THE INTERNATIONAL JOURNAL OF BUSINESS & MANAGEMENT

The Relationship between Work Family Conflict and Satisfaction Outcomes: An Investigation of the Moderating Effects of Nations

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Abstract:

Due to the negative outcomes resulting from work family conflict (WFC), it is important to identify variables that influence the relationship between WFC and satisfaction outcomes. At the same time, globalized business activities and a culturally diverse workforce make a cross-cultural perspective on WFC and satisfaction outcomes necessary. Accordingly, this study used the Individualism/Collectivism value dimension identified by Hofstede (1980) to examine the moderating effects of culture on the relationship between WFC and job satisfaction, family satisfaction, and life satisfaction. Data were obtained from The International Social Survey Program (ISSP), including a sample of 20,850 participants from 30 countries. Results found significant negative relationships between WFC with all measures of satisfaction across cultures. Moreover, results of this study showed that relationships between WFC and satisfaction were stronger in nations that are more individualistic. Consequently, culture is an important variable when examining the relationship between WFC and satisfaction outcomes.

Keywords: work interference with family (WIF), family interference with work (FIW), individualism/collectivism, job satisfaction, family satisfaction, life satisfaction

1. Introduction

Changes in society have altered our traditional views of work roles and the family structure (Greenhaus & Beutell, 1985; Hayghe, 1997). Work can now be easily intertwined with family and vice versa, meaning that issues at work affect family life and issues with the family affect work life (O'Driscoll, Brough, & Kalliath, 2006). When it becomes difficult to manage and keep work and family roles balanced, work family conflict (WFC) occurs. Work-family conflict has been defined as "a form of interrole conflict in which the role pressures from the work and family domain are mutually incompatible in some respect" (Greenhaus & Beutell, 1985, p.77). Empirical evidence has shown that WFC is used as an umbrella term for a construct with two different sub-dimensions, with each having different antecedents and outcomes: work interfering with family (WIF) and family interfering with work (FIW) (e.g. Aryee, Fields, & Luk, 1999; Carlson, Kacmar, & Williams, 2000; Frone, Russel, & Cooper, 1992; Gutek, Searle, & Klepa, 1991). Thus, to completely capture the experience of conflict between work and family, it is necessary to consider both directions, family interfering with work and work interfering with family (Bruck, Allen, & Spector, 2002; Mesmer-Magnus & Viswesvaran, 2005). According to Allen, Herst, Bruck, and Sutton (2000), both WIF and FIW can result in costly effects on an individual's work life, home life, general well being, and physical and mental health. Due to the wide scope of effects resulting from WIF and FIW, it is important to understand the causes and the specific outcomes – especially negative consequences - associated with this type of conflict. Consequently, the present study investigates relationships between WIF and FIW and satisfaction with one's job, family, and life.

In addition, concepts of work and family are intertwined with cultural beliefs, values, and norms (Carlson & Kacmar, 2000; Powell, Francesco, & Ling, 2009; Schein, 1984). For example, national differences in orientations to self and family have been shown to affect the amount of time that is allocated to work and family life (Schein, 1984), which lead to differences in how the work and family domains are deemed compatible (Aryee et al., 1999). Because cultures are known to place an emphasis on different aspects of work and family life (Lu et al., 2009; Spector et al., 2004; 2007; Yang et al., 2012), the causes of conflict and the level of conflict felt are also likely to depend on cultural differences. At the same time, increasing

globalization of business activities, and intercultural exchange of knowledge and experiences (Lee & Sukoco, 2010), have become commonplace in most large organizations, creating a need to understand and adapt to different working styles and working cultures (Selmer, 2007). Thus, it is important to understand how culture affects the perception of WFC, and how cultural differences may influence relationships between WFC and its consequences. Consequently, the purpose of the present research is to examine the effects of culture on the relationships between individual-level WFC and individual satisfaction with family, job, and one's overall life.

1.1. Effects of WIF and FIW on Job Satisfaction, Family Satisfaction and Life Satisfaction

Of the outcomes that have been linked with WFC, none has attracted more attention than job satisfaction (e.g., Allen et al., 2000; Bruck et al. 2002; Kossek & Ozeki, 1998; 1999; Mesmer-Magnus & Viswesvaran, 2005). Different meta-analyses found that the relationships between job satisfaction and WFC (overall WFC, WIF and FIW) were negative; however, there was significant variation in the strength of the relationships across studies (Kossek & Ozeki, 1998; Allen et al., 2000). Regardless of the direction of conflict (WIF or FIW), work family conflict represents an imbalance in one's ability to meet work expectations (Greenhaus & Beutell, 1985), resulting in a decrease in job satisfaction (Cooke & Rousseau, 1984).

Nevertheless, compared to job satisfaction, relatively less is known about relationships between WFC and family satisfaction and life satisfaction. Allen et al. (2000) reported a negative relationship overall (-.17) between WFC and family satisfaction. However, effect sizes varied considerably between studies, suggesting the presence of moderator variables needing investigation. Other studies not included in the Allen et al. (2000) meta-analysis also reported conflicting results (e.g., Aryee, et al., 1999; Carlson & Kacmar, 2000; Frone et al., 1992; Hassan, Dollard, Winefield, 2010; Lapierre et al., 2008). Clearly, the relative dearth of research, and the lack of consistency in findings that have been reported regarding the relationship between WFC and family satisfaction, suggests a need to investigate the relationship in different samples.

