Journal of Occupational Health Psychology
2006, Vol. 11, No. 4, 343–357

1076-8998/06/$12.00 DOI: 10.1037/1076-8998.11.4.343

The Work-Family Interface and Job Performance: Moderating Effects of Conscientiousness and Perceived Organizational Support

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Based on conservation of resources (COR) theory, the authors hypothesized that two aspects of the work-family interface—family-to-work conflict (FWC) and family-to-work enrichment (FWE)—are related to job performance. The authors also hypothesized that two variables moderate those relationships—individual differences in conscientiousness and aspects of the work environment in terms of perceived organizational support (POS). Data collected from a matched set of 136 private sector workers and their respective supervisors revealed that high FWC was more strongly related to lower job performance: (1) among high- than low-conscientiousness workers and (2) among workers reporting low rather than high levels of organizational support. However, FWE was unrelated to job performance.

Keywords: work and family, conflict, enrichment, conscientiousness, perceived organizational support

The integration of work and family demands may be one of the most critical challenges currently facing both workers and organizations (Kossek & Lambert, 2005). As noted by Bellavia and Frone (2005), this integration can result in both negative (i.e., work-family conflict) and positive interactions (i.e., work-family enrichment). Work-family conflict and work-family enrichment can occur in both directions—work-to-family and family-to-work (Frone, 2003). Our interest was the relationship between the work-family interface and job performance. As our outcome of interest is in the work domain, our focus was on the family-to-work direction.

We examined the relationships of family-to-work conflict (FWC) and family-to-work enrichment (FWE) with job performance. In so doing, we attempted to make unique contributions to the literature in at least four ways. First, unlike previous studies in the work-family literature, this study operationalized job performance with supervisor ratings instead of self ratings. Second, this may be the first study to examine the relationship between the enrichment side of the work-family interface and job performance. Third, whereas much of the research examining work and family has been based on managerial samples (see Eby, Casper, Lockwood, Bordeaux, & Brinley, 2005 for a review), the present study was based on a sample of nonmanagerial respondents. Fourth, following Allen, Hurst, Bruck, and Sutton's (2000) call for work-family researchers to investigate moderators assessing personal and organizational characteristics, we examined two potential moderators, one reflecting individual differences—conscientiousness—and one reflecting aspects of the work context—perceived organizational support (POS). By examining these potential moderators, we were able to examine the question, "Among whom and when are FWC and FWE related to job performance?"

The foundation upon which we built our hypotheses is conservation of resources (COR) theory. Its central tenet is that people strive to obtain and maintain resources that help attain goals (Hobfall, 1989). In applying COR theory, we describe below instrumental and motivational processes to explain the links between aspects of the work-family interface and job performance. We suggest that these processes may capture the manner in which aspects of the work-family interface interact with both conscientiousness and POS to influence job performance. Following Greenhaus and Powell (2006), we describe instrumental processes in which aspects of the work-family interface and the moderator variables may affect job performance through the manifesta-

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The authors thank Stevan Hobfall and Tammy Allen for their insightful comments on earlier versions of the manuscript. This study was presented at the 19th Annual Conference of the Society for Industrial and Organizational Psychology, Chicago.

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tion of competencies that enable job performance. Following Campbell (1990), we describe motivational processes in which aspects of the work-family interface and the moderator variables may affect job performance through choices regarding the level of resources to spend (i.e., effort).

Family-to-Work Conflict

Based on role stress theory (Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964, Greenhaus and Beutell (1985) defined work-family conflict as "a form of interrole conflict in which the role pressures from the work and family domains are mutually incompatible in some respect" (p. 77). A considerable stream of research examining resource-based incompatibilities between work and family responsibilities has emerged over the past two decades (see Allen et al., 2000; Bellavia & Frone, 2005; Eby et al., 2005; Frone, 2003; Kossek & Ozeki, 1998). This work has been based on two notions. One is a scarcity hypothesis that assumes a fixed amount of time and human energy (Marks, 1977). The other is that individuals with multiple roles experience stress. Thus, FWC occurs when resources spent in a family role detract from resources available in the job role. FWC drains resources through three mechanisms—time, strain, and behavior (Greenhaus & Beutell, 1985).

Grandey and Cropanzano (1999) argued that Hobfoll's (1989) COR theory provides an appropriate foundation for understanding the work-family interface. According to COR theory, the threat of or actual loss of resources is the chief element of the stress process. Resources include conditions, personal characteristics, objects, and energies (Hobfoll, 2001). When a loss or threat of a loss of resources occurs, people engage in efforts to avoid further loss, and these choices may impact performance. Applying COR theory to understanding family interference with work, Grandey and Cropanzano (1999) suggested that WFC leads to negative outcomes because resources "are lost in the process of juggling both work and family roles" (p. 352). Thus, COR theory builds on the notion of role stress by explaining that people are motivated to prevent the loss of resources.

Empirical evidence indicates that FWC is negatively related to job performance (Aryee, 1992; Frone, Yardley, & Markel, 1997; Netemeyer, Boles, & McMurrian, 1996). In line with COR theory, this relationship can be understood in terms of the motivation to conserve personal resources. Motivation involves three choices: (a) to expend energy, (b) the level of effort to expend, and (c) to persist at that level of effort (Campbell, 1990). Time pressures impact conditions (e.g., time for work), behavioral constraints impact personal characteristics (e.g., sense of optimism), and strain influences energies (e.g., stamina). As resources reach minimally acceptable levels, workers withhold effort in order to conserve personal resources and accept a decrease in performance (e.g., make less effort to cooperate with others, learn new skills, and maintain high performance standards). In other words, time pressures, strain, and behavioral constraints caused by FWC decrease motivation to expend and maintain high levels of effort at work. We suggest that the FWC-job performance relationship is unlikely to reflect a direct transfer of resources (i.e., instrumental path) because it reflects choices regarding effort levels rather than the application of competencies.

