*

*Keywords:* work-to-family conflict (WFC), work constraints, family responsibility, supervisory support, family help, work satisfaction, family satisfaction

**T**he potential impact that work and family issues have on employees, family members, and organizations has garnered rising interest among researchers based in 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 has also been argued that work and family issues are at least as important to organizational functioning as family functioning (Barnett,

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1998). A clear connection between work and family stressors and employee strain on the work/family interface has thus been established (e.g., Allen, Herst, Bruck, & Sutton, 2000; Byron, 2005). 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

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Western countries (Byron, 2005; Spector et al., 2004). Hence, 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. In recent decades, Taiwan has undergone a fundamental transformation from labor-intensive manufacturing to high-tech industries. Taiwanese employees are thus becoming more than ever exposed to stressful Western and industrialized work situations (Lu, Cooper, Kao, & Zhou, 2003). Further, with the rising proportion of females in the workforce from 37.65 percent in 1988 to 43.31 percent in 2008 (Directorate-General of Budget, 2008), and the great emphasis on family life (Hsu, 1985), more and more Taiwanese people are now caught between the demands of work and family (Hsu, Chou, & Wu, 2001; Lu, Huang, & Kao, 2005), especially considering that family life is traditionally and still highly valued

in a Chinese society (Hsu, 1985). Thus, to establish generalizability of the aforementioned Western findings, the present study used a cross-cultural design to compare cultural Chinese in Taiwan (collectivist, with larger power distance [PD]) against British (individualistic, with smaller PD) in their perceptions of antecedents and consequences of work-to-family conflict (WFC). Power distance describes the degree to which people in a country accept that power in institutions and organizations is distributed unequally. A cross-cultural design is an answer to the call

made by Poelmans, O'Driscoll, and Beham (2005) for more systematically investigating cultural differences to determine whether correlates of WFC are culture-specific or whether they cut across cultural boundaries. In addition to cross-cultural comparisons, the present study aimed to contribute to the work/family literature by examining both positive (resources) and negative (demands) antecedents of WFC and both work and family outcomes.

### **WFC: An Occupational Stress Perspective**

To date, much of the research on work and family issues has been conducted within the occupational stress perspective, focusing on work stressors as antecedents of work/family conflict and its effects on strains and well-being both at work and at home. Work/family conflict 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). The direction of conflict is particularly meaningful, because the potential antecedents of work-to-family conflict (WFC) are not necessarily the same as those of family-to-work conflict (FWC; Carlson, Kacmar, & Williams, 2000; Frone, 2003; Frone, Russell, & Cooper, 1992). Of the two, WFC may be especially critical. As Frone (2003) and a recent national survey of Taiwanese (Lu, Kao, Chang, Wu, & Cooper, 2008) revealed, individuals tend to experience more WFC than FWC. Thus, the present study focused specifically on WFC in comparing the results of two culturally dissimilar societies: Taiwan and the United Kingdom of Britain.

Furthermore, the focus on work stressors (e.g., workload, work hours) in existing WFC literature needs to be expanded. A recent meta-analytic review (Byron, 2005) that summarized findings from more than 60 published studies confirmed that both work and family demands, especially job stress and family stress, were consistently related to WFC. Work or family resources, however, were not included in the meta-analysis, indi-

cating that studies examining the effects of these “protective antecedents” are not as abundant as those looking at “negative antecedents” such as demands. We argue that resources are as important as demands in the work and family domains. Thus, in the current study, we expand the existing occupational stress perspective by examining both threats and protectors in the work and family domains in relation to WFC and well-being.

### **Antecedents of WFC: Work/Family Demands and Resources**

As mentioned, a clear connection between work and family stressors and employee strain has already been established (e.g., Allen et al., 2000; Byron, 2005). For instance, long working hours and heavy workloads are a direct precursor to WFC in the West (Frone, 2003) and in Taiwan (Lu et al., 2005, 2008), though such relations are usually modest. We propose that work constraints may partially explain such relations, though it has rarely been examined in WFC research. As Spector and Jex (1998) defined, any events or situations at work that prevent employees from transforming efforts and capabilities to high performance can be considered work constraints. Work constraints have been found to hamper performance and increase feelings of frustration (Peters & O’Connor, 1980), job dissatisfaction, and turnover intention (Carsten & Spector, 1987; Villanova & Roman, 1993). It is conceivable that work constraints may force employees to work harder and longer to make up for an insufficient supply of work resources such as equipment, consumables, information, training, and manpower, thus heightening WFC.

Parallel in the family domain, family demands or responsibilities are also identified as an antecedent of WFC (Frone et al., 1992; Lu et al., 2005, 2008). Most studies have used objective measures (e.g., counting number of young children, recording spouses’ employment status) to index family responsibility. One problem with this approach, however, is that the mere presence of a young child at home may not necessarily be demanding if sufficient help is available for child care. In

other words, only those “demands” that the individual perceives will be related to WFC. We thus attempted to capture the psychological reality of family demands by adopting a generic measure of perceived family responsibility, which has not often been done in WFC research. We thus hypothesize:

*Hypothesis 1: Work constraints and perceived family responsibility would be positively related to WFC.*

As argued, identifying and eliminating stressors are important, whereas identifying and cultivating resources may also be vital for well-being. Warren and Johnson (1995) identified three types of work resources aimed at promoting work/family balance: family-oriented benefits, family-friendly organization culture, and supportive supervisor practices. While Western scholars are cautioning that a contingent approach is necessary to address varying employee needs (Allen, 2001; Thomas & Ganster, 1995), very few Taiwanese companies actually provide family-oriented benefits at all (Lu et al., 2008). Lu et al. (2008) did, however, find that discretionary supervisory supportive practices such as granting flexibility for subordinates to handle family duties at work (e.g., taking a brief leave of absence) could, indeed, alleviate feelings of WFC. Results as such suggest that managers may need to pay more attention to cultivating a family-supportive work atmosphere and supervisory support.

