

## CEO Working Paper Series

Hard Working Coworkers: A Multi-Level Cross-National Look at Group Work Hours and Work-Family Conflict

CEO Publication: G19-02 (693)

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No society can provide its members with a high quality of life unless it has effective organizations.

Edward Lawler III

February 2019

To appear in the Journal of Organizational Behavior  
[<https://onlinelibrary.wiley.com/doi/10.1002/job.2361>]

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February 2019

This manuscript is accepted at Journal of Organizational Behavior  
[\[https://onlinelibrary.wiley.com/doi/10.1002/job.2361\]](https://onlinelibrary.wiley.com/doi/10.1002/job.2361).

This research was conducted through the Center for Effective Organizations in the Marshall School of Business and the University of Southern California. An earlier version of this manuscript was presented at the AOM Annual Meeting in Anaheim. We would like to thank Wendy Casper and Marcus Butts for their comments.

### Abstract

This study investigates the relationship between coworker work hours and perceived work-to-family conflict (WFC) in a multinational sample of professional service employees. Building on recent research on the ways in which workgroups influence individual WFC, we demonstrate that the average hours worked by coworkers has a significant relationship to reported WFC independent of an employee's own work hours. While this finding is universal across the multinational sample, national cultural differences were found to moderate the relationship, such that employees in more collectivist countries are more strongly influenced by average coworker hours than their counterparts in less collectivist countries. The multilevel analysis was conducted using a sample of 7,600 professional service employees in 497 different workgroups across 20 countries. The results provide support for the effect of culture on the relationship between group average hours and perceptions of WFC. We conclude with a discussion of how national culture affects WFC.

*Keywords:* Work-Family Conflict; Culture; Multilevel; Work Hours

Work-family conflict is a seemingly inherent part of modern society and an issue for organizations worldwide. Research shows that employees who work long hours experience greater conflict between their work and non-work roles than other employees (Frone, Yardley, & Markel, 1997; Michel, Kotrba, Mitchelson, Clark, & Baltes, 2011; Shockley, Shen, DeNunzio, Arvan, & Knudsen, 2017; Voydanoff, 2004). While there are important international differences, the relationship between work hours and work-family conflict appears to be universal across cultures (Spector et al., 2007; Yang et al., 2012). With a finite number of hours in a day, more time spent on the job means less time for family, friends and personal development. An employee's experience of work-family conflict, however, is far more complicated than how time is allocated. Elements of the work and social context, such as workgroup norms and cultural values, can influence the hours employees choose to work and their perception of work-family conflict.

Research on work-to-family conflict (WFC) has historically focused on individual and organizational predictors of WFC. A 2011 meta-analysis on antecedents of WFC identified four primary categories of work-related factors that influence WFC: job stressors, role involvement, social support, and work characteristics (Michel et al., 2011). Of these, job stressors (i.e., work role conflict, work role overload, and work time demand) are most often studied and tend to be highly correlated with WFC. These relationships are commonly explained using resource demand or conservation of resources theory suggesting that individuals have limited time, energy, and cognitive resources (Edwards & Rothbard, 2000; Ganster, Rosen, & Fisher, 2018; Hobfoll, 1989, 2011). When employees expend more of these resources at work, they have fewer resources available to allocate for non-work activities. These theories frame WFC as the interplay between the forces that deplete personal resources, such as workload and involvement,

and those that buffer depletion or enhance personal resources such as family-oriented organizational practices (Lapierre et al., 2018; Wayne, Casper, Matthews, & Allen, 2013) and supervisor support (Bagger & Li, 2011; French, Dumani, Allen, & Shockley, 2018).

The ways in which the broader work environment shapes perceptions of workload and WFC have received less attention from researchers. Some studies have examined the ways in which coworkers and supervisors affect WFC through direct interaction in the forms of instrumental aid or emotional support (Ferguson, Carlson, & Kacmar, 2015). These studies approach social support as a form of resource enhancement or a buffer which helps ease WFC (e.g., Hammer, Kossek, Anger, Bodner, & Zimmerman, 2011; Hammer, Kossek, Yragui, Bodner, & Hanson, 2009). However, another emerging line of research has shown the potential for coworkers to influence perceptions of WFC through means other than the provision of aid or resources (Bagger & Li, 2011; Van Emmerik & Peeters, 2009). Work-family conflict experienced by coworkers also influences individuals indirectly through the work climate (Bhave, Kramer, & Glomb, 2010; Paustian-Underdahl & Halbesleben, 2014; Van Emmerik & Peeters, 2009). For example, Bhave et al. (2010) found that aggregate workgroup WFC among university employees was positively related to individual-level WFC even when controlling for work demands and other stressors. Accordingly, the first goal of this study is to extend these studies by examining how coworkers' work hours influence an individual's experience of WFC.

While prior studies illustrate that feelings of conflict, stress, or strain associated with WFC can cross over from the group to the individual, open questions remain about the conditions under which these crossover effects occur (Bhave et al., 2010; Bolger, DeLongis, Kessler, & Wethington, 1989; Van Emmerik & Peeters, 2009; Westman, Brough, & Kalliath, 2009). For example, cultural differences in how employees identify with their workgroups have

important implications for their attitudes and behaviors (Hofstede, Hofstede, & Minkov, 2010; Taras, Kirkman, & Steel, 2010). National differences in how employees perceive WFC have been examined in several large multi-country studies (Lu, Gilmour, Kao, & Huang, 2006; Lyness & Judiesch, 2014; Ollier-Malaterre & Foucreault, 2017; Spector et al., 2004, 2007; Yang et al., 2012). These studies demonstrate that employees experience workload and WFC differently across cultures in ways that cannot always be explained by differences in work hours, family situation, or the availability of domestic help (Lu, Siu, Spector, & Shi, 2009; Luk & Shaffer, 2005; Spector et al., 2007). We expect that the collectivist society in which employees are embedded has the potential to affect how they perceive and respond to the work hours of their coworkers. We focus on collectivism because this cultural dimension reflects the extent to which individuals define themselves by the groups to which they belong and the extent to which they are committed to group norms and goals (Hofstede, 2001; Triandis, 1995; Yang et al., 2012). Individuals are likely to have different reactions to environments where coworkers tend to work long hours depending on how they construct their sense of self relative to the workgroup. The second goal of this study, therefore, is to investigate the degree to which cultural collectivism moderates the strength of the relationship between coworker work hours and individual WFC.

This research makes several contributions to the literature. First, we show that work environments with norms for long work hours contribute to perceived WFC in employees beyond the number of hours worked by an individual. Showing this relationship extends research on job-related stressors beyond individual working hours or work demand (Frone et al., 1997; Ganster et al., 2018; Hobfoll, 1989, 2011; Voydanoff, 2004). This study shows that the hours of those working around you also affect your felt WFC. Second, we extend the small number of WFC studies examining crossover effects at the workgroup-level. These studies suggest that

coworkers affect others' WFC through the social environment at work. Multilevel research has shown that a shared perception of WFC at the unit- (Bhave et al., 2010) and team- (Van Emmerik & Peeters, 2009) levels directly contributes to individual WFC. Our study uses a similar approach to examine actual work hours of coworkers and WFC. We demonstrate that environmental stressors, such as a work environment where people work long hours, affect employees in ways that have not been considered previously. Our research shows that WFC is higher in an office where long hours are the norm independent of an individual's own work hours. The heightened perception of WFC is not only due to a shared perception of WFC among coworkers, but also due to the work hours that employees observe their coworkers working.