At first, it may seem counterintuitive that workers would accept a decrease in job performance, particularly aspects of performance linked to compensation. However, the notion that workers withhold effort in order to conserve resources and accept a decrease in performance is akin to athletes slowing down when tired or out of breath. Moreover, it is consistent with biological explanations of the links between stress, motivation, and performance (see Hockey, 1997). In addition, it is not surprising that individuals avoid loss spirals. As Hobfoll (2001) described them, loss spirals follow initial losses, with each loss resulting in depletion of resources for confronting the next threat or loss. Workers experiencing considerable FWC are more likely than those experiencing little such conflict to stay behind, creating consequently a greater demand for resources to keep up. Hence, some workers may withhold effort (i.e., defensive behavior to conserve resources) that would affect job performance. Furthermore, Ito and Brotheridge (2003) argued that avoidance—resignation is a coping strategy that is commonly employed even by individuals who typically use control coping strategies and receive high levels of support. They explained that the resources required to address some problems may be viewed as exceeding potentially sizable losses. Similarly, the resources required to achieve some objectives may exceed even potentially substantial losses of desired outcomes.

Previously, we cited three studies (Aryee, 1992; Frone et al., 1997; Netemeyer et al., 1996) linking FWC and job performance. These studies operationalized job performance with self-ratings. It is possible that their estimates of the FWC-performance relationship were artificially high because of same-source method variance. Whereas self-reports of per-

formance have some advantages (see, e.g., Levine, 1980), they may be less accurate than supervisor ratings. For example, empirical work indicates that self-reports may reflect favorable or leniency biases, and the agreement between self and other reports tends to be lower than the agreement between different sources of other reports (see Harris & Schaubroeck, 1988; Ostroff, Atwater, & Feinberg, 2004; Thornton, 1980). Furthermore, supervisor-reported performance ratings are important because they are used to determine such important outcomes as pay and promotions. Accordingly, we considered it prudent to replicate findings of the FWC-performance relationship using supervisor rather than self-assessments of performance.

Hypothesis 1: FWC is negatively related to job performance.

Family-to-Work Enrichment

Work-family enrichment has received comparatively little attention in the organizational sciences, perhaps because it has been conceptually and empirically underdeveloped (Frone, 2003; Greenhaus & Powell, 2006). As reflected in its alternative labels—enhancement, facilitation, and positive spillover, researchers have not reached a consensus on its definition. Grzywacz (2002) theorized that enrichment occurs because it reflects a process of human development; that is, people use available resources to achieve goals. Furthermore, the theory of role accumulation (Seiber, 1974) and expansion hypothesis (Barnett & Hyde, 2001) suggest that active engagement in one domain provides resources that enhance success in the other domain. This notion—that the application of resources acquired in one domain (i.e., family) to the other (i.e., work) yields synergies—reflects the more common view of work-family enrichment. Regardless of perspective, scholars have suggested that the generation of resources is a central driver of the enrichment process (Greenhaus & Powell, 2006; Grzywacz, 2002).

Following Greenhaus and Powell (2006), we define FWE as the extent to which family experiences yield resources that can be applied to enhance work experiences. FWE may affect job performance through both instrumental and motivational processes. We describe the instrumental process as consisting of two steps. First, away from work, individuals acquire resources in the form of skills, knowledge, positive emotions, and status. These are competency resources that when manifested can directly impact supervisor perceptions of employee job performance. Second, individuals then apply these competency resources at work, which leads to enhanced work performance. Why would individuals be motivated to carry over competencies developed at home to work? Consistent with the central tenet of COR theory that people strive to obtain and maintain resources that help attain goals, we suggest that the reason is that workers are motivated to build their bank of resources. Individuals who exert effort on the job to express competencies that they developed away from work are likely to acquire valued resources at work (e.g., merit increases in pay).

We are unaware of any empirical studies that have examined the relationship between FWE and job performance. However, Wayne, Musisca, and Fleeson (2004) found a positive relationship between FWE and self-reported job effort, which likely is reflected in job performance. We suggest that enrichment research may benefit from explicitly exploring the FWE-job performance relationship.

Hypothesis 2: FWE is positively related to job performance.

Moderating Effect of Conscientiousness

There may be moderators of the effects of work-family conflict (Grandey & Cropanzano, 1999; Riolli & Savicki, 2003) and enrichment (Greenhaus & Powell, 2006; Grzywacz, 2002) on relevant outcomes. Friede and Ryan (2004) argued that considering personality is critical to understanding the work-family interface. COR theory treats personal characteristics as resources in that they affect how individuals spend resources and handle the loss of resources (Hobfoll & Shirom, 2001; Grandey & Cropanzano, 1999; Riolli & Savicki, 2003). A dimension of the Big Five model of personality, conscientiousness reflects diligence, achievement orientation, and organization (McCrae & John, 1992). Conscientiousness is the strongest personality predictor of job performance (Barrick, Mount, & Judge, 2001) and is negatively related to family interference with work (Bruck & Allen, 2003; Wayne et al., 2004).

Family-Work Conflict

How might conscientiousness affect the FWC-performance relationship? It may reflect an instrumental process. If so, competencies reflecting high levels of conscientiousness provide resources that would decrease the impact of FWC on job performance. Con-

scientiousness is a personal characteristic resource that provides time efficiency, organizational skills, active problem-solving, and lower vulnerability to stress (David & Suls, 1999; Vollrath & Torgersen, 2000; Wayne et al., 2004). Therefore, high levels of conscientiousness may enable workers to handle multiple roles efficiently. In contrast, low-conscientiousness workers may not effectively juggle family and work responsibilities because of their lack of organization, prioritization, and related competencies. As the workers low in conscientiousness have fewer competency resources than those high in conscientiousness, they may be unable to perform when experiencing high levels of FWC. Therefore, it is possible that FWC is related to performance primarily among low-conscientiousness workers.