In addition to job satisfaction and family satisfaction, life satisfaction is an important outcome resulting from WIF and FIW (Allen et al., 2000). Previous research has established a negative relationship between WFC and life satisfaction, as would be expected given the connections between life satisfaction and job and family satisfaction (Allen et al., 2000; Kossek & Ozeki, 1998). However, looking at the specific directions of conflict, Kossek and Ozeki (1998) found negative relationships between life satisfaction and both WIF (-.35) and FIW (-.25).

Overall, previous research demonstrates relationships between work family conflict and job satisfaction, family satisfaction, and life satisfaction. As Greenhaus and Beutell (1985) point out, these negative relationships may be caused by the inability to meet contradictory role demands and expectations in the different life roles. Although these relationships appear to be moderated by various factors, including perhaps cultural differences, overall negative relationships between WIF and FIW with job satisfaction, family satisfaction, and life satisfaction are expected.

- > H1: There will be a negative relationship between both WIF and FIW and job satisfaction.
- ➤ H2: There will be a negative relationship between both WIF and FIW and family satisfaction.
- > H3: There will be a negative relationship between both WIF and FIW and life satisfaction.

1.2. The Moderating Effects of National Culture on Relationships Involving WFC

Previous research has been able to identify antecedents and consequences of WFC; however, there are inconsistencies in effect sizes across different studies (O'Driscoll et al., 2006). Moreover, meta-analyses have shown that effects are moderated by factors that have not yet been fully identified (Allen et al., 2000; Kossek & Ozeki, 1998). At the same time, relatively fewer studies of potential moderators have been conducted compared to studies of main effects (O'Driscoll et al., 2006).

Work and family issues are closely related to cultural beliefs, values, and norms (Carlson & Kacmar, 2000; Powell et al., 2009; Schein, 1984). For example, pressures on work and family life are a reflection of social expectations and selfexpectations that are influenced by values, beliefs, and role-related self-conceptions (Greenhaus & Beutell, 1985; Parasuraman, Purohit, Godshalk, & Beutell, 1996). Additionally, the amount of time dedicated to the work or the family domain differs between different cultures (Schein, 1984), leading to differences in how the work and family domains are perceived as being compatible or incompatible (Aryee et al., 1999). Furthermore, cultures may differ in the extent to which work life is viewed separately from family life, or the view that work commitments have priority over family demands (Aryee et al., 1999; Schein, 1984). Moreover, cultures differ in their preferences for an integration or segmentation of different life domains (Powell et al., 2009). As empirical evidence has shown, differences in preference for integration and segmentation lead to mean differences in job satisfaction (Rothbard, Phillips, & Dumas, 2005). In addition, cultures differ in the strength of ties between their members and, as a consequence, in the amount of support and help offered to individuals (Powell et al., 2009). At the same time, support and help have the potential to buffer the negative effects of WIF/FIW (Matsui, Ohsawa, & Onglatco, 1995). Because the meaning of work and family can vary for different individuals due to cultural and social factors (Ford, Heinen, & Langkamer, 2007; Poelmans, Chinchilla, & Cardona, 2003; Poelmans, O'Driscoll, & Beham, 2005), it is thus possible that the relationships between WIF/FIW and satisfaction outcomes are also affected by these differences. Although there is an increasing body of studies investigating the interplay of life domains from an international perspective (e.g. Hill, Yang, Hawkins, & Ferris, 2004; Casper, Allen, & Poelmans, 2014), only few explicitly take cultural values into account.

Of the dimensions used to characterize cultural differences, none have attracted more attention than those described by Hofstede (1980; Kirkman, Lowe, & Gibson, 2006). Among these dimensions, Individualism/Collectivism (I/C) has become the

most prominent cultural value dimension (Kirkman et al., 2006; Powell et al., 2009). Individualism signifies a culture's emphasis on the goals and needs of the individual rather than the group (Hofstede, 1980). Members of individualistic cultures tend to give priority to self-interest, and value independence from others, whereas those with a more collectivist orientation tend to define the self in terms of group memberships (e.g. Erez and Earley, 1993; Hofstede, 1980). When there is a conflict of interest, individualists tend to put self-interests above collective interests, and collectivists tend to do the opposite (Hofstede, 1980; Triandis, 1995). Overall, I/C has been suggested as a cultural dimension that has the potential to have a large effect on the work-family interface (Francesco & Gold, 2005; Powell et al., 2009). For example, Powell et al. (2009) argued that members of collectivistic societies are more likely than members of individualist cultures to receive social support from family members when WIF or FIW occur, providing a buffering effect that members of individualist cultures are less likely to enjoy.