Third, as typical work hours vary widely around the world, we extend the cross-cultural understanding of WFC by examining how culture shapes the perception of norms and subsequent work attitudes for coworker hours across 20 countries (Lee, McCann, & Messenger, 2007; Ruppner & Maume, 2016). Several large sample studies have examined the effects of individual work-related stressors on WFC and shown that reactions to long work hours vary widely across cultures (Spector et al., 2007; Yang et al., 2012). We extend cross-cultural research about WFC by showing that coworkers' work hours directly contribute to WFC, independent of individual work hours, and that this relationship is the strongest in highly collectivist countries.

### **Hypotheses**

Greenhaus and Beutell (1985:77) defined work-family conflict as "a form of inter-role conflict in which the role pressures from work and family domains are mutually noncompatible in some respect." Researchers and practitioners are generally interested in the conflict between employees' two main roles (i.e., work and family) since work-family conflict has an array of

negative consequences, including lower job satisfaction, family satisfaction, career satisfaction, organizational commitment, job performance, and organizational citizenship behaviors (Amstad, Meier, Fasel, Elfering, & Semmer, 2011). Work-to-family conflict is also associated with higher turnover intentions, absenteeism, stress, burnout, and exhaustion (Nohe, Meier, Sonntag, & Michel, 2015).

The literature on work-family conflict treats the construct as bidirectional. That is, work can interfere with an individual's family (work-to-family conflict or WFC) and family role and responsibilities can also interfere with an individual's work (family-to-work conflict or FWC; Casper, Bordeaux, Eby, Lockwood, & Lambert, 2007; Frone, Russel, & Cooper, 1992). The two constructs are related but distinct and have different antecedents and outcomes (Casper, Vaziri, Wayne, DeHauw, & Greenhaus, 2018). Meta-analytic findings on the antecedents of WFC and FWC suggest that work-related factors, such as work support and work hours, are more strongly related to WFC, whereas nonwork-related factors, such as spousal support and the number of children, are more strongly related to FWC (Michel et al., 2011; Shockley et al., 2017). In this study, we specifically focus on the work-to-family direction of the conflict given our primary interest is the work environment and the hours worked by colleagues. Furthermore, we have no reason to expect that the hours worked by coworkers would be related to the degree to which employees feel that their family roles and responsibilities conflict with their work.

Many empirical studies have investigated, or controlled for, the effect of working hours on WFC (e.g. Adkins & Premeaux, 2012; DiRenzo, Greenhaus, & Weer, 2011). In a meta-analysis on the consequences of long working hours, Ng and Feldman found that WFC was one of the most pronounced consequences of long working hours (Ng & Feldman, 2008). The effects of job-related stressors on WFC are most often viewed from the perspective of conservation of



resources theory (Hobfoll, 1989, 2011). According to the theory, individuals have a finite amount of time, attention, and energy, and therefore, higher time commitment or demand from one role puts pressure on other roles (Edwards & Rothbard, 2000; ten Brummelhuis & Bakker, 2012). Therefore, job-related stressors, such as time demand or being contacted outside working hours, result in higher WFC.

### **Group Average Work Hours and WFC**

In many organizations, employees work in groups to accomplish tasks. We predict that these workgroups play a role in how individuals perceive their own WFC. Research shows that group-level variables often impact individual-level perceptions and behaviors (Bhave et al., 2010; Van Emmerik & Peeters, 2009). For example, observed conflict or unfairness among coworkers can influence individual performance within the group even if an individual is not directly involved (Colquitt, Noe, & Jackson, 2002; Jehn, 1995; Roberson & Colquitt, 2005).

Research has demonstrated that the perception of individual workload explains differences in reactions to work hours across cultures (Yang et al., 2012). We argue group norms for work hours also shape perceptions of WFC. A ‘group norm’ is defined as a standard or rule that is accepted by members of the workgroup and prescribes appropriate behavior for group members (Levine & Moreland, 1991). Norms can be situationally defined and can vary from one work unit to another (Postmes & Spears, 1998; Thibaut, 2017). The work hour norms of a unit, therefore, help guide whether employees conform or deviate from the hours that they see their coworkers contributing. Accordingly, we predict that a shared norm of long working hours can influence an individual’s perception of WFC.

Group norms develop as individual members observe and pay attention to the behaviors of others in their environment (Postmes, Spears, Sakhel, & Groot, 2001). Norms promote

adaptive and effective behaviors by providing guidelines about the types of behavior that are acceptable and unacceptable (Chiu, Gelfand, Yamagishi, Shteynberg, & Wan, 2010; Cialdini & Trost, 1998). According to the shared attention hypothesis, individuals experience the world from a shared attentional perspective, which is “a mode of attention that one takes on the world from the first person plural perspective—the ‘we-mode’” (Shteynberg, 2015b, p. 1246). The shared attention hypothesis suggests that individuals allocate more cognitive resources to information that is perceived as shared with their group (Shteynberg, 2015b, 2015a). As a result, agreement develops within the group for appropriate standards of behavior and shapes individual attitudes and behaviors (Shteynberg, 2015b, 2015a). In the office, shared norms form when workers observe the work hours of their coworkers by comings and goings in the office or on email.

Social information processing theory also suggests that social context leads to shared perceptions as individuals interpret direct communication from their coworkers and indirect informational cues from their work environment (Chen, Takeuchi, & Shum, 2013; Salancik & Pfeffer, 1978; Zalesny & Ford, 1990). For example, Bhave et al. (2010) argued that in cases where an employee was prohibited from leaving work early to attend to a family emergency, their coworkers would experience WFC. This experience occurred even when the coworkers were not directly affected by the family emergency nor directly interacted with that employee. They found that WFC at the group level influences WFC at the individual level. They argued that long-term close interactions within workgroups allow individual-felt WFC to influence coworkers, leading to a shared WFC perception (Bhave et al., 2010). Moen and colleagues (2015) also found that team-level perception of WFC predicted individual-level perception of WFC after controlling for the individual-level perception of job characteristics.

Therefore, we argue that the norms and expectations for long work hours among coworkers are likely to influence group members' WFC. If the office norm is to work long hours, the employees might still feel high levels of WFC even if they do not work long hours themselves. The felt obligation to comply with group norms and expectations for long working hours, coupled with associated feelings of guilt or stress, will heighten the experience of WFC. Thus, we predict that normative group work hours (i.e., group average work hours) is positively related to WFC over and above the effect of the hours that an individual actually works.

