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A closer look at the work hours and work/family relationship: The moderating and enhancing effects of fit

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A Closer Look at the Work Hours and Work/Family Relationship:
The Moderating and Enhancing Effects of Fit

by

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A thesis submitted in partial fulfillment
of the requirements for the degree of
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To my Dad-
who, despite my best efforts,
managed to teach me some of life's
most important lessons.

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ABSTRACT

Managing the conflict between work and family role demands is a critical issue that has generated substantial interest for both individuals and organizations in recent decades. One factor thought to contribute to the occurrence of work-family conflict (WFC) is the amount of time committed to activities in either the family or to the work domain. Because time is a finite resource, it has been posited that when one dedicates a certain amount of time to one domain, this will invariably take away from the amount of time available for activities in the other domain. The result of this is conflict between the domains of work and family (Greenhaus & Beutell, 1985). However, the relationship between time at work and work-family conflict is not always this clear. In the current study, it was proposed that work schedule fit is a moderator of the relationship between working hours and both forms WFC. That is, the nature of the relationship between the amount of time spent at work and WFC depends, in part, on perceived work schedule fit.

Recent research has gone beyond the notion of the work and family domains existing in perpetual conflict and has begun to focus on how these two domains can benefit each other. It has been argued that certain resources gained in the work domain can be beneficial to the family domain, and vice-versa (Greenhaus & Powell, 2006). Furthermore, affective states in one domain can spill over to the next, which could have both positive and negative consequences. In the current study, it was proposed that work schedule fit is a resource that facilitates both positive spillover from work and positive spillover from the family.

Hypotheses were tested using moderated multiple regression and zero-order correlations. Support was not found for proposed moderator hypotheses, however support for mediation was found in exploratory analyses. Support was also found for the proposed relationship between work schedule fit and both positive spillover from home and positive spillover from work. Implications of these findings are discussed.

Introduction and Literature Review

The construct of work-family conflict has roots that reach far back in history. Prior to the industrial revolution, work was primarily done at home, making work and non-work life virtually inseparable. The concept of work and family as distinct domains, each with the possibility of interfering with the other, did not exist in the same manner as it does today. Since then, however, industry has moved out of the home. Most jobs now require time away from the family. This creates the potential for conflict between the domains of work and family. Although this potential has grown throughout the decades, the reasons for its emergence are not quite so apparent.

Definition of Work-Family Conflict

The most commonly used definition of work-family conflict (WFC) states that it is “a form of inter-role conflict in which the role pressures from the work and family domains are mutually incompatible in some respect. That is, participation in the work (family) role is made more difficult by virtue of participation in the family (work) role” (Greenhaus & Beutell, 1985).

Directionality of work-family conflict. There are two directions in which work-family conflict can occur. Family time and activities can interfere with work time and activities (FIW) or work time and activities can interfere with family time and activities (WIF). An example of FIW is when an employee is tired and unproductive at work due to caring for a crying baby at home the night before. An example of WIF is when one must miss a child’s soccer game due to an impending deadline at work. The distinction between the two directions of conflict has been supported in previous research (e.g., Frone, Russell, & Barnes, 1996; Gutek, Searle, & Klepa, 1991).

Facets of work-family conflict. The construct of work-family conflict can further be broken down into three categories: time-based conflict, strain-based conflict, and behavior-based conflict (Greenhaus & Beutell, 1985). Time-based conflict occurs when the amount of time spent on activities in one domain inhibit the time available for responsibilities in the other domain. An example of this is when one does not have enough time to make a healthy meal for the family due to a project at work that requires working overtime. Strain-based conflict occurs when the pressures in one domain make it more difficult to fulfill responsibilities in the other domain. This would be the case when a sick child at home makes it difficult to concentrate at work. Lastly, behavior-based conflict occurs when behaviors that are necessary in one domain are incompatible with behaviors exhibited in the other domain. For example, methods used to deal with conflict between one's children may not be useful in dealing with conflict between co-workers. Although this form of conflict is often discussed, empirical research supporting its usefulness is lacking (Greenhaus & Beutell, 1985).