The moderating effect of conscientiousness may also reflect a motivational process. If so, high levels of conscientiousness affect decisions to spend resources that would increase the impact of FWC on job performance. Kossek, Noe, and DeMarr (1999) argued that conscientiousness may increase work-family conflict because conscientious individuals have a greater investment in both work and family roles and are motivated to do their best in all of their roles. Hence, high-conscientiousness workers are more motivated than low-conscientiousness workers because they "direct their effort, they are willing to exert higher levels of effort, and they exert effort for a longer period of time" (Mount, Barrick, & Strauss, 1999, p. 710). Not wanting to "let people down," high-conscientiousness workers are likely to exert considerable effort at home and work and thus have little resource reserve. This argument suggests that very high levels of FWC may have the greatest impact on the highly motivated, conscientious workers because they are spending high levels of resources in both family and work roles and therefore have little left to give in the face of high levels of FWC. At high levels of FWC, conscientious workers may accept a reduction in overt performance in order to prevent a loss spiral of resources.

Our discussion of the possible instrumental and motivational processes underlying the impact of conscientiousness on the FWC-performance relationship begs the question: Which is most likely correct? Two recent studies provide empirical support for the motivation basis of moderation that conscientiousness increases the impact of FWC on job performance. Ito and Brotheridge (2003) adopted a COR perspective in examining relationships between emotional exhaustion, resources, and coping strategies. They reported that working harder was positively related to both a positive coping strategy orientation and seeking advice and assistance from others, so they concluded that working harder served not as a substitute but rather as part of a set of active responses. They also found that working harder was related to emotional exhaustion, partly countering the ameliorative effects of a problem-solving strategy. We suggest that working harder and other active coping strategies are characteristic of individuals high in conscientiousness.

Witt, Andrews, and Carlson (2004) found that emotional exhaustion was more strongly related to job performance among workers high than low in conscientiousness. Consistent with the argument that the moderating effect of conscientiousness reflects a motivational process, the highly conscientious workers who were by predisposition spending relatively high levels of their resources were more sensitive to emotional exhaustion than workers low in conscientiousness. Witt et al. (2004) concluded that as predicted by COR theory, these workers reduced their work effort to conserve resources.

Following the Ito and Brotheridge (2003) and Witt et al. (2004) findings, we developed a hypothesis based on the motivational basis of moderation. When experiencing low levels of FWC, conscientious workers perform at high levels by utilizing high levels of available personal resources, whereas those low in conscientiousness are not motivated to spend their resources and perform at low levels. When experiencing high levels of FWC, workers have a diminished capacity of resources. Therefore, conscientious workers reduce effort to avoid a loss spiral of resources; that is, in terms of Campbell's (1990) third choice of motivation, they do not persist at the previous level of effort. Consequently, they perform at lower levels. The FWC-performance link is likely to be weaker among low-conscientiousness workers because they generally are not as motivated to spend resources.

> *Hypothesis 3:* FWC is more strongly related to job performance among high- than low-conscientiousness workers.

Family-Work Enrichment

Grzywacz (2002) argued that the effectiveness with which individuals realize benefit from the environment is dependent upon dispositions. We suggest that conscientiousness may also moderate the FWE-performance relationship. The process through which

the moderation occurs may be both motivational and instrumental.

The motivational process is reflected by the tendency of individuals to apply a resource gained in one domain to another when the potential outcome of the behavior is highly valued (Greenhaus & Powell, 2006). Conscientious workers are motivated to achieve and thus are more likely to value a high performance evaluation. Accordingly, they apply resources from home to work (e.g., sharing information learned from family members with the boss) when they deem that the resources can help them attain high performance. In other words, highly conscientious workers are more likely than workers low in conscientiousness to see the value of applying resources acquired at home to the job and then make the effort to do so.

The instrumental process is reflected in the higher level of job-relevant competencies that highly conscientious workers develop and maintain. In addition to attending to detail, being organized, and planning, highly conscientious individuals typically have an organized support network (McCrae & Costa, 1999). Hence, they have a relatively potentially greater pool of sources away from work with whom to develop new competencies as well as the ability to efficiently and effectively develop them. Consequently, they are more likely than individuals low in conscientiousness to develop competencies away from work that can be carried to work.

Hypothesis 4: FWE is more strongly related to high job performance among high- than low-conscientiousness workers.

Moderating Effect of Perceived Organizational Support

For five decades, theorists have suggested that employees form global perceptions about the level of support provided by their employer and that these perceptions affect their behavior at work (see Cropanzano, Howes, Grandey & Toth, 1997). In the mid-1980s, Eisenberger and his colleagues explicitly addressed this with the introduction of the construct of POS (Eisenberger, Huntington, Hutchison, & Sowa, 1986). POS reflects the "general belief that their work organization values their contributions and cares about their well-being" (Rhoades & Eisenberger, 2002, p. 68) and "may be used by employees as an indicator of the organization's benevolent or malevolent intent in the expression of exchange of employee effort for reward and recognition" (Lynch, Eisenberger, & Armeli, 1999, pp. 469–470). In other words, POS reflects the employee's assessment of the extent to which the organization is "on my side." This assessment, then, yields an estimate of the effort-outcome expectancy that characterizes their exchange with the organization (Masterson, Lewis, & Goldman, 2000).