In an empirical study, Spector et al. (2007) contrasted four different country clusters and identified I/C as a moderator of the relationships between WFC and both job satisfaction and turnover intentions. Specifically, they showed that the relation between work demands and overall WIF was stronger in the Anglo-Individualist country cluster, compared to the Asian, the Latin American, and the Eastern Europe clusters. Moreover, country clusters moderated the relationships between strain-based WIF and turnover intentions, and strain-based WIF and job satisfaction. However, in the case of time-based WIF and job satisfaction, a moderating effect of the country cluster was only found in the comparison of the Eastern Europe-Collectivist and the Anglo-Individualist cluster, but no moderating effects were found for the relationship between time-based WIF and turnover intentions. In a similar vein, Lu et al. (2009) examined the relationships between work and family demands, work and family resources, WFC and family satisfaction among Taiwanese and British employees and found that work resources seemed to have a stronger protective effect for Taiwanese than for British workers, whereas WIF resulted in greater role dissatisfaction among British workers. The authors noted that employees in individualistic countries perceive WIF as failure to meet self-expectations in both life domains and are thus less satisfied with their work and non-work domains when WIF occurs.

Although previous studies of the moderating effects of national culture on relationships involving WFC (e.g. Lu et al., 2009; Spector et al., 2007) have provided a number of unique insights, they have, by and large, only considered one direction of WFC, namely WIF, neglecting the role of FIW in influencing individual outcomes related to job, family, and life satisfaction. Nevertheless, researchers have argued that to fully understand the interplay of the work domain and the family domain, it is necessary to asses both WIF and FIW (e.g. Carlson et al., 2000). Additionally, previous studies have also been limited to comparisons involving only two countries (Lu et al., 2009), or comparisons involving country clusters (Spector et al., 2007), meaning that additional variation among individual nations that differ in I/C has not been investigated as thoroughly. As previous research has shown, it is necessary to make a clear differentiation between nations that are considered to belong to the same country cluster (Tsui, Nifadkar, & Ou, 2007); otherwise, differences in value patterns among these nations may easily be overlooked. Thus, extensions of the previous research, to include investigations of both directions of WFC, multiple satisfaction outcomes, and a wide variation of national culture contexts, would provide new and valuable insights. Accordingly, in the present study, WFC is conceptualized as a bidirectional construct, taking both WIF and FIW into account, as proposed by a number of authors (e.g. Carlson et al., 2000; Gutek et al., 1991). We also examine satisfaction with both the work and private life domains, in addition to overall life satisfaction. Finally, we include samples from 30 nations, representing a wide variation in I/C, providing a thorough investigation of the potential moderation of relationships involving WFC by nation-level differences in individualism.

In the case of WIF, it is expected that the negative effects of conflict on work, family, and life satisfaction will be stronger in individualistic countries. For example, Spector et al. (2007) observed that the relationship between strain-based WIF and job satisfaction was stronger among nations that were higher in individualism, and suggested that this was because employees in the individualistic country cluster are less loyal to their employers and more likely to react with dissatisfaction to adverse working conditions. Moreover, for people in collectivistic cultures more than for people in individualistic cultures, work roles are likely to be seen as serving the needs of the family in-group rather than the individual (Spector et al., 2007). Members of collectivistic cultures perceive work and family as integrated domains (Yang, 2005; Yang et al., 2012), and see work as a means of supporting the family (Spector et al., 2007). More specifically, work responsibilities are considered important to the success of the family group (Poelmans et al., 2003; Shenkar & Ronen, 1987). Employees in collectivistic countries are also more likely to receive social support from their family in-group (Powell et al., 2009), which could help buffer the negative effects of WIF on family and life satisfaction. Individualists, by contrast, prefer a clearer separation between the work and non-work domains (Powell et al., 2009), because it is assumed that one can function successfully in one domain without any influence from the other domain. Thus, the following hypothesis is proposed:

H4a: Country will moderate the relationship between WIF and job satisfaction, family satisfaction, and life satisfaction such that the negative relationship will be stronger in individualistic countries.

Along the same lines, FIW is expected to have a stronger effect on dissatisfaction with one's life domains in individualistic than in collectivistic countries. Individualists tend to be more focused than collectivists on achieving personal goals (Diener, Diener, & Diener, 1995), which are often tied to being successful at work. Thus, for individualists, FIW creates challenges for achieving personal work goals, which are less strongly linked to family goals than they are among collectivists. As a consequence, FIW has the potential to cause more significant problems for individualists because of the greater degree of

separation between the goals in the life and work domains, as compared to collectivists. This implies that the relationships between FIW and work, family, and life satisfaction will be stronger in individualist cultures than in cultures that are more collectivist. Thus, the following hypothesis is proposed:

H4b: Country will moderate the relationship between FIW and job satisfaction, family satisfaction, and life satisfaction such that the negative relationship will be stronger in individualistic countries.

2.Method

2.1. Participants

This study used data collected from the 2002 Family and Changing Gender Roles module of The International Social Survey Program (ISSP). Participants from each country were a nationally representative random sample of the adult population. Due to the nature of WFC (i.e. an imbalance between work life and family life), participants in this study were selected for analysis if they reported working for pay full time.