*Hypothesis 1: Group average work hours is positively related to individual-level WFC after controlling for individual work hours.*

### **Collectivism and Group Average Work Hours**

While the experience of WFC resulting from long work hours kept by coworkers is universal, we predict that this relationship is moderated by national culture and collectivism in particular. Societal values, beliefs, and expectations are known to influence the priority and pressure associated with work and family roles. This influence suggests that differences in cultural values might result in different perceptions of role stressors and WFC (Ollier-Malaterre & Foucreault, 2017; Powell, Francesco, & Ling, 2009). Culture influences how individuals interpret situational and environmental cues and subsequently forms attitudes and behaviors (Smith, 2004). According to the Cultural Expertise and Personal Values Proposition (Peterson & Barreto, 2014), individuals within a society develop cultural expertise (i.e., cognitive structure) through social learning and repeated contact with situations that prime similar ways of thinking and behaving (Peterson & Wood, 2008). Therefore, culture provides a template for cognitive processing and affects the interpretation of and reactions to information and situational cues (Gibson, Maznevski, & Kirkman, 2009; Peterson & Barreto, 2014). Accordingly, we believe

societal culture has important implications for how situational cues (i.e., group average work hours) are interpreted.

Collectivism is a cultural value that has important consequences for the attitudes and behaviors of individuals at work (Kirkman, Lowe, & Gibson, 2006). At the core of the concept is the emphasis on social groups that bind individuals and shape their cognitive structure and self-concept (Oyserman, Coon, & Kimmelmeier, 2002). Group membership is an important source of identity for individuals socialized in highly collectivist societies (Hofstede et al., 2010; Oyserman et al., 2002; Triandis, 2001). Accordingly, these individuals tend to be motivated to maintain harmonious relationships with in-groups and are more likely to be guided by group norms, goals, duties, and obligations relative to individual goals and self-interest (Fischer et al., 2009; Markus & Kitayama, 1991; Triandis, 2001). Behaviors and attitudes of individuals embedded in highly collectivist cultures are often driven by social norms and obligations to in-groups (Gelfand & Harrington, 2015; Oyserman et al., 2002; Triandis, 1995, 2001). Adherence to behavioral norms varies depending on the extent to which there are strong social norms and the degree of sanctioning for deviating from these norms (Gelfand, Harrington, & Jackson, 2017). Tight societies, where individuals tend to conform more to social norms and expectations, also tend to be nations where individuals are generally influenced by collectivist values (Gelfand et al., 2011). Therefore, group norms, such as group work hours, more strongly shape the attitudes and behaviors of individuals in more collectivist societies than less collectivist ones.

While individuals' acceptance of cultural values varies within a society (Chatman & Barsade, 1995; Moorman & Blakely, 1995; van Dyne, Vandewalle, Kostova, Latham, & Cummings, 2000), collectivism is also a characteristic that differentiates one national culture from another (e.g., Fisher, 2014; Jang, Shen, Allen, & Zhang, 2018). The cultural values that the

members of a society ascribe to on average influence the cognitive structures and schemas of those socialized within the society (Peterson & Barreto, 2014). This socialization further perpetuates shared values at the societal level (Peterson & Barreto, 2014).

Individualism-collectivism can be considered separate dimensions at the individual level. Specifically, individuals can simultaneously possess both individualistic and collectivistic values (Triandis & Gelfand, 1998). At the same time, the two dimensions form a single construct when used as a societal measure (Kirkman et al., 2006). That is, cultures in aggregate tend to value either individualism or collectivism (Hofstede et al., 2010; Triandis, 1994). In this paper, we focus on individualism-collectivism as a country-level construct, with individualism and collectivism existing on opposite sides of the same continuum. This focus is aligned with the work of other scholars who have demonstrated that a country's level of individualism-collectivism is related to differences in economic development, leadership, group performance, communication, conformity, and values (Smith, Dugan, Peterson, & Leung, 1998; Taras et al., 2010; Triandis, 1995; Wendt, Euwema, & Van Emmerik, 2009). For the remainder of our paper, we refer to countries as being low or high in 'collectivism' as determined by their position on the individualism-collectivism continuum.

Collectivism has direct implications for perception of WFC (Billing, Bhagat, Babakus, Srivastava, & Brew, 2014; Ollier-Malaterre & Foucreault, 2017; Ollo-López & Goñi-Legaz, 2017; Yang, Chen, Choi, & Zou, 2000). Employees across different cultures are likely to react differently to the same number of work hours and workload (Hill, Yang, Hawkins, & Ferris, 2004; Lu et al., 2006; Spector et al., 2004, 2007; Yang et al., 2012; Yang et al., 2000). In a sample of employees from 15 countries, for instance, Spector et al. (2004) found that the positive effect of working hours on work-family pressure was the strongest among the employees from

the Anglo cluster (low in collectivism) compared to those from Chinese and Latin American clusters (high in collectivism). Similarly, Lu et al. (2006) found that the positive relationship between workload and WFC was stronger among British employees (low in collectivism) than Taiwanese employees (high in collectivism). Spector et al. (2007) found that work hours and perception of workload were stronger predictors of WFC in the Anglo cluster than in Asian, East European, and Latin American clusters. Finally, Yang and colleagues (2012) found that the relationships between work hours and perceptions of workload, job dissatisfaction, and turnover intentions were stronger for employees in low collectivist cultures compared to those in high collectivist cultures. On the other hand, some studies suggest that the positive relationship between work demands and WFC may be stronger in more collectivist cultures (e.g., China) than in less collectivistic cultures (e.g., U.S.) or similar across countries when job expectations are well-defined (Hill et al., 2004; Yang et al., 2000). Taken together, these mixed findings motivate further probing into the relationship between collectivism and WFC.

Scholars have demonstrated that the perception of individual-level workload explains differences in reactions to work hours across cultures (Yang et al., 2012). We suggest that the normative amount of time that fellow workers commit to the organization (i.e., group average work hours) differently influences WFC across cultures as well. Because employees socialized in cultures high in collectivism often define themselves in terms of interdependence and group membership, their perceptions and attitudes are more strongly shaped by group norms and expectations (Chen, Chen, & Meindl, 1998; Davidson, Jaccard, Triandis, Morales, & Diaz-Guerrero, 1976; Yang et al., 2012). Thus, we predict that when the group-level work hours are high, working more hours is viewed favorably in more collectivist cultures. This favorable view results from the individual's motivation to contribute to the workgroup and to conform to what is

viewed as desirable behavior for group members. Yet, working more hours may simultaneously cause greater WFC, as obligations to family and other important social groups become increasingly difficult to meet. In less collectivist societies, where individual independence is seen as valuable, group work hour norms will have less of an influence on an individual.

Consequently, workers in less collectivistic cultures may feel less constrained when allocating their time across work and family domains and experience lower levels of WFC. Accordingly, we hypothesize that the effect of group average work hours in increasing the perception of WFC is likely to be moderated by collectivism such that individuals working in more collectivist countries would be more strongly influenced by their coworkers' long hours than workers embedded in less collectivist cultures.

*Hypothesis 2: Collectivism moderates the relationship between the group average work hours on employee perception of work-to-family conflict, such that the relationship is stronger in more highly collectivistic cultures.*

## METHODS

### Sample and Procedure

Data for this study were collected through employee surveys in a large multinational network of professional services firms. The employees in all countries perform similar work in client service roles in the fields of accounting, tax, finance, and consulting. Employees are professional, well-educated and licensed to do highly technical work. Employees are recruited out of university and progress through a series of promotions from Associate, Senior Associate, Manager, Senior Manager, and then Partner. Employees serve local and international clients doing audit, tax and consulting work in highly organized engagements. The work is demanding and requires long hours and working at client locations and often out of town.