Perceptions of organizational support may vary as a function of changes in policies and practices that affect workers or as a result of critical incidents signaling organizational support (Erdogan, Kraimer, & Liden, 2004). High levels of POS bring about feelings of trust, organizational identification, and long-term obligations (Rhoades & Eisenberger, 2002). Accordingly, key outcomes of POS include lower withdrawal behavior and higher job performance (Rhoades & Eisenberger, 2002). Although a focus on competency development may be typical among organizations providing high levels of organizational support, we suggest that the moderation effect of POS on relationships between aspects of the work-family interface and job performance likely reflects a motivational rather than an instrumental process because POS affects choices regarding effort levels rather than competency development and application.

As a perception-based attribution of how the organization's policies, procedures, and practices affect employees, POS is an appropriate construct for assessing situational influences that affect motivation. Researchers have discussed the conceptual link between POS and job performance using social exchange theory (Blau, 1964). For example, Eisenberger and his colleagues have asserted that high POS yields a responsibility to recompense the organization for its attention to socioemotional needs (e.g., Armeli, Eisenberger, Fasolo, & Lynch, 1998). In reporting their meta-analysis of the POS literature, Rhoades and Eisenberger (2002) concluded that relationships between POS and work-related outcomes reflected not only the desire to pay back the organization but also the presence of acceptable effort-outcome expectancies. These factors map to Campbell's (1990) three component description of motivation. High levels of POS induce the decision to expend effort at a level necessary to achieve personal goals and compensate the organization as well as to maintain that level of effort and help the organization achieve its goals until the organization is paid back and/or personal goals are achieved.

Hochwarter, Witt, Treadway, and Ferris (2006) recently offered an explanation of the POS–job performance relationship to augment that based on so-

cial exchange theory. They considered POS in terms of resource allocation and suggested that POS provides resources that enable workers to accomplish work objectives. These resources come not only in the form of socioemotional support but also in the forms of equipment, physical assistance, funding, technology, and ideas (Kraimer, Wayne, & Jaworski, 2001). They noted that achieving performance expectations is difficult without such resources. An employee reporting high POS may perceive that management is positioning workers to be successful by providing sufficient resources and facilitating cooperation through recognition and rewards.

Family-Work Conflict

COR theory suggests that a lost resource may be substituted by a second resource of generally equivalent value from another resource domain (Hobfoll, 2001). This substitution minimizes the otherwise negative impact of the stressor on the outcome. Thus, as work resources are lost because of FWC, individuals can substitute resources provided by the organization. Facing high levels of FWC, workers receiving considerable organizational support are likely to maintain their motivation to exert effort and therefore sustain effective performance for at least three reasons. First, POS provides additional resources on which to draw (Hochwarter et al., 2006), which reduces the motivation to conserve resources by withholding effort. Second, POS produces a felt obligation to reciprocate the organization. Third, high POS yields acceptable effort-outcome expectancies. Thus, we are suggesting that POS is likely to function as a buffer to reduce the impact of FWC on performance similar to the manner in which social support ameliorates the negative impacts of stress (e.g., Fried & Tiegs, 1993) and work-family conflict on job attitudes (e.g., Parasuraman, Greenhaus, & Granrose, 1992).

Workers who lack resources (low POS) are most vulnerable to additional losses. As they deplete their resource reserves, they are motivated to conserve resources rather than to spend them and exert effort (Hobfoll, 1989). Hence, the process through which POS moderates the FWC-performance relationship may be motivational in nature: High POS weakens the relationship by providing resources that enable workers to maintain their motivation to exert effort in order to receive favorable evaluations.

> *Hypothesis 5:* FWC is more strongly related to job performance among workers reporting low rather than high POS.

Family-Work Enrichment

FWE is likely to be more strongly related to job performance among workers reporting high rather than low POS. In line with COR theory, workers receiving high levels of organizational support are likely to exert effort to carry over competencies to work because they are motivated to build their bank of resources. Moreover, in line with the social exchange theory and resource-based explanations for the effects of POS, FWE is likely to impact job performance among workers reporting high POS for at least three reasons. First, POS provides greater opportunities for and lower risks of sharing resources developed away from work because situations of high POS yield greater trust and organizational identification. Second, POS produces a felt obligation to reciprocate the organization. Third, high POS yields acceptable effort-outcome expectancies.

Lacking not only low-risk opportunities to share resources developed away from work but also a feeling of obligation to reciprocate the organization and the presence of acceptable effort-outcome expectancies, persons reporting low POS are unlikely to exert much effort to carry over resources from home to the workplace.

> *Hypothesis 6:* FWE is likely to be more strongly related to job performance among workers reporting high rather than low POS.

Control Variables

Empirical research suggests that work-to-family conflict (WFC; i.e., when work responsibilities interfere with family life) is related to job attitudes (e.g., Greenhaus, Parasuraman, & Collins, 2001; Kossek & Ozeki, 1998) and therefore may serve as a potential source of resource loss or gain that affects job performance. Work-to-family enrichment (WFE), which happens when work experiences enhance the quality of family life (Greenhaus & Powell, 2006), may similarly serve as a resource that affects job performance. Emotional stability, which contrasts such traits as nervousness and moodiness versus stability and imperturbability (Goldberg, 1993), is not only an antecedent to work-family conflict (Wayne et al., 2004) but also a resource in both family and work situations because it provides persons with stability

in handling emotions and also helps maintain affirmative emotions (Kinnunen, Vermulst, Gerris, & Makikangas, 2003). Moreover, it has been a fairly consistent predictor of job performance (Barrick et al., 2001).

Method

Sample and Procedure

We collected data from 136 employees (61% women; 62% minorities; age: Mean = 32.91, *SD* = 10.67) employed full-time by a private sector wholesale distribution services organization in the United States. The employees performed either administrative transactions or manual labor involved in pulling/fulfilling customer orders. Forty-nine percent were married or living with a significant other, 47% were responsible for at least one child at home, and 48% were both single and not responsible for any children.