The ISSP data included participant responses from 35 country groupings. Participants from Germany-West and Germany-East were combined into one country, Germany. The same was done for Northern Ireland, which was combined with Great Britain and relabeled as Great Britain. As data for one of the variables used in this study were not available in the Slovenian sub-sample, this country (Slovenia) was removed from the dataset. Hofstede's cultural value dimension ratings (2001) were used for testing the moderating effects of culture. Ratings were unavailable for Cyprus and Latvia; thus, these countries were removed from the dataset. Table 1 shows within country sample sizes for the remaining 20,850 participants and 30 countries that were used in this study.

2.2. Measures

Work Interfering with Family (WIF). A two-item scale was created to measure work interfering with family: "I have come home from work too tired to do the chores which need to be done", and "It has been difficult for me to fulfill my family responsibilities because of the amount of time I spent on my job". Participants answered these questions using the following four-point scale: Never, Once or twice, several times a month, and Several times a week, with responses of, does not apply, and, don't know, recoded as missing. Items were recoded before analysis so that higher numbers represented higher levels of the construct. Cronbach's alpha of the measure ranged from .59 to .82 with an average of .70 across countries. Table 1 presents the internal consistencies and descriptive statistics of this scale.

Family Interfering with Work (FIW). Family interfering with work was measured using a two-item scale: "I have arrived at work too tired to function well because of the household work I had done", and "I have found it difficult to concentrate at work because of my family responsibilities". Participants responded to these questions using the same response scale as the measure of WIF. As can be seen in Table 1, the internal consistencies of this scale across countries ranged from .46 to .86 with an average of .69. We additionally controlled for differences in scale reliabilities across countries when examining the relationships between WIF/FIW and the satisfaction outcomes by covarying the country-level alphas in the analyses.

		WIF	Interface	Scale	FIW	Interface	Hofstede IC ¹	
Country	N	α	Mean	SD	α	Mean	SD	
Australia	521	.73	2.59	.821	.70	2.14	1.038	90
Germany	616	.59	2.48	.838	.49	1.79	1.078	67
Great Britain	1203	.65	2.57	.838	.64	1.99	1.074	89
United States	635	.68	2.57	.872	.68	1.95	1.027	91
Austria	845	.70	2.22	1.007	.63	1.41	.867	55
Hungary	371	.79	2.58	.976	.75	1.72	.983	80
Ireland	497	.67	2.41	.841	.67	1.74	.981	70
Netherlands	525	.72	2.37	.889	.58	1.72	.998	80
Norway	1107	.73	2.47	.859	.70	1.67	1.028	69
Sweden	723	.74	2.50	.858	.68	1.84	1.064	71
Czech Republic	316	.75	2.53	.869	.81	1.81	.995	58
Poland	490	.76	2.52	.887	.69	2.07	.988	60
Bulgaria	349	.82	2.65	.862	.86	2.12	.904	30
Russia	867	.74	2.61	.945	.82	1.63	.960	39
New Zealand	499	.68	2.54	.835	.66	1.97	1.067	79
Philippines	494	.69	2.51	.872	.68	2.09	.988	32
Israel	540	.67	2.54	.913	.75	1.99	1.017	54
Japan	521	.66	2.04	1.001	.75	1.36	.798	46
Spain	1069	.61	2.34	.925	.63	1.77	.994	51

		WIF	Interface	Scale	FIW	Interface	Hofstede IC1	
Slovakian Republic	559	.71	2.55	.864	.70	2.11	.999	52
France	981	.67	2.60	.852	.67	1.87	1.011	71
Portugal	772	.64	2.53	.941	.63	1.90	1.035	27
Republic of Chile	639	.71	2.61	.858	.81	2.31	.800	23
Denmark	1111	.72	2.42	.918	.55	1.49	.925	74
Switzerland	732	.61	2.31	.990	.46	1.40	.869	68
Belgium (Flanders)	598	.76	2.46	.908	.74	1.61	.930	75
Brazil	681	.73	2.48	1.011	.78	2.00	1.013	38
Finland	641	.65	2.46	.836	.63	1.79	1.045	63
Mexico	663	.63	2.46	.899	.78	2.11	.988	30
Taiwan	1285	.69	2.17	1.050	.71	1.47	.878	17

Table 1: Alpha Reliabilities, Means, and Standard Deviation among Study Scales as well as Hofstede Individualism Scores for Each Country Notes. Total N = 20,850; N only includes full-time workers. ¹Higher values reflect higher Individualism scores

Satisfaction: The three dimensions of satisfaction, job satisfaction, family satisfaction, and life satisfaction, were each measured with a single item. In the case of this study, overall measures of job, family, and life satisfaction were of interest. Researchers (McDowell, 2010; Scarpello & Campbell, 1983) have found that single-item measures of job satisfaction and life satisfaction are reliable forms of measurement, supporting their use in empirical research. Single-item measures are commonly used in cross-cultural research on job satisfaction (e.g. Oishi, Diener, Lucas, & Suh, 1999), and life satisfaction (e.g. Suh, Diener, Oishi, & Triandis, 1998). Job satisfaction was measured by "All things considered, how satisfied are you with your (main) job". Family satisfaction was measured using the following item, "All things considered, how satisfied are you with your family life", and life satisfaction was measured with the following item "If you were to consider your life in general, how happy or unhappy would you say you are, on the whole". Participants answered the questions using a seven-point scale ranging from Completely happy to Completely unhappy. For all three measures of satisfaction, higher scores represented lower levels of satisfaction; therefore, the items were reverse scored so that higher levels represented more satisfaction.