Work-family conflict is a consistent issue in this industry and this sample is particularly appropriate for testing the relationship between coworker hours and WFC across cultures for several reasons. First, employees are likely to know and be influenced by the work hours of coworkers in their same workgroups. Coworkers in an office and line of service work together to serve a group of clients to complete audit, tax, and consulting projects. The work requires close coordination within and across client engagements. This involves regular face-to-face and electronic communication as well as often working and traveling together with coworkers. Second, employees typically do not work on a single engagement team but rather multiple engagements at the same time and multiple engagements throughout the year with coworkers drawn from the larger line of service and location workgroup. Third, all employees are expected to contribute to the firm beyond their specific engagements and billable hours. This work includes, for example, practice development and proposal writing, mentoring and training junior employees, administrative tasks including billing, and social events. Finally, the nature of the work and management practices across offices and around the world is consistent which allows for direct comparisons of employees in different locations and different countries.

Employees were randomly selected to participate in one of two surveys that were administered at the same time. The responses from employees who responded to Survey 1 were used to calculate the group-level variable (i.e., group work hours), and responses from employees who responded to Survey 2 were used for the individual-level analysis (e.g., demographics, individual work hours). We used the data from Survey 1 for calculating group average hours to make the group data independent of individuals included in the analysis and guard against any potential for confounding the effects of work hours at the individual level and work hours at the group level on the perception of WFC. We were not able to combine Survey 1



and Survey 2 data to conduct the analysis since some of the constructs were not measured in both surveys (e.g., supervisor support). Surveys were managed and distributed by a university research center in the U.S. and fielded across the countries using an identical process. Emails were sent from the senior leadership of each country to employees introducing the survey followed by an email from the research center with links to the web-based survey. The questionnaire was translated from English into each target language by professional translators and back-translated by collaborators at each regional office or by competent bilinguals under their oversight (Brislin, 1970). In cases where the translator and the competent bilingual disagreed on how to express certain terms or phrases, the discrepancies were discussed and resolved by selecting the most appropriate and understandable translation. Employees around the world were given the option to take the survey in English (the language of business across the firms) or the local language of the country where they resided. Percentages of responses in each language by country are reported in Table 1. No significant differences in demographic information and responses were found among those who responded to the survey using different languages.

Overall, 16,922 total employees responded to Survey 2 with an overall response rate of 34.1%. Response rates across countries ranged from 20% in the Netherlands to 47% in Korea. Employees who worked full time, were not an expatriate, and reported their location and line of service in the survey were included in the analysis. We removed expatriates from the analysis (N = 448) because their cultural intuition may be different from that of their coworkers, and they may be influenced by the group average hours differently. The percentage of expatriates within each country ranged between 0% in the Czech Republic to 23% in Switzerland. We included only client service employees, as the work hours are longer and the norms are stronger for these

employees than for internal firm services jobs. Non-client service staffs are involved in the firm's administrative tasks (e.g., HR) and typically have a regular set work schedule and do not interact directly with clients. On the other hand, client service employees usually work in engagement teams to provide audit, tax, and consulting services for clients. Partners were also excluded from the analysis because the nature of their work is different from associates and managers.

Workgroup average hours was calculated using employee responses from Survey 1 and was based on the average of work hours of employees in the same office location and line of service. Employees who are in the same line of service and are located in the same office regularly work together on various engagement teams to serve clients. Employees tend to work on multiple engagements at the same time throughout the year and the firm is organized to staff engagements from markets by location and line of service. These coworkers have regular face-to-face interactions and comprise the relevant social environment experienced by our survey respondents. If the number of respondents within each workgroup in Survey 1 were less than three employees, the respondents were removed from the analysis (see Bhawe et al., 2010; and Glomb & Liao, 2003 for a similar approach). The final sample, after listwise deletion of missing values, included 7,600 employees in 497 workgroups across 20 countries. The average size of the workgroups examined was 15.29 responses. Forty percent of respondents were female with an average age of 30.46 ( $SD = 6.92$ ). In terms of family, 46% were married or cohabiting with a partner and 77% responded they did not have any children under the age of 18. Those who had at least one child reported having less than two children under the age of 18 on average ( $M = 1.66$ ,  $SD = .96$ ). The final sample included 32% associates, 31% senior associates, 20% managers, and 17% senior managers. Descriptive information on the number of employees, the number of

workgroups, and the average size of the workgroup for each country is presented in Table 1.

While the size of the workgroup varies substantially across countries, the ML estimator in multilevel models does not assume balanced cluster size, and Monte Carlo simulations suggest that even extreme unbalance does not result in biased estimates of standard errors (Maas & Hox, 2005).

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Insert Table 1 about here  
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## Measures

**Work-to-family conflict (dependent variable; survey 2).** WFC was measured using four of the items in the 5-item scale developed by Netemeyer, Boles, and McMurrian (1996). Sample items include, “The demands of my work interfere with my home and personal/family life” and “My job produces strain that makes it difficult to fulfill personal/family duties.” Due to concerns about survey length and consistent with previous research (e.g., Cheng & McCarthy, 2013), we removed one item from the survey: “Things I want to do at home do not get done because of the demands my job puts on me.” The scale was administered on a 5-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*). The average reliability of the scale across countries was calculated as .88, which ranged between .73 (Korea) and .93 (Russia).

**Average work hours per week (level 1 predictor; survey 2).** Work hours in professional service firms typically vary throughout the year. These variances typically result from a firm’s “busy season” which corresponds to audit and tax filing deadlines. We asked the respondents about the average hours they work during different times of the year. We asked, “How many hours per week did you work on average during the busiest time in the last 12 months?” (q1), “For how many weeks did you work that long?” (q2), and “How many hours per

week did you typically work on average outside of the busiest time in the last 12 months?" (q3). Average hours per week was calculated using a formula of  $(q1 * q2 + q3 * (52 - q2)) / 52$ . Employees in this firm are required to give detailed reports for their billable and administrative (non-billable) time. Therefore, we believe that they have a very good idea about the hours that they work. The firm also uses an electronic system that reports employee engagement staffing, which can be accessed by all employees.

A total of 96 respondents with average hours per week of greater than 75 were considered outliers (i.e., 3 SD above the mean) and were removed from the analysis. We rounded to 75 hours to normalize the distribution and excluded cases beyond three standard deviations. Conversations with firm HR directors indicated that an average of 75 hours or more year-round would be extremely atypical if not physically impossible. These responses were more likely due to errors in responding. We conducted additional analyses using Ronen & Shenkar's (2013) country clusters to investigate whether a disproportionate number of cases across cultures were removed from the analysis due to the cutoff value. The results indicated that, countries in Anglo (.2%), Nordic (0%), Germanic (.04%), Latin European (.07%), and African (.07%) clusters had fewer employees reporting average work hours of more than 75, compared to countries in Far East (3%), Confucian (3%), and Latin America (5%) ( $F(8, 7675) = 18.41, p < .001$ ). To investigate the influence of such disproportionate removal of cases on the robustness of our results, we ran a series of alternative models with different cutoff values (i.e., 85, 100, and no cutoff), which indicated that the results were robust, regardless of the cutoff value.