Workers participated voluntarily in the data collection. On our behalf, human resources officials sent memoranda to supervisors requesting that they ask members of their respective business units to participate in our study. We were informed that only three workers available to participate declined the opportunity. Employees were divided into small groups and asked to report to a training room near their work area. Upon arrival, they were informed of the study, provided a chance to ask questions, and given an opportunity to discontinue their involvement.

Supervisors were asked to complete performance ratings at their respective workstations. Before distributing the rating forms, we provided a set of written instructions and conducted brief training sessions to explain the rating protocol to reduce the potential impact of judgment errors. We also explained that performance data were collected for research purposes only. We matched the supervisor and employee data forms using identity numbers derived for the study. Human resources representatives indicated that the demographic characteristics of the sample were consistent with those of the organization population.

Measures

Job performance. As the workers did not have identical jobs, we sought to use performance items that would be relevant to the performance of all participants. In job analysis interviews, we asked interviewees to list behaviors that distinguished poor from good performers in the organization. We then selected or adapted previously used items based on the frequency of interviewee responses and input from HR officials. Six items assessed job performance. Items assessed task performance ("[Employee name] is personally committed to meeting high performance standards"), contextual performance ("[Employee name] maintains a positive attitude when dealing with difficult customers and coworkers"; "[Employee name] maintains a sense of control and poise with demanding people"; "[Employee name] accepts instruction from supervisors without resentment"), and adaptive performance ("[Employee name] adapts readily to changing rules or requirements"; "[Employee name] seeks development through self-teaching"). Supervisors used the following scale: 1 (*weak or bottom 10%*), 2 (*fair or next 20%*), 3 (*good or next 40%*), 4 (*very good or next 20%*), or 5 (*best or top 10%*).

Personality. We used the 10-item versions of the Conscientiousness and Emotional Stability scales of Goldberg's (1999) Big Five factor markers in the International Personality Item Pool. Items were rated on a 5-point scale from 1 (*very inaccurate*) to 5 (*very accurate*).

POS. We measured POS with the 9-item, short form version of the Survey of Perceived Organizational Support (Eisenberger, Fasolo, & Davis-LaMastro, 1990). Workers completed items (e.g., "Help is available from management where I work when I have a problem") on a 5-point, Likert-type scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*), which was also the response scale used to measure the aspects of the work-family interface listed below.

Work-family conflict. We used Carlson, Kacmar, and Williams' (2000) 9-item (e.g., "The time I spend with my family often causes me to not spend time in activities at work that could be helpful to my career") FWC scale and 9-item (e.g., "My work keeps me from my family activities more than I would like") WFC scale.

Work-family enrichment. Greenhaus and Powell (2006) noted that whereas validated measures of work-family enrichment are nonexistent, some of the existing measures of positive spillover adequately reflect their conceptualization of enrichment. Because they suggested that Kirchmeyer's (1992) role privileges and security subscales did not fall under what they considered to be work-family enrichment, we only used her personal enhancement and status enhancement subscales. Hence, we adapted eight items (e.g., "My family life helps me understand the people at work better") from Kirchmeyer's (1992) positive spillover from nonwork to work scale to assess FWE. Based on the literature and interviews with job incumbents and HR officials, we developed an 11-item scale to assess WFE. In order to ensure that these two constructs were capturing unique dimensions of enrichment, we used LISREL 8.71 to conduct a confirmatory factor analysis of the two dimensions, FWE and WFE. We estimated a 2-factor model with the eight items loading on the FWE factor and 11 items loading on a second WFE factor. The model fit the data (CFI = .90, NNFI = .89, RMSEA = .12, $\chi^2(151) = 427.53$, $\chi^2/df = 2.83$). However, the modification index suggested that two WFE items wanted to load on the FWE factor. Removing these two items from the 11 item WFE scale resulted in improved model fit (CFI = .94, NNFI = .93, RMSEA = .089, $\chi^2(118) = 245.00$, $\chi^2/df = 2.08$). Furthermore, these two factors were correlated at .34. Thus, we retained the eight items of the FWE scale and nine items for the WFE scale to represent the two dimensions of enrichment. The WFE items can be found in the Appendix.

Demographic variables. Employees indicated their gender, age, minority status, marital status, and number of children at home.

Results

Because some of the supervisors rated more than one subordinate, we tested for the possibility of a violation of the assumption of independence. Following Kenny, Kashy, and Bolger (1998), we conducted an ANOVA in which the independent variable was supervisors who reported on more than one subordinate, and the dependent variable was the supervisor ratings of job performance. The results of this analysis indicated that the assumption of independence was not violated (F 18, 108 = 1.42, *ns*).

Table 1 presents the means, standard deviations,

Table 1
Means, Standard Deviations, Intercorrelation Matrix, and Reliability Estimates

Variable	Mean	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Job performance	3.41	.83	[.86]												
2. Family-to-work conflict	2.22	.71	−.31***	[.85]											
3. Conscientiousness	3.69	.66	.31***	−.25**	[.78]										
4. Perceived organizational support	3.35	.89	.26**	−.11	.01	[.92]									
5. Gender	1.60	.49	.06	−.14	.01	.05	—								
6. Minority status	1.62	.49	.01	−.07	−.02	.33***	.22	—							
7. Age	33.05	10.81	.09	−.10	.18*	−.24**	.03	−.18*	—						
8. Number of children	1.87	1.09	−.12	.08	.18*	−.10	.06	−.08	.00	—					
9. Marital status	1.49	.50	−.02	−.07	.05	−.17*	−.16	−.29***	.37***	.22*	—				
10. Work-to-family conflict	2.61	.79	−.15	.54***	−.27**	−.22**	−.22**	−.15	−.01	−.00	−.11	[.82]			
11. Emotional stability	3.25	.88	.17*	−.29**	.37***	.15	−.08	.05	−.02	.16	.08	−.28**	[.87]		
12. Family-to-work enrichment	3.23	.58	.02	.14	−.06	.27**	−.02	.12	−.21*	−.14	−.15	.05	.12	[.86]	
13. Work-to-family enrichment	3.12	.67	.01	.26**	−.12	.43**	.12	.13	−.11	−.08	−.13	−.00	−.05	.52**	[.85]