Individualism/Collectivism. Scores for I/C were obtained from Hofstede's (2001) Values Survey Module. These scores are based on responses of IBM employees in 53 nations. I/C ratings were measured on a scale ranging from 0 to 100. Higher values reflect higher Individualism scores.

Control variables. As can be seen in Table 2, significant correlations were found between one or more of the study variables and the number of persons in a participant's household, the number of hours worked weekly, the participant's marital status, and the participant's gender. Therefore, these four variables were included as covariates in the appropriate analyses. In addition, to rule out the possibility that the moderating effects of I/C are caused by wealth or economical factors, the Human Development Index (HDI; Human Development Report 2013) was included as a control variable in the moderation analysis.

	N	Means	SD	1	2	3	4	5	6	7	8	9
1. WIF	18306	2.46	0.92	-								
2. FIW	18372	1.81	1.01	.165**	-							
3. JS	19152	5.17	1.15	067**	102**	-						
4. FS	20378	5.55	1.06	067**	114**	.312**	-					
5. LS	20579	5.33	0.95	074**	128**	.366**	.625**	-				
6. Persons	20682	3.23	1.69	021**	.047**	.012	.105**	.082**	-			
7. Weekly hours	20850	44.61	11.04	.035**	.020**	.026**	.012	.006	.113**	-		
8. Marital Status	20660	-	-	.009	020**	046**	158**	099**	237**	039**	-	
9. Gender	20836	-	-	.062**	.068**	004	065**	049**	052**	208**	.039**	-

Table 2: Correlations among Research Variables

Notes. **Correlation significant at the 0.01 level (2-tailed), *Correlation significant at the 0.05 level (2-tailed). JS= Job Satisfaction, FS= Family Satisfaction, LS= Life Satisfaction, Persons = number of persons in the household, Weekly hours = number of hours worked weekly, Marital Status 1 = *married*, 2 = *not married*; Gender 1 = *male*, 2 = *female*.

2.3. Procedure and Measurement Equivalence

A common questionnaire was distributed to all respondents. Each national questionnaire was translated from a standard questionnaire originally written in British English, which was agreed upon by the ISSP Group. In cross-cultural research it is necessary to first determine measurement equivalence (ME) of the items used to measure the constructs before comparing scales across countries and making inferences about observed differences. In order to examine ME, we followed the recommendations by Riordan and Vandenberg (1994) in evaluating our two multi-item measures. Table 3 presents the results

of the CFA models that were used to evaluate for ME. The second model where the loadings of WIF and FIW items were constrained to equality across groups met the established change criteria indicating non-significant differences between the item loadings across countries (<.01 for Δ CFI), suggesting that the relationships between items and factors were the same across groups and the scales used in this study were a good fit across all nations. These results imply that the measures were equally effective in measuring the latent WFC factors in the different countries, despite the fact that alpha reliabilities differed somewhat across countries. As noted above, our main analyses controlled for country differences in the scale alphas, as an added precaution against finding nation-level differences that are confounded with measurement differences.

Model	df	X ²	CFI	IFI	RMSEA
Unconstrained	30	63.914	.998	.998	.007
Fixed Loading	88	231.823	.991	.991	.009

Table 3: Summary of Fit Statistics for Scale Equivalence Tests (N = 19,979)

Notes. $\Delta CFI = .007$; CFI = Comparative fit index; IFI = incremental fit index; RMSEA = Root mean square error of approximation; N=20,850)

2.4. Analysis

We used normal correlation/regression methods to test the main effects of WIF/FIW on the three satisfactions outcomes, and used hierarchical linear modeling (HLM) to test whether these relationships are moderated by nation-level differences in I/C. HLM provides an appropriate estimate of the multilevel interaction between cultural value dimensions and WIF and FIW in predicting measures of satisfaction. In the first step of the HLM analyses, job, family, and life satisfaction were regressed on the predictor variable (WIF or FIW), and then in a second step, the slope estimated at Level 1 was regressed on I/C at Level 2. A significant change in the slope of the relationship between WIF or FIW and satisfaction across nations that differ in I/C indicates whether or not the value dimension moderates the relationships between WIF or FIW and measures of satisfaction. Following the recommendations of Enders and Tofighi (2007), variables at Level 1 were group mean centered and the variables at Level 2 were grand mean centered. To obtain a pure estimate of the cross-level interaction and partial out the effects of Level 1 variables at Level 2, aggregate WIF and FIW country scores, the Hofstede (2001) I/C country scores, and the interaction between these two were added to the Level 2 equation to predict the satisfaction outcomes. Resembling all regression tests, gender, marital status, number of hours worked weekly, number of persons in the household and the HDI were included as covariates in the Level 1 equations.