Indeed, Kamerman and Kahn (1987) confirmed that support at work is beneficial for both employees’ work performance and integrating work-family roles. Thomas and Ganster (1995) found that supervisory support could alleviate work/family conflict. Goff, Mount, and Jamison (1990) noted that for working parents with young children, supervisory support in terms of listening to and discussing family needs could effectively reduce feelings of work/family conflict.

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*Evidence seems unequivocal in Western societies; nonetheless, only until recently, Taiwanese studies have found that WFC was negatively related to job satisfaction (Lu et al., 2008) and family satisfaction (Lu et al., 2005), respectively. We could not, however, find a study of a Taiwanese population that incorporated both work- and non-work-related outcomes. In the present study, we thus examine both work and family consequences—work satisfaction and family satisfaction—as outcomes of WFC.*

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Beyond Lu et al.'s (2008) study involving discretionary supervisory supportive practices, effects of psychological support from supervisors have not been examined for Taiwanese employees in the work-family context. We thus tested the protective effects of supervisors' emotional support as documented in the Western literature in this cross-cultural comparison study.

In the family domain, support and help from family members have been found to alleviate individual role stress and enhance well-being. For instance, spousal help with child care and household maintenance reduced working women's distress and enhanced their well-being (Beutell & Greenhaus, 1983; Noor, 1999). For Taiwanese young parents, help from extended family in child care and home maintenance has beneficial effects on adjustment and well-being (Lu, 2006).

We thus hypothesize:

*Hypothesis 2: Supervisory support and family help would be negatively related to WFC.*

### Consequences of WFC

In a meta-analysis synthesizing research published between 1977 and 1998, Allen et al. (2000) linked WFC to three categories of outcomes: 1) work-related (e.g., job satisfaction), 2) non-work-related (e.g., life satisfaction), and 3) stress-related (e.g., depression). Ford, Heinen, and Langkamer (2007) came to similar conclusions in their more recent meta-analysis of the WFC literature. Again, evidence seems unequivocal in Western societies; nonetheless, only until recently, Taiwanese studies have found that WFC was negatively related to job

satisfaction (Lu et al., 2008) and family satisfaction (Lu et al., 2005), respectively. We could not, however, find a study of a Taiwanese population that incorporated both work- and non-work-related outcomes. In the present study, we thus examine both work and family consequences—work satisfaction and family satisfaction—as outcomes of WFC and hypothesize:

*Hypothesis 3: WFC will be negatively related to both work satisfaction and family satisfaction.*

### WFC in a Cultural Context

The preceding literature review on work and family issues is largely based on studies conducted in the developed West. As Spector et al. (2004) pointed out, Western countries share a number of important characteristics in terms of economic development, family structure, and cultural values such as individualism (I) as opposed to collectivism (C), and small PD as opposed to large PD.

Spector et al. (2004) attempted an extensive review of the limited number of work/family studies outside 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 signs of strain within an individual (e.g., Aryee, Luk, Leung, & Lo, 1999). Although a few more studies have since been conducted in Taiwan since the Spector et al. (2004) study was published (e.g., Lu et al., 2005, 2008), they focused mostly on the nexus of work/family demands  $\Rightarrow$  WFC  $\Rightarrow$  work/family consequences. The negative effects of WFC on individual well-being (e.g., decreased job satisfaction and life satisfaction) and organizational performance (e.g., decreased organizational commitment) have been confirmed. But the potential beneficial effects of work resources such as supervisory support and family resources such as family help still need to be tested systematically in non-Western, developing countries. In particular, the issue of culture-specificity

or culture-universality needs to be addressed.

Systematic studies on WFC outside the developed West are few; cross-cultural comparisons are even more rare. These studies adopted individualism/collectivism (I/C) as a general explanatory framework for cultural differences and found that nation (operationalized to represent I/C) moderated the relationship of work/family demands—WFC (Lu, Gilmour, Kao, & Huang, 2006; Spector et al., 2004, 2007; Yang, Chen, Choi, & Zhou, 2000). No cross-cultural comparison studies, however, have examined the protective effects of work and family resources on WFC and the damaging effects of WFC on role satisfaction.

According to Hofstede's (2001) study on cross-cultural differences, Taiwan is a society with relatively larger PD, while the United Kingdom is a society with a smaller PD. We purported that supervisory support may be more useful for Taiwanese employees working in a larger PD work environment for two reasons. First, acknowledging and accepting employees' family responsibilities outside work by the management implies respect for the full spectrum of individual needs. It further grants autonomy and control over one's work and family life, which have been shown to be universally beneficial for employees (e.g., Karasek, 1979). This is likely particularly true for Taiwanese workers, who normally have very few opportunities to exercise control at work (Lu, Wu, & Cooper, 1999). Previous research has found that for Taiwanese employees working in large PD organizations, supervisory support was pivotal for well-being and far more effective than other forms of support, such as coworkers and friends (Lu, 1999). A recent nationwide survey in Taiwan further revealed that a special form of supervisory support—granting work flexibility to allow employees to attend to family matters—greatly reduced WFC (Lu et al., 2008). Second, supervisory support for employees to coordinate their work and family needs is likely to be perceived as care and understanding from the management. Such gestures of goodwill are consistent with a core Chinese cultural value: "interpersonal

benevolence" (The Chinese Culture Connection, 1987). Research has shown that endorsing such "human-heartedness" is generally beneficial for well-being (Lu, Gilmour, & Kao, 2001).