Scope and Organization of Review

The literature review that follows covers many theories and factors associated with the work and family literature. First, outcomes associated with WFC are discussed to highlight the importance of this research. Second, working hours and issues associated with its utility as a variable are discussed. Current theories regarding working hours are explained, and research on its relationship with other variables is documented. Next, Barnett's (1998) model for conceptualizing work-family conflict is introduced. Family adaptive strategies are then examined within the context of this model. A second part of the model, fit, is then discussed at length, along with previous research on this particular

construct. This is followed by a brief summary of the literature on time and fit variables, along with hypotheses of the relationship between time, fit, and WFC. Research on positive spillover, along with hypotheses of this construct's relationship with fit, is then provided before the current study is introduced.

Work-Family Conflict Outcomes

The importance of research on work-family conflict has increased over the past few decades for a variety of reasons. Among them is its linkage with various negative outcomes. These outcomes can be detrimental to the individual, the family environment, and the work environment.

Outcomes for the individual. Most of the individual-level outcomes of work-family conflict focus on the physical and mental health of the individual, as well as overall well-being. Effects of WFC have been explored regarding stress levels (Kelloway, Gottlieb, & Barham, 1999; Allen, Hurst, Bruck, & Sutton, 2000), general psychological distress (Grzywacz, 2000; Allen et al., 2000), alcohol and cigarette usage (Frone, et al., 1996), depression levels (Allen et al., 2000), and clinical mood and anxiety disorders (Frone, 2000). More general effects such as general mental health and well being (Grzywacz, 2000) and dissatisfaction with life (Adams, King, & King, 1996; Kossek & Ozeki, 1998) have also been studied. These studies have all shown relations between individual stressors and both forms of WFC. In regards to the health of the worker, both forms of WFC have also been shown to relate to chronic health problems and poor physical and overall health (Grzywacz, 2000; Frone et al., 1996). Lastly, in a meta-analysis conducted by Allen et al. (2000), a weighted correlation of $r = .42$ was found between WFC and burnout across 10 different studies.

Outcomes related to the family. Many outcomes in the work-family conflict literature have to do with the family environment. Both directions of WFC have been shown to predict less family satisfaction (Allen et al., 2000; Frone, Yardley, & Markel, 1997). Also, work interfering with family has been found as a predictor of increased parental overload, less emotional support, and decreased performance in the family role (Adams et al., 1996; Frone et al., 1997; MacEwen & Barling, 1994). For example, Allen et al. (2000) found weighted correlations of $r = -.23$ and $.31$ between WFC and marital satisfaction and family related stress, respectively.

Outcomes related to work. The work domain has also been studied as a source of outcomes in the work-family literature. One of the most consistent findings is that both forms of WFC predict lower levels of job satisfaction (e.g., Allen et al., 2000; Kossek & Ozeki, 1998). Also, family interfering with work has been shown to predict greater amounts of job distress (Frone, Russell, & Cooper, 1992a; Frone et al., 1997), work overload, absenteeism, and turnover (Kelloway et al., 1999) and decreased work performance (Frone et al., 1997; MacEwen & Barling, 1994). Furthermore, Allen et al. (2000) found weighted correlations of $r = -.23$, $-.12$, $.29$, and $.41$ between WFC and organizational commitment, job performance, intention to turnover, and work-related stress, respectively. These negative outcomes highlight the importance of research on work-family conflict and provide rationale for the study of its causes.

Work Hours

Time has traditionally been regarded as a major component in the work-family literature. The underlying theory is that both workplaces and families make a host of demands on the employee. As the work or family domain increases its demands, workers

will extend their time limits to meet those demands, and conflict will increase. Given this particular argument, it is easy to understand the appeal of focusing on work hours as the culprit that produces conflict between work and family. Indeed, organized labor fought one of its first occupational health battles over reducing work hours (Barnett, 1998). This focus on work hours has the additional advantage of being easily communicated to decision makers who have the power to change working conditions. Although this argument has great simplicity, the reality is far more complex.