3. Results

Pearson correlations among the main research variables were calculated to test Hypotheses 1-3. These correlations can be found in Table 2. Significant correlations (at the 0.01 level) were found between job satisfaction and both WIF (r = -.067) and FIW (r = -.102). Also, as predicted, significant negative correlations were found between family satisfaction and both WIF (r = -.067) and FIW (r = -.114). Additionally, it was predicted that life satisfaction is also negatively correlated with WIF and FIW. As expected, the relationships between life satisfaction and WIF (r = -.074) and FIW (r = -.128) are negative and significant. Overall, these results fully support Hypotheses 1-3.

Finally, Hypothesis 4 predicted that the relationships between WIF and FIW with the three satisfaction outcomes would be moderated by I/C. Using HLM, predictors and covariates were entered at Level 1 and country level culture scores were entered at Level 2. Hypothesis 4a predicted that the relationship between WIF and the satisfaction outcomes was moderated by I/C. As seen in Table 4, WIF is significantly associated with job satisfaction (p = .000). Additionally, this relationship is moderated by I/C (p = .007). Furthermore, as Table 4 shows, WIF had a significant relationship with family satisfaction (p = .000), confirming Hypothesis 2. As can be seen in the table, this relationship was moderated by I/C (p = .001), as predicted by Hypothesis 4a. As Table 4 further shows, WIF had a significant relationship with life satisfaction, and this relation was moderated by I/C (p = .001), further supporting hypothesis 4a.

Hypothesis 4b predicted that the relationships between FIW and the satisfaction outcomes would be moderated by I/C. As can be seen in Table 4, the results show significant relationships between FIW and job satisfaction (p = .000), between FIW and family satisfaction (p = .000), and between FIW and life satisfaction (p = .000), supporting Hypotheses 1-3. As can also be seen in the table, each of these relationships was moderated by I/C (job satisfaction p = .000; family satisfaction p = .000). These results fully support hypothesis 4b. All significant results were in the expected direction such that the relationship between WIF/FIW was stronger in countries that are higher in individualism.

In addition, we performed simple slope analyses in order to better understand the significant moderating effects. Following common guidelines (e.g. Aiken & West, 1991), values one standard deviation (SD) below and one SD above the mean of the cultural moderator I/C were chosen for plotting. The analysis indicated that in the prediction of job satisfaction, simple slopes of WIF varied between -0.25 at one SD above the mean of I/C to -0.17 at one SD below the mean of I/C. For FIW, the simple slopes varied between -0.37 (one SD above the mean of I/C) and -0.19 (one SD below the mean of I/C). In the prediction of family satisfaction, simple slopes of WIF varied between -0.20 (one SD above the mean of I/C; for FIW -0.40) and -0.12 (one SD below the mean of I/C; for FIW -0.21). Finally, in the prediction of life satisfaction, the simple slopes varied between -0.21 (one SD above the mean of I/C; for FIW -0.39) and -0.13 (one SD below the mean of I/C; for FIW -0.21). All of

the simple slopes for WIF/FIW between one SD above and below the average value of I/C were significant (p < .01). Figure 1 shows plots of the relationships between WIF/FIW and the three satisfaction outcomes, for countries that are one SD above and below the mean of I/C. As these plots indicate, the relationship between WIF/FIW and satisfaction outcomes is stronger in countries that are higher in Individualism (one SD above the mean of the I/C score, dotted line) than in countries with lower Individualism (one SD below the mean of the I/C score, solid line).