**Group average work hours (level 2 predictor; Survey 1).** The average work hours per week of respondents (Survey 1) in each workgroup was calculated to constitute the group average work hours. Average work hours, when aggregated to the group level of analysis, is

considered an additive composition model (Chan, 1998). The individual-level agreement on the average work hours is not central to the meaning of group average hours. Therefore, the within-group variance among individuals is not relevant in the composition of higher-level constructs. No group level aggregation statistics (e.g.  $r_{wg}$ ,  $ICC$ ), therefore, were necessary for the analysis.

We conducted additional analyses to examine whether the dispersion of work hours within groups influences the effect of group average hours on the experience of WFC at the individual level. The results, however, suggested that dispersion of group work hours (operationalized as the standard deviation of group work hours) did not influence WFC directly ( $\beta = .00$ ,  $p > .05$ ), or indirectly by interacting with group average hours ( $\beta = -.01$ ,  $p > .05$ ). Detailed results of this analysis are provided in supplementary materials.

**National culture (level 3 predictors; archival data).** Hofstede's (1980) cultural values were used as the measure of collectivism. Hofstede's cultural dimension of collectivism is one of the most widely studied measures of national culture and has been used to predict a variety of employee outcomes (Kirkman et al., 2006; Taras et al., 2010). However, it has been criticized for a number of reasons (Brewer & Venaik, 2011; McSweeney, 2002). Accordingly, we conducted additional analyses using Global Leadership and Organizational Behavior Effectiveness (GLOBE)'s measure of in-group collectivism as practiced in society for comparison. The GLOBE project sought to refine Hofstede's dimensions; however, it has been criticized as well. For example, it has been argued that the middle managers surveyed in the project may not have been able to accurately describe cultural values of the larger society (Peterson, 2004). The results were slightly different from the model using Hofstede's measure. Specifically, GLOBE's measure of collectivism was a weaker moderator of the relationship between group average work hours and WFC compared to Hofstede's measure. In addition, it was not a significant moderator

of the relationship between individual work hours and WFC. The results of this analysis are presented in the supplementary materials. The observed differences between the two measures are not uncommon, given the conceptual differences between them (Brewer & Venaik, 2011; Smith, 2006). Specifically, while Hofstede's conceptualization of culture is based on the average of self-report of values, GLOBE conceptualization stems from individuals' report of what is widespread within their organization or society (Smith, 2006). Further, items used to measure Hofstede's collectivism are mainly work-focused, whereas, the items in GLOBE's in-group collectivism are mainly family-focused (Brewer & Venaik, 2011). These differences might explain the weaker moderating effect of the GLOBE measure and we believe that Hofstede's measure is more appropriate to be used in this study.

The cultural value for each country was obtained from Hofstede's website ([www.geert-hofstede.com](http://www.geert-hofstede.com); see also Hofstede, Hofstede, & Minkov, 2010). It should be noted that while most country scores come from the original IBM study, the scores for Eastern Europe, Russia, China, Korea, and Egypt are approximations developed after the original IBM study. These scores represent relative positions of countries on collectivism, and research mimicking Hofstede's measure using World Value Survey suggest that while contemporary societies have lower scores on collectivism, these scores have not changed relative to other countries (Beugelsdijk, Maseland, & van Hoorn, 2015). We reverse-coded the scores to represent collectivism and rescaled them (0 to 1) for ease of interpretation. These scores are listed in Table 1.

**Control variables (survey 2).** We controlled for individual-level variables that might influence WFC, including demographics, perception of supervisor support, and frequency of contact at home. Age was included because prior studies have suggested that younger individuals experience higher WFC (Grandey & Cropanzano, 1999). Prior studies have found contradictory

results regarding the effect of gender on WFC (Eby, Casper, Lockwood, Bordeaux, & Brinley, 2005; Shockley et al., 2017). Therefore, we controlled for its effect. Prior research has also indicated that the number of children would influence the perception of WFC (Byron, 2005; Michel et al., 2011).

We included two additional control variables that represent work-related social support and stressors. Perception of supervisor support represents a type of work-related social support that reduces the experience of WFC (Byron, 2005; Michel et al., 2011). The variable was measured with four items adapted from the perceived organizational support scale (Eisenberger, Huntington, Hutchison, & Sowa, 1986). A sample item includes, “My immediate supervisors would forgive an honest mistake on my part.” The average reliability of the scale across countries was calculated as .74, with Egypt (.42) and Poland (.65) having the lowest reliabilities. While the reliability of the scale in Egypt is not optimal, we believe that this is due to small sample size ( $N = 11$ ). Supplemental analysis excluding Egypt resulted in the same pattern of findings. Finally, the frequency of contact at home represents a type of work-related demands that increases perception of WFC (Voydanoff, 2004, 2005). This variable was measured with a single item, “How often do coworkers, supervisors, managers, customers, or clients contact you about work-related matters outside normal work hours?” (Voydanoff, 2005).

### **Analytic Strategy**

Multi-level analysis was used to examine all the hypotheses due to the nested nature of the data. Multi-level analysis takes into account the nonindependence of the data and ensures that each case in the higher level is not used more than once. The results reported here are the results of a three-level regression conducted in Mplus 7.4. Individual-level variables of average hours, gender, age, number of children under 18, supervisor support and frequency of contact at home

were included as level 1 variables. Workgroup predictors of group average hours and line of service were included as level 2 variables. Culture (i.e., collectivism) was included as level 3 predictors. All level 1 and level 2 predictors were group-mean-centered based on workgroups and country, respectively, for unbiased estimation of slopes. Following the recommended approach for multilevel analysis, the level 3 variable (i.e., collectivism) was grand-mean-centered (Hofmann & Gavin, 1998).

Four models were estimated to examine the hypotheses using an incremental improvement procedure (Hox, 2010). The first model included all the control variables. Average hours and group average hours were added to the second and third models, respectively, to test the incremental effect of group hours on WFC over and above the effect of individual work hours (hypothesis 1). Finally, the interactions with collectivism were added to Model 4 to test hypothesis 2. While estimation of effect sizes is more difficult in multi-level models with cross-level interactions, we report pseudo R-squared (Snijders & Bosker, 2012) measuring the proportional reduction of level 1, level 2, and level 3 errors to examine the comparative fit of the models.

### **Preliminary Analysis**

Confirmatory factor analysis indicated that the expected two-factor model of WFC and supervisor support adequately fit the data as indicated in Table 2. The results suggested that the two-factor model was significantly better than the alternative one-factor model ( $\Delta\chi^2(1) = 7157.69, p < .001, \Delta CFI = -.248$ ). We also tested for scale equivalence across the countries using a process detailed by Vandenberg and Lance (2000) and Muthén and Asparouhov (2013). Measurement invariance analysis in cross-cultural research ensures that respondents have similar conceptual frames of reference and perceive rating intervals similarly (Schaffer & Riordan,



2003). We conducted a measurement invariance analysis for the WFC and supervisor support scales for the countries with 100 or more respondents (see Fisher, 2014 for a similar approach) with the results presented in Table 2. The measurement invariance analysis was also conducted including countries with a sample size of less than 100 (i.e., Czech Republic, Egypt, Poland, and Russia). The results were consistent with those reported here.