Hour mismatches. Individuals have different preferences for working hours based on personal characteristics such as age, gender, family structure, and economic status. However, actual hours are mostly based on job and organizational characteristics (Reynolds, 2003). Hour mismatches exist when employers and workers have different preferences for working hours. There are many serious consequences when employees are unable to work a preferred number of hours (Reynolds, 2003). For example, employees who report working too many hours may feel overworked, and overworked employees are more likely to resent co-workers and employers, make detrimental mistakes, have poor health, look for a different job, and experience work-family conflict (Galinsky, Kim, & Bond, 2001). Working fewer hours than preferred has been linked with lower self-esteem (Prause & Dooley, 1997), less organizational citizenship behavior (Stamper & Van Dyne, 2001), alcohol abuse (Dooley & Prause, 1998), and depression (Dooley, Prause, & Ham-Rowbottom, 2000).

Some studies suggest that hour mismatches are becoming more common in the U.S. (Jacobs & Gerson, 2000). This may be due to the increasing percentage of dual-earner families who need to coordinate work schedules in order to provide consistent

childcare, or to increasing numbers of single parents looking for ways to spend time with their families. Interestingly, some studies have also found that family structures (i.e. single parents, dual-earners with children) associated with greater work-family conflict are not associated with a desire for fewer working hours (Reynolds, 2003).

Work hours and distress. Another popular theme in the literature on work-family conflict is that putting in long hours or not enough hours will have negative consequences for those who struggle to balance the domains of work and family (Reynolds, 2003). It has further been argued that time committed to work will contribute to conflict between the work and non-work domains (Gutek et al., 1991). The popularity of this conflict perspective stems from the scarcity hypothesis, which assumes that individuals have limited time and energy. Therefore, occupying multiple roles creates inter-role conflict and role overload, which in turn cause various distress outcomes (Coser, 1974; Marks, 1977). However, although time is a central component in much of the work-family research, there are very few studies measuring time as a focus variable. For example, Major, Klein, and Ehrhart (2002) reviewed over 130 quantitative studies on WFC over the last 15 years, but were able to find only 10 that used work hours as an independent variable.

What little research has been done relating work hours to distress outcomes has yielded contradictory results. Empirical findings relating the absolute number of work hours to a wide range of outcomes are quite inconsistent, even after controlling for such variables as social class, gender, age, spouse's presence at home, spouse's employment status, household income (Barnett, 1998), and schedule flexibility (Major et al., 2002). In addition, some studies have found a positive relationship between work hours and

distress. For example, Staines and Pleck (1983) found that working more hours per week on the job was associated with scheduling difficulties at home, while other researchers reported that longer hours on the job related to reports of work/family strain and the perception that paid work interferes with family hours (Gutek, et al., 1991; Major et al., 2002; Staines & Pleck, 1983).

On the other hand, work hours has been linked to various positive outcomes. For example, compared with employees who work fewer hours, those who work longer hours reported better physical health (Bird & Fremont, 1991) and lower levels of psychological distress (Barnett, Raudenbush, Brennan, Pleck, & Marshall, 1995; Barnett & Shen, 1997). Emmons, Biernat, Tiedje, Lang, and Wortmant (1990) also found that in a sample of professional women with preschool-age children, almost half reported that not being able to spend as much time at work as they should was a problem "often" or "all of the time." Furthermore, in direct contrast to the Gutek et al. (1991), Major et al. (2002), and Staines and Pleck (1983) studies, Brett and Stroh (2003) found that those working the longest hours were the *least* stressed by the family in a sample of managers working long hours.

Other studies have reported no significant relationship between time on the job and such diverse outcomes as marital tension, psychological distress, quality of life indicators, marital companionship, self-reported happiness, work commitment, job satisfaction, role conflict, perceived control, and quality of home environment (Barnett & Gareis, 2000; Crohan, Antonucci, & Adelman, 1980; Gareis & Barnett, 2002; Hughes, Galinsky, & Morris, 1992; Menaghan & Parcel, 1991; Parcel & Menaghan, 1990, 1993).

The presence of such counterintuitive and contradictory findings suggests that there may be moderators at play in the relationship between work hours and work-family conflict.

Barnett's Work/Family Model

Barnett (1998) recently proposed a new model for research in the work and family field. In the model, there are four main sets of variables: distal conditions, proximal conditions, fit, and outcomes. Distal conditions refer to elements that tend to constrain or expand options for the worker and include social, economic, and attitudinal factors, as well as workplace policies and practices and job conditions. Proximal conditions involve the context in which workers develop certain family adaptive strategies, along with worker characteristics that might affect these strategies (e.g., demographics, options in the workplace). The degree that workers realize their family adaptive strategies given the proximal and distal conditions is referred to as fit. Lastly, outcomes refer to any of the range of dependent variables in work/family research.