		Job	satisfactio	on	Fami	ly satisfact	ion	Life satisfaction		
Fixed Effect	S	Coefficien	t	Z	Coefficien	t	Ζ	Coefficient		Z
WIF										
Level 2 B0	Intercept	7.508**	(0.524)	14.32	7.688**	(0.601)	12.79	8.681**	(0.821)	10.56
	WIFAG	-0.433	(0.188)	-2.30	-0.216	(0.217)	-0.99	-0.316	(0.273)	-1.16
	I/C	0.049	(0.026)	1.93	0.056	(0.030)	1.90	0.073*	(0.035)	2.06
	WIF x I/C	-0.019	(0.010)	-1.84	-0.022	(0.012)	-1.86	-0.028*	(0.014)	-2.00
Gender	Intercept	-0.072**	(0.019)	-3.74	0.055**	(0.017)	3.24	0.014	(0.020)	0.73
Marital Status	Intercept	-0.125**	(0.020)	-6.20	-0.427**	(0.018)	-23.87	-0.760**	(0.016)	- 13.20
Hours Worked	Intercept	0.008**	(0.000)	7.62	0.002*	(0.000)	2.34	0.003*	(0.001)	2.98
Persons	Intercept	0.001	(0.000)	7.62	0.043**	(0.006)	7.57	0.027**	(0.006)	4.10
HDI		-1.462	(0.801)	-1.83	-0.437	(0.929)	-0.47	-1.381	0.909	-1.52
Alpha WIF	Intercept	-1.819*	(0.706)	-2.58	-2.207*	(0.817)	-2.70	-3.619**	(1.031)	-3.51
WİF	Intercept	-0.203**	(0.015)	-13.66	-0.159**	(0.012)	-13.21	-0.175**	(0.019)	-9.26
	I/C Cross-level Interaction	-0.002**	(0.000)	-2.68	-0.002**	(0.001)	-4.06	-0.002**	(0.001)	-1.71
FIW										
Level 2 B0	Intercept	6.396**	(0.386)	16.56	6.616**	(0.366)	18.10	7.358**	(0.887)	8.29
	FIWAG	-0.291	(0.268)	-1.08	-0.008	(0.251)	-0.03	-0.074	(0.309)	-0.24
	I/C	0.036*	(0.016)	2.29	0.031*	(0.015)	2.14	0.031	(0.018)	1.63
	FIW x I/C	-0.023*	(0.009)	-2.40	-0.021*	(0.009)	-2.35	-0.021	(0.011)	-1.88
Gender	Intercept	-0.064**	(0.019)	-3.34	0.052**	(0.017)	3.09	0.009	(0.019)	0.47
Marital Status	Intercept	-0.114**	(0.020)	-5.63	-0.417**	(0.018)	-23.40	-0.250**	(0.016)	-15.65
Hours Worked	Intercept	0.005**	(0.000)	5.16	0.000	(0.000)	0.23	0.001	(0.000)	1.31
Persons	Intercept	0.006	(0.006)	0.93	0.049**	(0.006)	8.65	0.032**	(0.006)	4.98
HDI		-0.422	(0.867)	-0.49	1.071	(0.805)	1.33	0.663	0.921	0.72
Alpha FIW	Intercept	-1.123*	(0.535)	-2.10	-1.429*	(0.504)	-2.84	-2.628*	(1.018)	-2.58
FIW	Intercept	-0.269**	(0.021)	-12.48	-0.292**	(0.022)	-13.08	-0.290**	(0.029)	-9.94
	I/C Cross-level Interaction	-0.005**	(0.001)	-4.43	-0.005**	(0.001)	-4.67	-0.005**	(0.001)	-3.13

Notes. *p<.05, **p<.01; Standard errors in parentheses; Persons = number of persons in the household, Weekly hours = number of hours worked weekly, Marital Status 1 = married, 2 = not married; Gender 1 = male, 2 = female, N=17,242.

Table 4: HLM Analysis of Life Satisfaction, Job Satisfaction and Family Satisfaction predicted by WIF and FIW

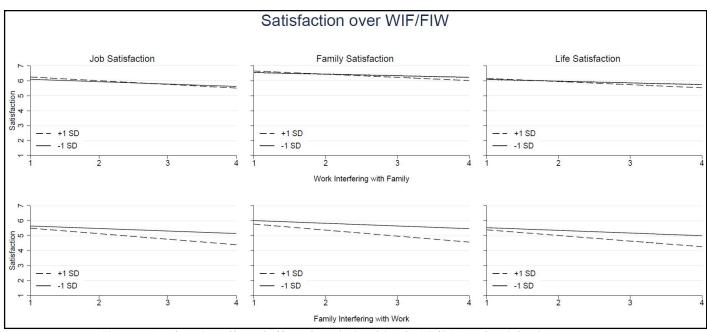


Figure 1: Moderating effect of I/C on the relationship of WIF/FIW and satisfaction outcomes.

Unmarried persons served as reference group for this figure

4. Discussion

4.1. Summary of the Findings

The purpose of this study was to examine whether nation-level differences in individualism/collectivism moderate relationships between WFC and satisfaction outcomes, while including both WIF and FIW as predictors of satisfaction with one's job, family, and overall life. Therefore, the present study looked at these relationships using a large sample of participants from 30 countries. Hofstede's, I/C value dimension was investigated as a potential moderator of the relationships between WIF/FIW and satisfaction, in an effort to provide insight about the ways in which culture may influence relationships involving work-family conflict.

Hypotheses 1-3 predicted that there would be negative relationships between job, family, and life satisfaction and both WIF and FIW. Consistent with the majority of previous research (e.g. Allen et al., 2000; Kossek & Ozeki, 1998), results showed that significant negative relationships exist for all variables. However, the correlations between WFC and the different satisfaction outcomes obtained in the present study are smaller than the correlations reported by recent meta-analyses (e.g. Shockley & Singla, 2011). This may be due to the fact that the present study is based on a large multinational dataset and a culturally diverse sample while most of the studies in the meta-analysis are based on samples from the United States or other Western countries. As predicted by Hypothesis 4, moderating effects of I/C were found for the relationship between WIF and the satisfaction outcomes, such that the relationship was stronger in nations that are higher in individualism (Hypothesis 4a). Additionally, I/C moderated the relationships between FIW and all three of the satisfaction outcomes (Hypothesis 4b). Specifically, the relationships between FIW and satisfaction were stronger among countries that are higher in individualism, as compared to countries that are lower in individualism (i.e. higher in collectivism). These results are consistent with the notion that members of collectivistic nations are more flexible in how they view work and family issues (Lu et al., 2009), and are more apt to see work and family life as domains that should intermingle with each other (Schein, 1984). The findings suggest that members of collectivistic societies are better able to handle the negative effects of FIW than members of individualistic societies, experiencing a smaller reduction in their satisfaction when FIW occurs. Additionally, members of collectivist societies have greater social support, which results in less WFC overall (Powell et al., 2009). These social networks can also be called upon to provide support in times of need and distress (Lu et al., 2009), buffering the negative effects of FIW on satisfaction.