Although no cross-cultural studies have examined the role of family resources in the WFC context, a recent meta-analysis (Byron, 2005) found that family support was consistently related to WFC across Western and non-Western samples. We could find no theoretical basis to infer differential effects of family resources on WFC across Eastern and Western cultures. Taken together, we thus hypothesize:

*Hypothesis 4: Nation would moderate the relation between supervisory support and WFC, with Taiwanese employees showing a stronger relation than their British counterparts.*

We also purport that there may be a moderating role of I/C in the link between WFC and strain (i.e., role satisfaction). The core of cultural individualism is the supremacy of individual goals, emphasizing personal independence and autonomy; in contrast, the core of cultural collectivism is the priority of group goals over individual preferences, emphasizing interpersonal connectedness and role obligations (Triandis, 1995). In individualistic societies, people focus on achievements at work. In a way, they "live to work," regarding personal accomplishments as prerequisite for the meaning in life and personal happiness (Lu & Gilmour, 2004). Because they view the needs of the self and the family as distinct, they are prone to experience distress when conflict arises between the two life domains. In collectivist societies, people focus on the family's welfare (Triandis, 1995). Work is seen not as a means of enhancing the self, but as a means of supporting the family. Collectivists thus "work to live," regarding

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family prosperity as prerequisite for the meaning in life and personal happiness (Lu & Gilmour, 2004). For example, the Chinese people traditionally view work as contributing to family welfare rather than competing with it (Redding, 1993). WFC may thus have a less damaging effect on collectivists due to their less rigid demarcation of the work/family boundary and greater tolerance

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*WFC may thus have a less damaging effect on collectivists due to their less rigid demarcation of the work/family boundary and greater tolerance of spillover between the two life domains (Lu et al., 2005). This theory may explain the lack of association between WFC and strain found in some Asian societies (e.g., Aryee et al., 1999).*

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of spillover between the two life domains (Lu et al., 2005). This theory may explain the lack of association between WFC and strain found in some Asian societies (e.g., Aryee et al., 1999). We thus hypothesize:

*Hypothesis 5: Nation would moderate WFC–work satisfaction and WFC–family satisfaction relations, with British employees suffering stronger negative effects of WFC than their Taiwanese counterparts.*

To summarize, the present study contributes to the work/family literature and extends Spector et al.'s (2004, 2007) cross-cultural research and other prior studies in several ways. First, we examined both positive (resources) and negative (demands) antecedents of WFC and both work and family outcomes. Second, we explored both culture-general and culture-specific correlates of WFC. Because compelling evidence has been obtained in the West and some fragmented evidence obtained in the East, supporting our H1 to H3, we expect that these three hypotheses would apply to both Taiwanese and British sam-

ples, that is, would be culture-general. On the other hand, the strength of work resources–WFC and WFC–outcomes was expected to be a culture-specific phenomenon, tied to PD and I/C values, as predicted in H4 and H5. Such moderation effects have not been tested in previous research. Third, we used a well-established measure of WFC encompassing

all three major forms of WFC, time-, strain-, and behavior-based, unlike Spector et al. (2007), who focused on the first two aspects only. Fourth, we expanded our study population to employees of different marital and/or parenthood statuses. Worldwide surveys (Byron, 2005; Spector et al., 2004, 2007) have indicated that WFC was not restricted only to married people or those with children.

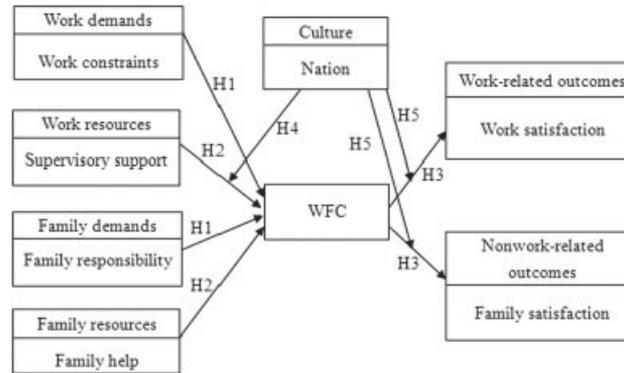
To justify our choice of countries for comparison, we consulted Hofstede's (2001) ranking of nations. On the dimension of I/C, Britain scored 89, ranked third, and Taiwan scored 17, ranked 44th. On the dimension of PD, Britain scored 35, ranked 44th, and Taiwan scored 58, ranked 29th. Because higher scores represent higher individualism and larger power distance, Britain and Taiwan are quite different on both dimensions of cultural values. A recent cross-cultural study also found that Taiwanese people endorsed higher collectivist values, while their British counterparts endorsed higher individualistic values (Lu & Gilmour, 2004), thus corroborating Hofstede's (2001) rankings.