As indicated in Table 2, the  $\chi^2$  statistics are significant, which might signal the scales do not have adequate measurement invariance. However, it has been argued that the  $\chi^2$  test of model fit is not a good indicator of goodness-of-fit for large sample sizes and other fit indices, such as CFI and TLI, are recommended (Schout, Lugtig, & Hox, 2012). Therefore, configural invariance, which examines whether there is a similar factor structure across countries, was established based on these indices which suggest excellent model fit to the data ( $\chi^2(304) = 618.82, p < 0.001, CFI = .989, TLI = .984, RMSEA = .047$ ). To establish metric invariance, which examines whether the factor loadings are equivalent across countries, the metric model should be compared to the configural model. The use of  $\Delta CFI$  instead of  $\chi^2$  difference test is recommended since the  $\chi^2$  difference test is very sensitive to sample size and indicates poor goodness-of-fit if the sample size is large (Cheung & Rensvold, 2002). Cheung and Rensvold (2002) argued that  $\Delta CFI$ , with the cutoff score of less than -.01, is better to compare goodness-of-fit for different measurement invariance models. As presented in Table 2, the metric model had acceptable level of fit to the data ( $\chi^2(394) = 1005.33, p < 0.001, CFI = .978, TLI = .975, RMSEA = .058$ ), and the  $\Delta CFI$  between the configural and metric model was -.01, indicating that both scales have metric invariance. However, scalar invariance, which examines the equivalence of item intercept across countries, could not be established since the  $\Delta CFI$  is greater than .01 between the scalar and metric invariance models. Although scalar invariance could not be

established, we proceeded with the analysis for two reasons. First, mean differences of these constructs across countries are not central to our hypotheses. Second, scalar invariance may not be established when there are expected mean differences among comparison groups (Vandenberg & Lance, 2000). Various studies have found that differences in cultural values might influence individuals' perception of WFC (e.g., Spector et al., 2004, 2007; Yang et al., 2000). Therefore, we expect our international sample to have countries with different means of WFC and supervisor support.

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Insert Table 2 about here  
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## RESULTS

Correlations and descriptive statistics of individual-, group-, and country-level data are presented in Table 3. The four models used to examine the hypotheses are presented in Table 4. Since the power to detect cross-level interactions and accuracy of estimation in multi-level analyses is a function of sample size at all level of analysis (Maas & Hox, 2005; Mathieu, Aguinis, Culpepper, & Chen, 2012), and Egypt and the Czech Republic had a relatively small sample size at level 1 and level 2, we also conducted supplemental analysis excluding these two countries. The results were consistent and similar to the ones reported here. Further, supplemental analyses were conducted controlling for the size of the workgroups at level 2 and GDP per capita at level 3. The supplemental results indicated that these variables were not significant predictors of WFC and did not change the effects of other variables. The results reported here are based on the analysis without controlling for workgroup size and GDP per capita.

The results indicated that the model fit improved when individual-level average hours per week was added to the model ( $\Delta$ pseudo  $R^2 = .04$ ). Although pseudo  $R^2$  increased only 1% after the addition of group average hours, small changes in overall pseudo  $R^2$  is very typical of multilevel models, especially when a random effect predictor is added to the model (Aguinis, Gottfredson, & Culpepper, 2013; Snijders & Bosker, 2012). The pseudo  $R^2$  change in level 2 residuals indicates that pseudo  $R^2$  increased from 9% to 17%, suggesting the strong predictive power of group work hours. Similarly, the addition of interaction terms increased the pseudo  $R^2$  at level 2 by 3%, suggesting that interaction variables are moderate predictors of WFC.

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Insert Table 3 and 4 about here  
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Hypothesis 1 was supported as group average work hours was positively and significantly related to WFC controlling for family and job-related stressors ( $b = .04$ ,  $SE = .004$ ,  $p < .001$ ). In addition, the interaction between collectivism and individual's average work hours was significant ( $b = -.02$ ,  $SE = .01$ ,  $p = .02$ ) affirming findings in the literature from Yang et al. (2012). Hypothesis 2 indicated that the cultural value of collectivism moderates the relationship between the group average hours and perception of WFC, such that the relationship is stronger for cultures high in collectivism. Hypothesis 2 was supported as the interaction between group average work hours and collectivism was also significant ( $b = .04$ ,  $SE = .01$ ,  $p = .01$ ). Probing the interaction at high and low levels of collectivism indicated that while the effect was significant at both levels, as expected, the effect was stronger at high levels of collectivism ( $b = .05$ ,  $SE = .004$ ,  $p < .001$ ) than low levels of collectivism ( $b = .03$ ,  $SE = .01$ ,  $p < .001$ ). Figure 1 shows the interaction effect of collectivism and individual work hours on the perception of WFC.

Insert Figure 1 about here

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## **DISCUSSION**

The goals of this study were to understand how work hours among coworkers influence employees' perception of WFC and whether the effect of coworker hours on WFC is different across cultures. Our findings demonstrate that a workgroup's average working hours influences individual group members' perception of WFC such that employees experience higher levels of WFC if their workgroup works longer hours. Moreover, we found that the effect of group average hours on WFC is stronger in countries high in collectivism.

These findings contribute to our understanding of work hours and WFC in several ways. Most importantly, the results show that the group average hours predicts individual WFC after controlling for an individual's own working hours. These results demonstrate a new pathway through which group behaviors related to managing work and family affect individual perceptions of WFC. Consistent with prior research on work-family (Bhave et al., 2010; Van Emmerik & Peeters, 2009), our findings suggest that coworkers' work behavior expressed through hours worked affects individual WFC. The effect comes not only through direct social interactions but also indirectly, as individuals observe the hours kept by coworkers. This indirect influence is also consistent with research suggesting that groups develop behavioral norms that are transferred to group members' behavior through a social sensemaking process (Duff, Podolsky, Biron, & Chan, 2015; Robinson & O'Leary-Kelly, 1998).

Second, this research adds to the growing body of work which examines group-level predictors of WFC in general and work climate effects in particular (Bhave et al., 2010; Paustian-Underdahl & Halbesleben, 2014). Previous work linking group and individual WFC has focused on crossover effects, defined as the transmission of strain or felt conflict from one

person to another in a social environment (Westman et al., 2009). While the notion of crossover originated in the study of spouses (Bolger et al., 1989; Ferguson et al., 2015), our study suggests that crossover effects can also occur at the workgroup level more generally. Our findings show that employees also influence their coworkers through the examples they set by the hours they keep.

Finally, we show that the effect of group average hours on individual WFC differs across cultures for employees doing the same jobs with the same demands. This study helps to better understand how coworkers and cultural differences shape perceptions of WFC. Our results indicate that employees in high collectivist cultures are more strongly influenced by group work hours than are their counterparts in low collectivist cultures. Social norms and expectations have more influence on the behaviors of individuals socialized in high collectivist than individualist cultures (Chen et al., 1998; Davidson et al., 1976; Yang et al., 2012). Therefore, if a group develops a role expectation of long working hours, individuals in high collectivist cultures may be more sympathetic to their hardworking coworkers and feel a higher level of WFC compared to those in low collectivist cultures.