4.2. Implications of this Study

Building on previous studies that examined cultural differences in WFC (e.g. Lu et al., 2009; Spector et al., 2007), the present research shows that the effects of WFC differ by country and more specifically, these differences are predictable from nation-level variation in individualism/collectivism. The current study also observed that the moderating effects of culture also occur for the relationships between FIW and satisfaction, offering new information about the influences of culture on WFC. Additionally, the present study incorporated different satisfaction outcome variables and shed new light on the consequences of both WIF and FIW on life and family satisfaction.

An important practical implication of the current study is that multinational companies might need new or different strategies for handling work and family conflict depending on office locations. Understanding how people balance work and family life cross-culturally would allow organizations to better meet the needs of their employees, thus reducing the potential consequences associated with it. The results of the present study suggest that policies to reduce WFC might be more important in individualistic countries than in collectivistic countries as the negative effect of WIF/FIW is stronger in individualistic countries. In addition, policies and practices such as flexible work schedules and childcare assistance that work in individualistic countries may not be as effective in collectivist countries. As a result, policies and practices to reduce WFC should be adapted to the context and the cultural values of the respective country (Poelmans et al., 2003). For example, flexible work arrangement may be more effective in individualistic countries as they respond to the specific needs of employees with more individualistic values (Spector et al., 2007). The same is true for childcare assistance programs. While there is more social support in collectivistic countries (Powell et al., 2009), working parents in individualistic countries may be more in need of childcare assistance offered by their employer. Moreover, this study shows that across different countries, strategies for handling work and family conflict should include both directions of WFC, namely WIF and FIW.

Taken together, these findings suggest that while some cultural differences influence WFC it cannot be assumed that all cultural differences will. Future research is needed that replicates the current findings and examines other cultural dimensions. For example, cultural dimensions such as gender egalitarianism have the potential to further clarify the relationship between WFC and its outcomes. Based on the results of this study, culture appears to affect work and family domains. These differences were found to affect outcomes of WFC, but cultural differences are also likely to affect antecedents of WFC. A more inclusive model, such as one that incorporates antecedents of WIF and FIW, and outcomes of WIF and FIW, should be evaluated in future research that examines culture as a moderator of relationships involving WFC.

4.3. Limitations

This study has contributed to expanding our knowledge of how WFC affects satisfaction outcomes among employees in different cultural contexts; however, as in all research, there are some limitations of the research that are worth noting. First, because data were collected at one specific point in time, causal relationships cannot be assumed. Longitudinal study designs should be used in future research to gain a better understanding of role of causality in the relationships between WFC and job, family, and life satisfaction. Second, effect sizes of the findings obtained in this study can be criticized as being rather small. Yet, they are important in illustrating effects that have largely been ignored in previous research, and certainly encourage future research that examines additional moderators of the important relationships between WFC and satisfaction with various life domains. Third, the measures used in this study were limited because of practical constraints in the numbers of items used to measure the focal constructs. Measures that include a greater number of items are preferred because they usually have higher internal reliability, and may allow for the measurement of sub-dimensions of the broader constructs. Nevertheless, the reliabilities of the two-item scales used to measure WIF and FIW were remarkably high in most countries, therefore providing appropriate justification to use these scales. Furthermore, CFA analyses provided excellent support for the hypothesized measurement model in this research, and results showed psychometric equivalence across countries. Previous research has found single-item measures to provide reliable assessments of the constructs investigated in this research, thus it was also appropriate to use them in this study. We also controlled for nation-level differences in the internal consistency reliabilities of the WIF and FIW scales, so that observed nation-level differences in relationships were relatively unconfounded by nation-level differences in the reliabilities of the scales that were used. Future research would benefit from replicating this study using alternative measures of WIF and FIW, as well as measures of satisfaction outcomes. Additionally, future studies could take differences in types of WIF and FIW (e.g. time-based, strain-based and behavior-based conflict; Greenhaus & Beutell, 1985) into account. Finally, scores for the Hofstede I/C dimensions were obtained from prior research (Hofstede, 2001), and represent an overall measure of individualism for the nation. However, a country identified as individualist does not mean that all people within the country are equally individualistic, or collectivistic (e.g. McSweeney, 2002). Thus, withincountry variation in I/C or other value dimensions may be worth investigating in future research.

Despite its limitations, the current study adds to the growing body of cross-cultural WFC research. This study provided new insight into the possible moderating effects involving WIF/FIW, however future research can build upon these results by investigating additional similarities or differences in the way individuals across cultures experience the antecedents, outcomes, and interface between work and family and by taking more different cultural value dimensions into account. We hope that the present research encourages additional studies of the role of culture in WFC research.

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