This study's conceptual framework and proposed hypotheses are summarized in Figure 1. We first examined relationships among work/family demands/resources, WFC, and outcomes in each country, and then reviewed possible moderating effects of nation involving work resources and WFC.

## Method

### Participants

Data were collected from multiple companies to represent as wide a variety of sectors/organizations/positions as possible. A variety of recruitment methods were used in both Taiwan and the United Kingdom. For example, some participants were enrolled in executive education programs and were recruited in classes; some were recruited through personal contacts; and some were members of professional organizations who were contacted and asked to participate. We recruited only Han Chinese in Taiwan and Caucasians in the United Kingdom. Consequently, the Taiwan-



**FIGURE 1.** The Research Framework: Antecedents, Consequences, and the Cultural Moderator of WFC

ese sample was composed of 264 participants (response rate of 80.7%), and the British sample included 137 participants (response rate of 75%). Surveys were conducted at the same time in both countries. Participants completed structured questionnaires in their leisure time and returned them in sealed envelopes to the researchers.

The Taiwanese sample was 39.1% male, with a mean age of 33.23 ( $SD = 8.61$ ), with a mean job tenure of 7.32 years ( $SD = 7.23$  years). Less than half of them (42.0%) were managers of various levels. Half of the sample (50%) was married and 82.9% had a spouse who was working. The British sample was 49.6% male, with a mean age of 35.36 ( $SD = 8.46$ ), with a mean job tenure of 6.92 years ( $SD = 6.94$  years). More than half (56.1%) were managers of various levels. Most (62.1%) were married and 88% had a partner who was working. The two samples were very similar in occupation representations: 27.1% of Taiwanese participants were drawn from the manufacturing industry and 22.4% from the service industry. Twenty-nine percent of British participants were drawn from the service industry and 21.5% from the manufacturing industry.

## Measures

Variables analyzed in the present paper were measured with the following instruments.

### Work and Family Demands

*Work constraints* were assessed using 11 items developed by Spector and Jex (1998), tapping various aspects of organizational constraints. Following the stem “How often do you find it difficult or impossible to do your job because of ... ?” respondents checked sample items such as “poor equipment or supplies” and “interruptions by other people” on 5-point rating scales (1 = less than once per month or never to 5 = several times per day). Thus, high scores represent more work constraints. The internal consistency of this scale was .91 and .90 in the Taiwanese and British samples.

*Family responsibility* was assessed using three items developed by Allen (2001), tapping the respondents’ overall perceived burden of family life. Following the stem “How often do you feel ... ?” respondents checked sample items such as “that your family makes too many demands on you” on 5-point rating scales (1 = never, 5 = very often). Thus, high scores represent more family responsibility. The internal consistency of this scale was .84 in both Taiwanese and British samples.

### Work and Family Resources

*Supervisory support* was assessed using three items developed by Clark (2001), tapping supervisor’s emotional support for the

employee's family needs. A sample item is "My supervisor listens when I talk about my family." Again, a 5-point rating scale was used (1 = strongly disagree, 5 = strongly agree) for both measures. Thus, high scores represent more supervisory support. The internal consistency of this scale was .86 in both Taiwanese and British samples.

*Family help* was assessed using 12 items developed by Georgas et al. (1997) tapping child care and domestic help. Following the stem "Who helps with child care in your house?" respondents were asked to check six sources of help: spouse/partner, parents, siblings, members of extended family, friends or neighbors, and paid help. Five-point rating scales were used to measure frequency of the help (1 = never, 5 = daily). Following the stem "Who helps with housework in your house?" respondents were to check six sources of help: spouse/partner, parents, siblings, members of extended family, friends or neighbors, and paid help. The same rating scales were used to measure frequency. We created an index of "family help" by aggregating responses on all 12 items, representing frequency of help from six sources on two tasks: child care and housework. Thus, high scores represent more family help received. As this is a measure composed of conceptually distinct components (sources of help) each indicated by a separate item

(e.g., spouse/partner, parents), items are not interchangeable. Thus, internal consistency is irrelevant for this scale (Bollen & Lennox, 1991).

## WFC

The nine-item Work-Family Conflict Scale (Carlson et al., 2000) was used to assess WFC. Sample items are "My work keeps me from my family activities more than I would like" and "Due to all the pressures at work, some-

times when I come home I am too stressed to do the things I enjoy." Five-point rating scales were used (1 = strongly disagree, 5 = strongly agree). Following Carlson et al.'s (2000) advice, aggregation scores were used; thus, high scores represent high overall levels of WFC. The internal consistency of this scale was .81 and .82 in the Taiwanese and British samples, respectively.

## Outcomes

Both work and nonwork outcomes were measured. Three items from the Michigan Organizational Assessment Questionnaire (Cammann, Fichman, Jenkins, & Klesh, 1979) were used to assess *work satisfaction*: "In general, I like working here," "All in all, I am satisfied with my job," and "In general, I don't like my job" (reversed score). Participants were asked to rate their *family satisfaction* on three items: "My family life is very enjoyable," "All in all, the family life I have is great," and "In general, I am satisfied with my family life" (Edwards & Rothbard, 1999). Six-point rating scales were used for both satisfaction measures (1 = disagree very much, 6 = agree very much), with high scores representing high levels of work satisfaction or family satisfaction. The internal consistency of the work satisfaction scale was .86 and .88 in Taiwanese and British samples, while that of the family satisfaction scale was .97 and .96 in the two samples, both respectively.