Note. Reliability estimates (Cronbach's α) are presented in the diagonal. Gender: 1 = men; 2 = women; Minority status: 1 = non-minority; 2 = minority. Marital status: 1 = single, divorced, or widowed; 2 = married.
* $p < .05$. ** $p < .01$. *** $p < .001$.

correlations, and reliability estimates. As shown there, FWC ($r = -.31$, $p < .001$), Conscientiousness ($r = .31$, $p < .001$), and POS ($r = .26$, $p < .01$) were significantly related to the performance ratings, whereas WFC ($r = .15$, $p < .10$), FWE ($r = .02$, *ns*), and WFE were not ($r = .01$).

We conducted hierarchical moderated multiple regression analyses to test the hypotheses. We centered the predictors prior to conducting the analyses to minimize the influence of multicollinearity among the interactions and main effects (Aiken & West, 1991). We present the resulting standardized regression coefficients in Table 2.

We entered at step 1 the control variables—WFC, WFE, and Emotional Stability. They did not account for a significant amount of variance (total adjusted $R^2 = .02$, *ns*). At step 2, we entered the main effects of the moderators—Conscientiousness and POS. Their addition contributed unique variance ($\Delta R^2 = .13$, $p < .001$; total adjusted $R^2 = .14$, $p < .001$), and both coefficients were significant (Conscientiousness: $\beta = .29$, $p < .001$; POS: $\beta = .30$, $p < .001$). We entered the main effects of FWC and FWE at step 3. Collectively, they added incremental variance over-and-above the variance accounted for by the control variables and the main effects of the moderators ($\Delta R^2 = .05$, $p < .01$; total adjusted $R^2 = .18$, $p < .001$). However, only the coefficient of FWC was significant (FWC: $\beta = -.28$, $p < .01$; FWE: $\beta = .00$, *ns*). These results are consistent with Hypothesis 1 regarding the negative relationship between FWC and job performance. However, the results are inconsistent with Hypothesis 2 regarding the relationship of FWE to job performance.

We entered the cross-product terms at step 4. The set of two-way interactions accounted for significant incremental variance in job performance over-and-above the variance explained by the main effects ($\Delta R^2 = .06$, $p < .05$; total adjusted $R^2 = .22$, $p < .001$). The FWC × Conscientiousness ($\beta = -.19$, $p < .05$) and FWC × POS ($\beta = .19$, $p < .05$) interaction terms added significant variance providing support for Hypotheses 3 and 5. The FWE × Conscientiousness ($\beta = -.06$, *ns*) and FWE × POS ($\beta = -.05$, *ns*) interaction terms did not add significant variance. Thus, the results were inconsistent with Hypotheses 4 and 6.

We followed Aiken and West's (1991) procedure to graphically depict the forms of the significant interactions. Figures 1 and 2 present the plots of the FWC × Conscientiousness and FWC × POS interactions, respectively. Figure 1 indicates a negative relationship between FWC and job performance

Table 2
Regression Analyses Results for the Work-Family Interface and Job Performance

Variables	Step 1	Step 2	Step 3	Step 4
Step 1: Control variables				
Work-to-family conflict (WFC)	−.11	.00	.13	.14
Work-to-family enrichment (WFE)	.01	−.11	.00	.04
Emotional stability	.14	.01	−.02	−.04
Step 2: Main effects of moderators				
Conscientiousness		.29**	.28**	.23**
Perceived organizational support (POS)		.30**	.26**	.26**
Step 3: Main effects of family-to-work predictors				
Family-to-work conflict (FWC)			−.28**	−.28**
Family-to-work enrichment (FWE)			.00	.02
Step 4: Hypothesized 2-way interactions				
Family-to-work conflict × conscientiousness				−.19*
Family-to-work conflict × POS				.19*
Family-to-work enrichment × conscientiousness				−.06
Family-to-work enrichment × POS				−.05
ΔR^2		.13***	.05*	.06*
Total adjusted R^2	.02	.14***	.18***	.22***

Note. The standardized regression coefficients are presented.
* $p < .05$. ** $p < .01$. *** $p < .001$.

among workers at high and average levels of conscientiousness; the simple slopes were significantly different from zero ($t = -3.06$, $p < .01$ and $t = -2.51$, $p < .01$, respectively; Aiken & West, 1991). Conversely, the slope of the regression line of the workers low in conscientiousness was not significantly different from zero ($t = -.39$, *ns*). Thus, congruent with Hypothesis 3, FWC may have affected job performance only among workers at average and high levels of conscientiousness. Figure 2 indicates a negative FWC-performance relationship among workers reporting low and average levels of POS; the simple slopes were significantly different from zero ($t = -3.12$, $p < .01$ and $t = -2.50$, $p < .01$, respectively; Aiken & West, 1991). Conversely, the slope of the regression line of the workers reporting high levels of POS was not significantly different from zero ($t = -.94$, *ns*). Thus, consistent with Hypothesis 5, FWC may have affected job performance only among workers reporting low and average levels of POS.