This research also helps to broaden our view of the cross-cultural differences in WFC. While there are some notable exceptions (e.g., Allen, French, Dumani, & Shockley, 2015; Hill et al., 2004; Yang et al., 2012), the vast majority of research on WFC consists of single country studies and has been conducted mainly in the United States and Western countries. Relatively less attention has been given to the effect of cultural values on the ways in which individuals experience WFC (Ollier-Malaterre, Valcour, Dulk, & Kossek, 2013). A 2005 review of work-family conflict literature by Eby, Casper, Lockwood, Bordeaux, & Brinley (2005) was unable to consider culture as a factor in the experience of WFC due to the lack of cross-cultural studies.

International work-family research has advanced since then (Ollier-Malaterre & Foucreault, 2017). However, our findings are significant in that they directly compare similar workers across many countries (Allen et al., 2015; Ollier-malaterre et al., 2013). These findings provide another view of the ways in which culture might play a role in the perception of WFC around the world.

This study benefitted from an extremely large and diverse multinational sample of 20 countries. We were able to control for career path, organizational support, and work demands by using employees from a network of firms doing the same work with parallel management practices. As with all studies, however, there are limitations in our methodology. We used single-source, self-report data for WFC, supervisor support, the frequency of contact outside of work, and work hours. This self-report data can be considered a potential limitation because some individuals may be influenced by social desirability in responding to the work hours question in the survey. To reduce such possibility, the participants were surveyed by a third-party academic research center and were clearly informed that their individual responses would not be shared with anyone. We also conducted additional analysis to examine the extent of common method bias for supervisor support and WFC. We used the Single Unmeasured Latent Method Factor technique (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). The results indicated that the average percent of variance accounted for by proposed traits (64%) was higher than the average percent of variance accounted for by method (27%), suggesting low levels of bias.

Using a self-report measure of work hours may also pose another limitation. It is possible that some respondents may have interpreted this question to include such things as commuting time. However, this would be out of the norm for what is considered “work hours” in our sample as time accounting and billing practices are standardized across offices around the world and are included in new hire training. For these reasons, we believe that these employees were likely to

have an accurate view of how much they and their coworkers were actually working. Future research might supplement this study with hours reported by the employer.

We also did not directly ask employees about the hours worked by their coworkers. However, we believe that individuals in this organization are likely to have good insight into the number of hours worked by their coworkers for several reasons. To begin, when employees are working at the firm offices, the floor plans are arranged by line of service to promote collaboration. It is easy to see when people come and go from the office. Additionally, when employees are working onsite on an audit or consulting engagement, they work directly together. Finally, the firm uses a centralized staffing system for engagements that managers use to monitor billable time. All employees have access to the system and can see which projects their coworkers are working on.

We do not have a direct measure of the number of multinational engagements for employees. There is some potential for employees to be more closely aligned with a virtual team than the coworkers with whom they share offices. There is also the potential for asynchronous virtual work to impact WFC independently of coworker hours. Unfortunately, we do not have the data on the proportion of multinational versus national engagements in our sample. While many employees interact with colleagues in different countries or time zones, we believe the vast majority of the firm's employees interact primarily with coworkers in their local units.

The presence of expatriates in workgroups poses another limitation. We excluded expatriates from the analysis because the cultural values of their home country that shaped their cognitive structures and ways of thinking may be different from those of their coworkers. However, it is possible that local employees are impacted by the behavior of expatriates as well, especially in groups with a large number of expatriates (e.g., Switzerland in our study). We

conducted additional analyses by removing Switzerland. The results, however, did not meaningfully change, suggesting the robustness of the findings. Nevertheless, additional research is needed to explore how expatriates influence local WFC norms.

Our measurement and design also bring some inherent limitations. We used abbreviated scales in order to assess the key variables in our research model. Future research might use more complete measures of WFC and family-to-work conflict (FWC). The cross-sectional design of this study also warrants caution in interpreting the results in terms of causality. Finally, the generalizability of the findings is another limitation of this study. The nature of the work and the workers surveyed need to be considered as well, given this study only included client-facing professional service employees. For example, these employees tend to work very long hours per week (i.e., an average of 49 hours per week year-round). Second, since these employees worked in service roles, they were often working closely with one another on client engagements and were always responsible for keeping track of their time and billable hours. Finally, our sample may not be representative because it is skewed toward younger employees and is more male-dominated than other workplaces. Gender diversity in public accounting is an ongoing concern in large firms. While 48% of accounting graduates are women (Association of International Certified Professional Accountants, 2017), there are typically fewer in public accounting and consulting firms. In our sample, consistent with the overall company profile, 40% of respondents were women. Accordingly, the age and gender composition of the sample may limit the generalizability of the findings.

This research has important implications for organizations trying to help employees manage work and family. Most importantly, the findings on the effect of group average hours on individual WFC suggest that organizations should be concerned about the norms and culture of



long hours in teams in addition to individual work hours. Our results suggest that a number of employees working long hours in a group can elevate the perception of WFC for all group members, regardless of whether the others in the group increase their hours to keep up. This effect of long workgroup hours means that managers and organizations, particularly those in highly collectivist countries, should educate all employees that choices regarding their weekly work hours can adversely affect their coworkers.

Our findings are part of an emerging line of research which suggests the social environment at work needs to be addressed for work-life initiatives. We intentionally limited our research to examining work hours. For similar potential group level effects, future research might investigate practices such as project management or electronic communications. The examples set by coworkers need to be considered along with the messages given by managers and the types of support practices offered by organizations to support work-life balance. Our study does not directly address the potential work-family issues for employees working across international boundaries. However, our results suggest that work hour is likely to be an important issue in multinational organizations in which employees work virtually across international borders. These companies need to be sensitive to the fact that norms for high work hours in one country are likely to have negative effects on employees in other countries with whom they interact.

This and other research on group-level effects on individual WFC help to deepen our understanding of how the work environment and coworkers play a key role in employee WFC. This research demonstrates the need to take national culture and context into account in work-family research. Coworkers' hours have a stronger influence on other employees in highly collectivist cultures and this is likely the case for other types of group dynamics. This research

suggests that there is more to be learned about the ways in which employees' WFC are affected by their coworkers in different types of jobs around the world.

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Table 1  
*Sample Descriptive Information*

Country	Collectivism Score	% Female	Individual N	City N	Group N	Average Group Size	Response Rate	Survey Languages Used
Brazil	.62	38%	209	12	26	8.04	39%	Portuguese (76%), English (24%)
Canada	.20	48%	271	16	34	7.97	30%	English (92%), French (8%)
China <sup>a</sup>	.80	59%	735	15	28	26.25	36%	Chinese (64%), English (36%)
Czech Republic	.42	29%	17	2	4	4.25	33%	English (100%)
Egypt	.75	27%	11	1	2	6.00	41%	English (100%)
France	.29	38%	175	9	12	14.58	25%	French (83%), English (16%), Spanish (1%)
Germany	.33	34%	535	20	41	13.05	37%	German (77%), English (22%), French (1%)
India	.52	20%	280	7	20	14.00	34%	English (100%)
Italy	.24	38%	214	14	20	10.70	41%	Italian (75%), English (25%)
Japan	.54	16%	322	3	7	46.00	41%	Japanese (94%), English (6%)
Korea	.82	17%	335	4	7	47.86	47%	Korean (93%), English (7%)
Mexico	.70	38%	212	13	21	10.10	46%	Spanish (80%), English (20%)
Netherlands	.20	29%	206	10	18	11.44	20%	English (99%), Russian (1%)
Poland	.40	42%	60	2	4	15.00	21%	Polish (58%), English (42%)
Russia	.61	68%	90	4	6	15.00	21%	English (51%), Russian (49%)
South Africa	.35	51%	306	18	29	10.55	36%	English (100%)
Spain	.49	34%	333	11	19	17.53	42%	Spanish (85%), English (15%)
Switzerland <sup>b</sup>	.32	31%	143	10	18	7.94	42%	German (43%), English (37%), French (16%), Italian (2%), Spanish (1%)
United Kingdom	.11	40%	641	23	46	13.93	22%	English (100%)
United States	.09	45%	2,505	63	135	18.56	37%	English (100%)
<b>Overall</b>		<b>40%</b>	<b>7,600</b>	<b>257</b>	<b>497</b>	<b>15.29</b>	<b>34%</b>	