Information on gender (male = 1, female = 2), age, tenure on the job, managerial role (managers = 1, employees = 0), and marital status (married = 1, not married = 0) was also collected.

## Scale Equivalence

All the measures described originated from the West, though some were already translated into Chinese and have proven usable in previous cross-cultural research, including the WFC and family satisfaction scales in Lu et al. (2006) and work satisfaction scale in Spector et al. (2007). Three more scales, work constraints, family responsibility, and

supervisory support, have also been used with Chinese employees, showing good reliability and validity (Kao, Lu, & Lu, 2008). In all these studies, the standard procedure of back-translation was followed to create Chinese versions of various scales. We, too, adopted back-translation to produce the Chinese version of the family help scale. To ensure equivalence further, we conducted multisample tests for the three scales that were not yet tested in cross-cultural studies: work constraints, family responsibility, and supervisory support. Following recommendations by Schaffer and Riordan (2003), we conducted two-sample tests and found fit indices within the usually accepted values of .90 for GFI (.93, .92, .93); CFI (.92, .91, .92); and .10 for RMSEA (.07, .08, .07), indicating acceptable fit for these measures.

## Results

### Within-Cultural Analysis

Pearson correlation analyses were conducted separately on the Taiwanese and British samples among all research variables. Be-

cause the Taiwanese and British samples were not exactly compatible demographically (more females and fewer managers in the Taiwanese sample), we conducted preliminary analysis to determine whether sex and managerial position (dummy coded) correlated with our main research variables. Results showed that neither sex nor managerial position correlated with WFC, work satisfaction, or family satisfaction in the two samples. This was done to ensure that sample differences did not influence the relationships among our main research variables. Nonetheless, demographics were still controlled for in subsequent regression analysis for hypothesis testing.

As shown in Table I, for the Taiwanese, both work and family demands (work constraints and family responsibility) positively correlated with WFC. Work resources (supervisory support) negatively correlated with WFC and positively correlated with work satisfaction. WFC negatively correlated with both work and family satisfaction. Family help, however, did not yield significant correlations as predicted. The correlation pattern for the British sample

**TABLE I** Zero-Order Correlations Among Main Research Variables, Reliability, Item Mean (SD) of All Scales, and *t* Values for Chinese-British Comparison of Group Means

Variables	1	2	3	4	5	6	7
1. Work constraints	<b>1.00</b>	-.22***	.10	-.09	.35***	-.37***	-.19***
2. Supervisory support	-.25*	<b>1.00</b>	-.02	.01	-.26***	.32***	.09
3. Family responsibility	.06	.02	<b>1.00</b>	-.06	.26***	-.13**	-.35***
4. Family help	.18*	-.00	.16*	<b>1.00</b>	-.00	.23*	.00
5. WFC	.35***	-.30***	.23***	-.00	<b>1.00</b>	-.24***	-.31***
6. Work satisfaction	-.35***	.29***	-.08	.07	-.24***	<b>1.00</b>	.29***
7. Family satisfaction	-.13*	.05	-.36***	-.03	-.28***	.29***	<b>1.00</b>
Cronbach's $\alpha$ (TW)	.91	.86	.84	/	.81	.86	.97
Cronbach's $\alpha$ (UK)	.90	.86	.84	/	.82	.88	.96
Item mean/SD (TW)	1.96 0.77	2.93 0.95	2.36 0.74	2.06 1.33	2.90 0.75	3.22 1.04	4.81 1.06
Item mean/SD (UK)	2.02 0.75	3.47 0.87	2.31 0.77	1.84 0.88	2.93 0.58	3.32 0.63	4.82 1.22
<i>t</i> (df)	-2.11* (378)	-5.56*** (391)	1.64 (397)	3.59*** (289)	-0.48 (377)	-1.39 (292)	-0.05 (395)

Note: The upper triangle is the correlation matrix for the British sample; the lower triangle is the correlation matrix for the Taiwanese sample.

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

was largely similar but with fewer significant results; however, there were some differences in the degree of significance between samples. This is probably due to the smaller British sample size.

We used hierarchical multiple regression technique to test Hypotheses 1 to 3. When predicting WFC, personal background variables (i.e., gender, marital status, managerial role, tenure) were entered into the equation first (Step 1) to control for their possible contributions. At Step 2, work demands, family responsibilities, supervisory support, and family help were entered. When predicting work and family satisfaction, the first two steps were the same, while at Step 3 WFC was entered. Full regression models are presented in Table II for Taiwan and Table III for the United Kingdom. Standardized regression coefficients ( $\beta$ ) were taken from the final models.

For both Taiwanese and British, work demands and family responsibility were positively related to WFC, supporting Hypothesis 1. On the other hand, supervisory support, but not family help, was negatively related to WFC, partially supporting Hypothesis 2. WFC was negatively related to family satisfaction but not work satisfaction, again partially supporting Hypothesis 3. To summarize, the culture-general correlates of WFC (H1 to H3) were partially confirmed. We now

proceed to test the culture-specific effects (H4 and H5).

### Cross-Cultural Analysis

To obtain an overall picture of possible cross-cultural differences on our study variables, we conducted a series of independent sample *t* tests on work/family demands and resources, WFC, and outcomes. As presented in the bottom three rows of Table I, there were indeed several cross-cultural differences. British employees perceived more work constraints as well as more supervisory support than their Taiwanese counterparts. Taiwanese, on the other hand, reported more family help than British.