Discussion

We described a motivational process through which high levels of FWC lead to low levels of job performance. Based on COR theory, we argued that: (a) time pressures, strain, and behavioral constraints characteristic of high levels of FWC lead to a loss or threat of a loss of personal resources; (b) as resources approach or reach minimally acceptable levels, individuals are unlikely to expend and maintain high levels of effort at work because they are motivated to conserve personal resources; and (c) the decreased job effort leads to reduced job performance. Therefore, we predicted a negative relationship between

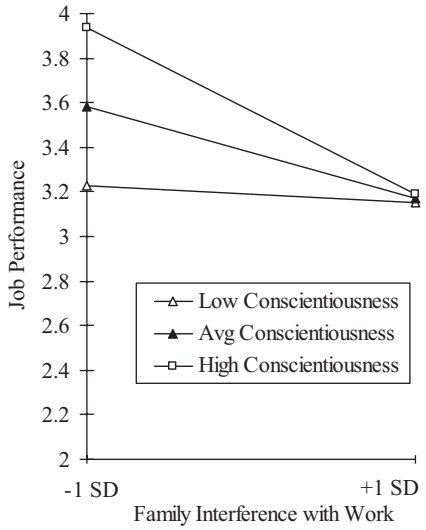

Figure 1. Job performance regressed on family to-work conflict scores across low, average, and high levels of conscientiousness.

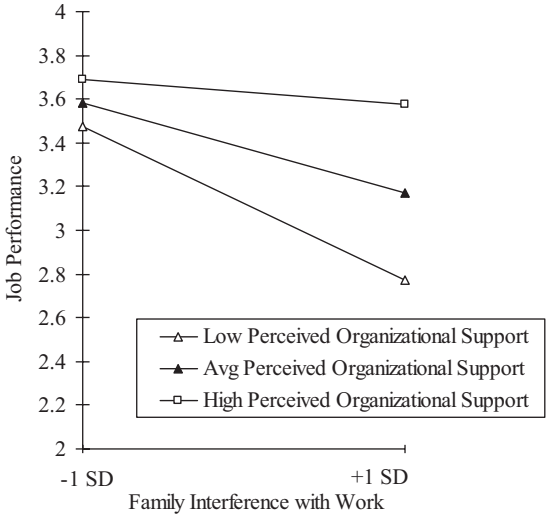

Figure 2. Job performance regressed on family to-work conflict scores across low, average, and high levels of perceived organizational support.

FWC and job performance. The results were consistent with this prediction, thereby replicating previous work indicating a link between FWC and self-reported performance and extending previous research to find this with FWC data obtained from workers and job performance data gathered from supervisors.

In developing our hypotheses, we described motivational processes through which Conscientiousness and POS moderate the FWC-job performance relationship. We predicted that FWC has the greatest impact on the highly motivated, conscientious workers because they are already spending high levels of resources in both family and work roles. We suggested that at high levels of FWC, conscientious workers do not persist at the previous level of effort and therefore accept a reduction in overt performance in order to prevent a loss spiral of resources. In contrast, the impact of FWC on performance is low among low-conscientiousness workers because they generally are not as motivated to spend resources in the first place. We predicted that there is a substitution effect for POS at high levels of FWC. That is, workers experiencing high FWC but receiving considerable organizational support are likely to maintain their motivation to exert effort and therefore sustain effective performance because POS provides: (a) additional resources on which to draw, (b) a felt obligation to reciprocate the organization, and (c) an acceptable effort-outcome expectancy. In contrast, workers reporting low POS are vulnerable to additional losses and possess relatively low levels of motivation to exert effort. Therefore, they are motivated to conserve resources rather than to spend them when experiencing high FWC. Thus, we predicted that FWC is more strongly related to job performance among workers reporting low rather than high POS. The results were consistent with these predictions.

We argued that FWE may affect job performance through both instrumental and motivational processes. We suggested that competencies developed at home may yield more effective job performance when expressed at work and that individuals are motivated to express these competencies because they are motivated to build their bank of resources. We also proposed that FWE is more strongly related to job performance among highly conscientious workers because not only are they more likely to develop more competencies at home than workers low in conscientiousness, but also they are more motivated to achieve resources at work than their less conscientious colleagues. Furthermore, we predicted that FWE is more strongly related to job performance among workers reporting high rather than low POS. These predictions were not supported by the data.

We offer two possible explanations for the lack of a significant finding between FWE and supervisor-rated job performance. First, the measures of enrichment may not have accurately captured this complex

process. As we noted previously, the construct of enrichment has been conceptually and empirically underdeveloped (Frone, 2003; Greenhaus & Powell, 2006). Second, conflict and enrichment are distinct concepts and may operate differently (Bellavia & Frone, 2005; Frone, 2003; Grzywacz, 2000). Although conflict may have direct behavioral outcomes (e.g., reduced performance) because of resources losses, FWE may have indirect effects on performance. Perhaps enrichment impacts attitudinal variables, such as satisfaction or commitment, but has a much lower magnitude of effect for behavioral variables, especially those observed by another party as in this study.

Strengths and Limitations

The present study may have at least seven strengths. First, this is the first study of which we are aware that investigated the relationships of self-reported FWC and FWE with supervisor-rated job performance. The FWC literature has demonstrated links between self-reported FWC and self-reported work-relevant outcomes (e.g., Aryee, 1992). By linking FWC with supervisor-rated job performance, we provided evidence that previous findings of this important relationship may not have reflected method variance alone. Second, we brought together elements of the work-family, COR, POS, and personality literatures to develop the conceptual foundation of the study. By doing so, we were able to identify when FWC is related to job performance and what other factors play a role.