*Note.* <sup>a</sup> includes HK/Macau; <sup>b</sup> includes Liechtenstein.

Table 2

*Summary of Fit Statistics for Confirmatory Factor Analysis and Measurement Invariance Tests*

Variables	$\chi^2$	RMSEA	CFI	TLI	SRMR	$\Delta\chi^2(df)$	$\Delta CFI$
<i>Confirmatory Factor Analysis</i>							
Expected 2-Factor Model	670.93 (27) <sup>***</sup>	.056	.978	.970	.048		
Alternative 1-Factor Model	7828.62 (28) <sup>***</sup>	.191	.730	.653	.144	7157.69 (1) <sup>***</sup>	-.25
<i>Examination of Measurement Invariance<sup>a</sup></i>							
Configural Invariance	618.82 (304) <sup>***</sup>	.047	.989	.984	.037		
Metric Invariance	1005.33 (394) <sup>***</sup>	.058	.978	.975	.086	386.51 (90) <sup>***</sup>	-0.01
Scalar Invariance	2034.00 (484) <sup>***</sup>	.083	.945	.949	.105	1028.67 (90) <sup>***</sup>	-0.03

*Note.* <sup>a</sup>  $N = 7,422$  as the data for countries with less than 100 responses (Czech Republic, Egypt, Poland, and Russia) were removed from the analysis.

<sup>\*\*\*</sup>  $p < .001$ .

Table 3  
*Mean, Standard Deviation, and Correlations among Variables in the Study*

Variables	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
<i>Individual-level Variables</i>									
1 Gender <sup>a</sup>	.40	.49							
2 Age	30.46	6.92	-.12***						
3 # of Children under 18	.38	.83	-.12***	.43***					
4 Career Stage <sup>b</sup>	1.37	.48	-.10***	.59***	.37***				
5 Frequency of contact	3.42	1.10	-.09***	.09***	.07***	.23***			
6 Supervisor Support	3.61	.72	.02	-.03*	.00	.01	-.10***		
7 WFC	3.65	.91	.03*	-.05***	-.02	.03*	.29***	-.28***	
8 Average Work Hours	48.68	7.24	-.08***	.00	-.01	.13***	.34***	-.12***	.32***
<i>Group-level Variables</i>									
1 Line of Service – Assurance <sup>c</sup>	.49	.50							
2 Line of Service - Tax <sup>c</sup>	.29	.45	-.62***						
3 Mean WFC	3.63	.50	.20***	-.07					
4 Group Average Work Hours	48.59	3.78	.05	-.19***	.28***				
<i>Country-level Variables</i>									
1 Mean WFC	3.62	.27							
2 Collectivism	.56	.23	.12						

*Note.* Sample size depends on the level of analysis:  $N = 7,600$  for individual-level variables;  $N = 497$  for group-level variables;  $N = 20$  for country-level variables. <sup>a</sup> Male = 0; Female = 1; <sup>b</sup> Associate/Sr. Associate = 1, Manager/Sr. Manager = 2; <sup>c</sup> Line of Service – Advisory as the reference group.

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

Table 4  
*Multilevel Model Results, Predicting WFC*

	Model 1 Control	Model 2 Individual Hours	Model 3 Group Hours	Model 4 Interactions
	<i>b</i> ( <i>SE</i> )	<i>b</i> ( <i>SE</i> )	<i>b</i> ( <i>SE</i> )	<i>b</i> ( <i>SE</i> )
Intercepts	3.36 (.09)***	3.43 (.09)***	3.39 (.09)***	3.40 (.09)***
<i>Individual-level</i>				
Gender <sup>a</sup>	.06 (.02)**	.09 (.02)***	.09 (.02)***	.09 (.02)***
Age	-.01 (.00)***	-.01 (.00)***	-.01 (.00)***	-.01 (.00)***
# of Children under 18	.00 (.02)	.01 (.02)	.01 (.02)	.01 (.02)
Frequency of contact	.22 (.03)***	.17 (.02)***	.17 (.02)***	.17 (.02)***
Supervisor Support	-.35 (.02)***	-.32 (.02)***	-.32 (.02)***	-.32 (.02)***
Career Stage <sup>b</sup>	.06 (.02)**	.01 (.02)	.00 (.02)	.00 (.02)
Average Work Hours		.03 (.00)***	.03 (.00)***	.03 (.00)***
<i>Workgroup-level</i>				
Line of Service – Assurance <sup>c</sup>	.24 (.08)**	.24 (.08)**	.27 (.08)**	.26 (.09)**
Line of Service – Tax <sup>c</sup>	.07 (.07)	.07 (.07)	.14 (.07)	.12 (.08)
Group Average Work Hours			.04 (.00)***	.04 (.00)***
<i>Country-level</i>				
Collectivism	.07 (.25)	.06 (.25)	.07 (.25)	.06 (.25)
<i>Interactions</i>				
Average Hrs. × Collectivism				-.02 (.01)*
Group Hrs. × Collectivism				.04 (.01)*
Pseudo R <sup>2</sup> - Level 1 <sup>d</sup>	0.17	0.22	0.22	0.22
Pseudo R <sup>2</sup> - Level 2 <sup>d</sup>	0.09	-0.03 <sup>f</sup>	0.17	0.20
Pseudo R <sup>2</sup> - Total <sup>e</sup>	0.15	0.19	0.20	0.20
Model Loglikelihood	-9098	-8892	-8874	-8872
Number of Free Parameters	13	16	18	20

*Note.* Unstandardized coefficients are reported;  $N = 7,600$  for level 1;  $N = 497$  for level 2;  $N = 20$  for level 3. <sup>a</sup> Male = 0; Female = 1; <sup>b</sup> Associate/Sr. Associate = 1, Manager/Sr. Manager = 2; <sup>c</sup> Line of Service – Advisory as the reference group; <sup>d</sup> Proportional reduction in sum of variance at each level; <sup>e</sup> Proportional reduction in sum of variance at all levels (Snijders & Bosker, 2012); <sup>f</sup> One of the limitations of Pseudo R<sup>2</sup> in multilevel models with random slope is that it might result in a negative number when a new predictor at another level is added to the model (Kreft & Leeuw, 1998)

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