We then tested Hypothesis 4, that nation would moderate the relation between work resources and WFC, using moderated regression (Cohen, Cohen, West, & Aiken, 2003). Following procedures suggested by Cohen et al. (2003), predictors were standardized and interaction terms were then created from these standardized predictors. We report unstandardized coefficients ( $B$ ) from the output. This practice is advised by Cohen et al. to report moderating effects.

We coded nation as 1 for Taiwan and 2 for the United Kingdom. We entered the same four demographics at the first step as

**TABLE II Predicting WFC, Work, and Family Outcomes: Results for the Taiwanese Sample**

Step	Variables	WFC		Work Satisfaction		Family Satisfaction	
		$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$
1	Sex		-.01		-.04		-.04
	Marital status		.04		.08		.07
	Tenure		-.20*		-.01		.03
	Managerial role	.06*	.18*	.03*	.18*	.02	.05
2	Work constraints		.27***		-.03		-.02
	Family responsibility		.25***		-.10		-.22***
	Supervisory support		-.23***		.30***		.17*
	Family help	.22***	-.07	.12***	.07	.14***	.03
3	WFC			.00	.02	.03*	-.20**
	Total $R^2$	.28		.15		.19	
	Final F (df)	6.89*** (8,151)		2.09* (9,115)		3.64*** (9,151)	

Notes: Sex: 1 = male, 2 = female; marital status: 1 = married/cohabiting, 0 = not married; managerial role: 1 = manager, 0 = nonmanager. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

**TABLE III** Predicting WFC, Work, and Family Outcomes: Results for the British Sample

Step	Variables	WFC		Work Satisfaction		Family Satisfaction	
		$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$
1	Sex		-.13		.08		-.22*
	Marital status		.15		.06		.03
	Tenure		.03		.26***		.10
	Managerial role	.03	.10	.09*	.15*	.13**	.24**
2	Work constraints		.22*		-.11		-.08
	Family responsibility		.18*		-.10		-.23***
	Supervisory support		-.19*		.36***		.15*
	Family help	.18***	-.10	.27***	.26***	.19***	.18*
3	WFC			.01	-.12	.06*	-.26**
	Total $R^2$	.21		.37		.38	
	Final F (df)	3.14*** (8,74)		2.09* (9,70)		4.32*** (9,74)	

Notes: Sex: 1 = male, 2 = female; marital status: 1 = married/cohabiting, 0 = not married; managerial role: 1 = manager, 0 = nonmanager.  
\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

controls: gender, marital status, tenure, and managerial role. The main variables of interest were supervisory support, nation, the product of supervisory support and nation, with WFC as the criterion. As none of the control variables was significant when all predictors were in the model, they were removed to simplify the model. Final results are summarized in Table IV (section 1).

The product term of supervisory support and nation was significant in predicting WFC. The exact nature of this interaction is plotted in Figure 2. Supervisory support had a stronger negative relation with WFC for the Taiwanese than the British, indicated by the difference in steepness of the two regression lines. Thus, our Hypothesis 4 was supported.

Our Hypothesis 5, that nation would moderate the relations of WFC, work satisfaction, and family satisfaction, was tested with a similar series of moderated regressions. We again entered four demographic variables at the first step as controls: gender, marital status, tenure, and managerial role. The main variables of interest this time were WFC, nation (Step 2), the product of WFC and nation (Step 3), with work satisfaction or family satisfaction as the criterion. As none of the control variables was significant when all predictors were in the model, they were removed to simplify the model. Final results

are summarized in Table IV (sections 2 and 3).

The product term of WFC and nation was significant in predicting both work satisfaction and family satisfaction. These interactions were plotted in Figure 3, showing that WFC had a stronger negative relation with both work satisfaction and family satisfaction for the British than Taiwanese, indicated by differences in steepness of the two pairs of regression lines. Thus, our Hypothesis 5 was supported, and the culture-specific effects of WFC on well-being confirmed. Readers are cautioned, however, that all significant interactions had small effect size (Table IV).

## Discussion

The thrust of the present study is that rather than focusing exclusively on the work domain, we systematically examined demands and resources in both the work and family domains, as well as work and family outcomes. More importantly, we compared results in two distinct cultural groups: the collectivist Taiwanese (cultural Chinese) with high power distance and the individualist British with low power distance. We found that some results generalized nicely, while others produced differences.

We noted that across cultures, WFC demonstrated a consistent relationship with

**TABLE IV** Moderated Regressions Testing Culture-Specific Effects: Final Regression Models

Dependent Variables	Predictors	B (Unstandardized)	$\Delta R^2$	$\Delta R^2$	F <sub>(df)</sub>
WFC	+ Nation	.43*	.01	.01	
	+ Supervisory support	-.41*	.14	.13***	
	+ Nation $\times$ Sup. support	.77*	.16	.02*	7.16*** (3,273)
Work satisfaction	+ Nation	.47*	.01	.01*	
	+ WFC	-.04*	.02	.01*	
	+ Nation $\times$ WFC	-.21*	.03	.01*	3.14*(3,274)
Family satisfaction	+ Nation	.04	.00	.00	
	+ WFC	-.18**	.09	.09***	
	+ Nation $\times$ WFC	-.43*	.11	.02*	14.91***(3,372)

Notes: + indicates a new step in hierarchical regression. Unstandardized B and F are taken from the final equation.