Third, FWC accounted for unique variance in performance ratings over-and-above the variance accounted for by the control variables—Emotional Stability, WFC, and WFE—and the main effects of Conscientiousness and POS. This suggests that feeling stress in general (low emotional stability), stress from WFC, enrichment from work to the family (WFE), conscientiousness, and POS are not what only predicts the ratings. Thus, the results provide some support for our explanation that a lack of resources in the work domain because of WFC may reduce motivation and job performance, particularly among conscientious workers and among workers reporting low POS. This may be an important contribution to the work-family literature because it has confirmed that the integration of work and family demands as manifested in FWC is indeed related to performance and identified when it is.

Fourth, our performance measure included task, contextual, and adaptive performance components, which allowed us to more fully assess the link between FWC-induced resource losses and performance outcomes than we would have had we focused only on task performance. Fifth, because of the nature of the work, it is unlikely that the participants in the sample were working at home or on off-hours. Hence, the sample may have permitted an appropriate test of the scarcity hypothesis-based predictions. Sixth, whereas much of the research examining work and family has been based on managerial samples, our participants were nonmanagers.

Seventh, to test our application of COR theory on interactive relationships of the work-family interface with variables reflecting aspects of the situation and the person, we used as moderators two variables prominent in the motivation and job performance literatures. Conscientiousness is the considered the most important trait-based motivation variable in the field (Schmidt & Hunter, 1992). A considerable stream of literature has emerged over the last to decades indicating that POS is one of the most important situational indicators of motivation (see Rhoades & Eisenberger, 2002). By considering these widely studied constructs, we were able to link constructs representing the work-family literature to the broader job performance literature.

We emphasize five limitations of the present study. As we were unable to collect data longitudinally, we were unable to make statements about causal direction. Pressures associated with maintaining high levels of performance may increase sensitivity to FWC. Second, the generalizability of our results may be limited because of our single sample. However, consistent with previous research, we found that conscientiousness and emotional stability (Barrick et al., 2001) as well as POS (Rhoades & Eisenberger, 2002) were positively related to job performance and that individual differences moderated relationships between situationally defined levels of resources and outcomes (e.g., Riolli & Savicki, 2003; Witt et al., 2004). These outcomes provide some confidence that our sample and data were not wildly unrepresentative of other samples and data. Third, our sample consisted of 65 people who were not married and did not have children. Although family can be viewed in a much broader context than marriage and children, future research should consider the definition of family and the role that different family demands play. Fourth, the performance measure used was a forced distribution measure, which may have both advantages and disadvantages (see McBriarty, 1988; Scullen, Bergey, & Aiman-Smith, 2005). However, we provided rater training, and as we mentioned

above, the correlations found in the present study are consistent with the correlations reported in the literature. Fifth, in the absence of validated measures of work-family enrichment (Grzywacz & Butler, 2005), we used a measure of positive spillover as a proxy for FWE. We emphasize that limitations associated with our FWE measure may account for our failure to find a relationship between FWE and job performance.

Opportunities for Future Research

Beyond replication and longitudinal data collection, we offer four suggestions for future research. First, we encourage researchers to consider additional personality variables and workplace perceptions when studying links between the work-family interface and performance outcomes. One personality characteristic that shows promise is the concept of self-evaluations and its role in this process (Friede & Ryan, 2004). Furthermore, the use of domain-specific measures of support, such as Allen's (2001) family supportive organizational perceptions (FSOP) scale, would closely link support of the work-family context to performance and provide another perspective of how aspects of the situation impact the FWC-performance link. Second, research is needed to explicitly measure the different processes—motivational and instrumental—that link conflict and enrichment with work-related outcomes (Greenhaus & Powell, 2006). Based on arguments by Greenhaus and Powell, we expect that these processes operate differently. Understanding the process that is occurring could be critical to developing the work-family literature. Third, work investigating links between both directions of enrichment and other work-related outcomes is needed. Whereas enrichment was unrelated to performance as we measured it, it may be important to other aspects of work, such as withdrawal behaviors. Further, it is important to consider the magnitude of effects in determining the role that enrichment has on the work domain. Fourth, efforts to investigate the role of job demands—work schedules (e.g., defined hours vs. response-to-need service delivery), emotional labor, creativity or cognitive requirements, and physical demands—on the relationships between the work-family interface and job performance may help further elucidate the nature of these relationships.

Conclusion

Previously, we asked, "Among whom and when are FWC and FWE related to job performance?" We conclude that high levels of FWC may lead to low levels of job performance because workers are motivated to conserve resources and that this relationship is particularly characteristic of the highly conscientious workers who tend to spend high levels of resources at home and work. Moreover, we conclude that high levels of organizational support can reduce the negative impact of FWC on job performance because high levels of organizational support reduce the motivation to conserve personal resources among workers experiencing high levels of FWC. Our findings of significant effects on job performance for FWC but null effects for FWE confirm that these are distinct concepts and likely have different antecedents. We also conclude that more conceptual and empirical work is needed before we can identify the existence and nature of the links of FWE with both FWC and job performance.

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Appendix

Work-to-Family Enrichment Scale Items

1. My job develops skills in me that are useful at home.
2. Values that I learn through my work responsibilities assist me in fulfilling my family responsibilities.
3. Having a supportive work environment helps me to face the difficulties outside of work.
4. Work makes disappointments at home seem easier to take.
5. I often have a positive attitude toward my family as a result of my job.
6. Having a successful day at work puts me in a good mood to handle my family responsibilities.
7. Spending time at work helps me to relieve the stress I feel from home.
8. My job energizes me so I can tackle the challenges of my family.
9. I have had greater confidence in my ability to handle family responsibilities because I have been able to handle my job responsibilities well.

Received August 8, 2005
Revision received June 1, 2006
Accepted June 17, 2006 ■