Nation: 1 = Taiwan, 2 = United Kingdom.

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

family satisfaction. This finding expands the scope of one previous Taiwan–United Kingdom comparative study, which noted a consistent relationship between WFC and work satisfaction (Lu et al., 2006). With a large national representative sample in Taiwan, researchers also found that WFC demonstrated a negative relationship with work satisfaction and organizational commitment (Lu et al., 2008). Thus far, WFC seems to have negative impacts on both work and family outcomes (role satisfaction), across cultures.

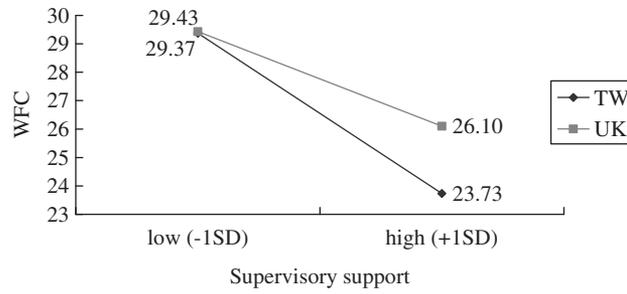
Also in the present study, we noted that both work and family demands in the form of work constraints and family responsibilities had consistent exacerbating effects for WFC across the cultural boundary. Previous cross-cultural studies have revealed that workload and work hours are generally related to WFC (Lu et al., 2006; Spector et al., 2004, 2007; Yang et al., 2000). Our present finding enriches the conceptualization of work demands to include lack of sufficient resources for task completion—work constraints—which the WFC literature has not examined. Our findings pertaining to perceived family responsibility further highlight the need to include family variables in WFC studies (cf. Byron, 2005).

Furthermore, in the present study we noted that work resources in the form of

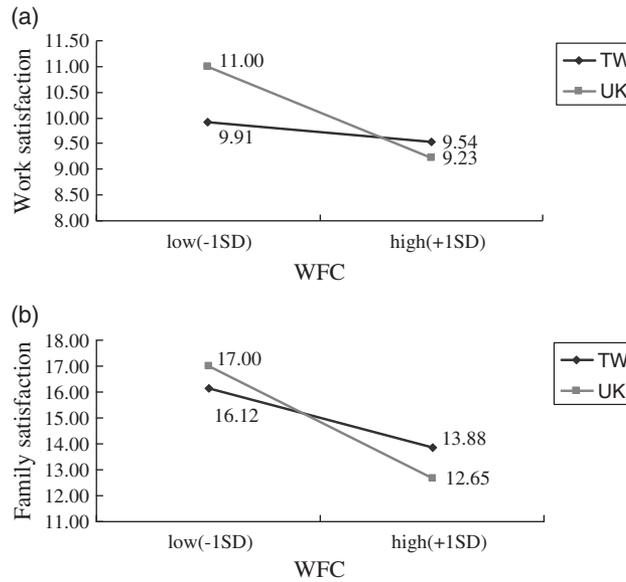
supervisory support had consistent protective effects to reduce WFC across the cultural boundary. Also noted in Lu et al. (2008) in Taiwan, supervisory family-supportive practices (allowing brief leave to take care of family matters) were effective in reducing subordinates' WFC. It thus seems that WFC can be ameliorated through both tangible support practices and emotional/psychological support from the supervisor. Because previous cross-cultural studies (Lu et al., 2006; Spector et al., 2004, 2007; Yang et al., 2000) and the present study have revealed that both work and family demands are related to WFC, we now have a more comprehensive framework to conceptualize antecedents of WFC, including both threats (demands) and protectors (resources).

Because our present results suggest that the generic relationship between work resources and WFC holds across cultures, it is imperative to take into account the role of work resources in WFC experiences for workers in different cultural contexts. In so doing, the issue of cultural specificity needs to be considered as well.

It is exactly in terms of effective resources that differential patterns emerge in the specific cultural milieu. Specifically, we found that supervisory support was more effective in reducing WFC for the Taiwanese than the



**FIGURE 2.** The Moderating Effect of Nation on the Relation Between Work Resources and WFC



**FIGURE 3.** The Moderating Effect of Nation on the Relation Between WFC and Work/Family Satisfaction

British. Hypothesis 4 based on Hofstede’s (2001) theorizing regarding power distance was that there would be stronger relations between work resources and WFC in a high power distance society (Taiwanese) than in a low power distance society (UK). Our theory presumes that for Taiwanese employees working in large PD organizations, supervisory support will be pivotal for well-being. Further, organizational support will be perceived as a goodwill gesture conveying group solidarity and humaneness sanctioned by the core Chinese cultural values of collectivism and human benevolence. Moderated regression results supported our hypothesis. In the

relationship-conscious and hierarchical Chinese organizations, the supervisory power can be put to the good cause of helping employees balance work and family life.

In contrast, family resources in terms of tangible help with child care and domestic chores predicted both work satisfaction and family satisfaction for the British, but not the Chinese. British employees also reported receiving less family help than their Taiwanese counterparts. In the collectivist Chinese societies, extended families usually form a close-knit protective social network that can be called upon to provide support and help in time of need and distress (Hsu, 1985; Lu,

2006), especially child care from grandparents. In individualistic societies, however, such help may not be readily available unless purchased. Thus, Western organizations may consider channeling more resources toward providing tangible family support, such as on-site child care or a subsidy to purchase domestic help. These measures may enhance employees' role satisfaction.

Another important cross-cultural difference we found was the moderation effect of nation on the WFC–outcomes relations. Hypothesis 5, based on the theory of I/C, was that there would be stronger WFC–work satisfaction and WFC–family satisfaction relations in an individualistic society (Britain) than among collectivists (Taiwanese). Moderated regression results supported this hypothesis in both work satisfaction and family satisfaction.

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*Mobilizing managers to perform as first-line counselors may help reduce employees' work/family conflict and enhance their well-being.*

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Our theoretical explanation for these cultural moderation effects concerns the core values of I/C, proposing that individualists view the needs of the self and the family as distinct. They thus perceive time and energy at work as competing with their duties to family, and vice versa. As a result, when perceived work interference with family life is high, individualists may interpret this spillover as failure to fulfill self-expectations in

both domains and will thus experience heightened dissatisfaction. In contrast, collectivists are more flexible in viewing work and family issues, and the demarcation between work and family is far from rigid in daily life. Working and living merge seamlessly: that is still the spirit in the contemporary Taiwanese society (Lu et al., 2005). Devotion to work is not only a highly praised Confucian virtue, but also tolerated by the family as a "necessary evil," or even regarded as an insurance for job security and career advancement (Redding, 1993).

## Conclusions

Our study has contributed to bridging some gaps of knowledge in work/family issues from

a cross-cultural perspective. Before drawing conclusions, however, there are certain methodological limitations that should be kept in mind. First, our data came from a cross-sectional study; thus, no causal conclusions are legitimate. For example, work satisfaction is often considered an outcome of work/family stressors, but it is possible that work satisfaction may be a cause rather than an effect. For instance, those who are satisfied with their jobs may tend to expend more time and energy toward work to the detriment of family life. Thus, longitudinal designs should be adopted in the future.

A second problem is the lack of compatibility between the demographics of two samples: the Taiwanese sample had more females and fewer managers. Preliminary analysis, however, revealed that gender and managerial position did not correlate with WFC, work satisfaction, and family satisfaction in either country. All hypothesis testing analyses ruled out effects of demographics as well. We further tested three sets of three-way interactions to rule out alternative explanations. They were 1) nation  $\times$  sex  $\times$  supervisory support; nation  $\times$  rank  $\times$  supervisory support in predicting WFC; 2) nation  $\times$  sex  $\times$  WFC; nation  $\times$  rank  $\times$  WFC in predicting work satisfaction; 3) nation  $\times$  sex  $\times$  WFC; nation  $\times$  rank  $\times$  WFC in predicting family satisfaction. None of the interactions reached statistical significance. It seems that in the present study, the sampling bias is negligible.

Another limitation is that we compared only the Taiwanese with British because of limited time and resources; thus, no conclusions should be drawn concerning other cultural groups. Our results may not even generalize to other Chinese societies, such as mainland China (PRC), which has its own unique political, economic, and social characteristics (Lu et al., 2003). Spector et al. (2004, 2007), however, did include a much wider range of regions in their studies, and our results regarding the culture-general effects of WFC on outcomes largely corroborate theirs. This convergence of results from different regions is encouraging for promoting work/family studies worldwide and, to

a certain extent, lessens worries over methodological considerations inherent in a cross-cultural approach. It must be noted, however, that Spector et al.'s (2004, 2007) studies focused on work demands and ours extended to work and family resources; thus, the two series of studies should be regarded as complementary.

Finally, we did not explicitly measure cultural values such as I/C and PD, but rather drew inferences about country differences based on prior research considering average I/C and PD levels in Taiwan and Britain. Although countries may vary in mean levels, it should be kept in mind that individuals within countries vary in these values. That is, not all individuals in a collectivist society will be collectivists, and vice versa. A Taiwan-Britain comparative study did show that Taiwanese employees were higher on C and British employees higher on I (Lu & Gilmour, 2004). It would be scientifically more rigorous if future studies directly measure cultural values such as I/C.

Despite its limitations, the current study demonstrated that some relations of work/family demands and resources with WFC and those of WFC with work satisfaction and family satisfaction generalize across the individualistic, small PD and collectivistic, large PD societies, whereas cultural differences still exist. Researchers in future studies should adopt a greater variety of methodologies to explore the exact mechanisms that link work/family demands and resources to outcomes, including additional sources of data

such as coworkers, supervisors, and family members.

Our results have practical implications for managers, especially in multinational companies. The present study has underlined the power of psychological care and emotional support. Mobilizing managers to perform as first-line counselors may help reduce employees' work/family conflict and enhance their well-being. The protective effects of support from supervisors were greater for Taiwanese employees in terms of reducing WFC. Thus, in Chinese organizations or international companies operating in Chinese societies, training supportive and caring supervisors may yield even greater benefits.

Perhaps the more important implication of our study is that we cannot ignore cultural influences on work and family issues. Researchers have already shown that a collectivist value orientation may buffer the detrimental effects of work/family demands on WFC (Lu et al., 2005, 2006; Spector et al., 2004, 2007) and those of WFC on work/family outcomes (the present study). For future research in the work/family field, our results serve to highlight that both culture-general and culture-specific effects need to be considered.

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