Family adaptive strategies. According to Barnett (1998), a family adaptive strategy refers to the notion that workers will generate a distinct plan for meeting their needs and goals. Family adaptive strategies have been defined as “the actions families devise for coping with, if not overcoming, the challenges of living, and for achieving their goals in the face of structural barriers” (Moen & Wethington, 1992). For example, a young couple with jobs that offer little chance for promotion and several children to raise may have a strategy where the children are enrolled in an affordable child care facility, the father works full-time, and the mother works part-time while attending night classes at a university. Weekend time would then be negotiated in such a way that commitments to other family members, friends, and other people or organizations can still be kept.

Barnett argues that these strategies may change according to proximal conditions such as the worker's needs. These may include biological (e.g., health), psychological (e.g., aspirations, recognition), and economic (i.e., financial) needs. It is further argued that needs may change according to characteristics of the worker. For example, a young, highly educated, white male may have entirely different needs than a poorly educated, minority female. Barnett also argues that these strategies may change according to distal factors. Macroeconomic factors such as the unemployment rate, affordability of health care and child care, and cultural norms certainly have an impact on workers' strategies. Factors at the workplace level, such as policies, flexibility, and benefits, may also have an impact. Finally, job conditions, such as wages, occupational health and safety, and job security will likely have an impact on one's family adaptive strategy.

Fit within Barnett's model. "Fit" is proposed by Barnett (1998) as a mediator between the proximal and distal conditions and certain outcomes. It is argued that when available workplace options permit workers to obtain their adaptive strategies, workers will experience compatibility, and when workplace options do not allow workers to realize their strategies, conflict will emerge.

The Importance of Fit

One of the main benefits of using fit as a variable is that it is more inclusive than strictly using working hours to assess time in the work domain. Most studies of the relationship between time at work and WFC use only a single-source, objective measure of time (i.e., Major et al., 2002). However, fit goes beyond the traditional objective measures of time and focuses not only on employees' own perceptions of their time at work, but also employees' perceptions of how their work time affects their spouse and/or

child(ren). This is important because most employees live in dyads, with stressors from one partner's job affecting distress levels of the other partner (Barnett & Brennan, 1995, 1997). Also, most decisions about working hours are made at the family level (Barnett, Gareis, & Brennan, 1999).

Fit research. The current study examines the idea of fit as it applies to time- and strain-based WFC. According to Barnett et al. (1999), most research on time-based WFC argues that there is inevitable conflict between the work and family domains because time is a limited resource. The concept of fit proposes that conflict is not inevitable, as it may only occur (or may occur more often) when employees perceive their time as not being allocated in a desired manner. This supports the argument that in order to fully understand the significance of a person's actual work hours, we must also know something about the number of hours he or she would prefer to work (Clarkberg & Moen, 2001). If this is the case, it may be more useful for employers to focus on the employee's subjective schedule fit over the allocation of sheer number of hours when making new policies.

Previous research has shown that work schedule fit (or work/family fit), a construct adopted from Barnett's (1998) original idea of fit, is a useful construct to assess perceptions of one's time at work. In one study with marital tension as the outcome variable, a husband's actual work hours were unrelated to marital tension. However, there was strong support for fit as a mediator (Pittman, 1994). The findings suggest "first, that there is no true relation between work hours and marital quality, and, second, that work/family fit can be viewed as a reliable mediator of the effects of husband's work factors on marital tension for both spouses" (p. 207). From the perspective of each spouse

separately, "work/family fit clearly mediates the relation between husband's work factors [e.g., work hours] and each spouse's report of marital tension" (p. 201). One limitation of the study was that the sample was comprised solely of Army personnel. There were also too few Army women available for the dataset, so results could only be interpreted from the perspective of the male worker. Lastly, the participants were all salaried workers. Therefore, working hours may not have had the same effect as it would for hourly workers, where benefits and financial rewards are a direct function of time spent working. These factors make the generalizeability of the study findings questionable.

Barnett et al. (1999) used the idea of fit in a study to test whether it mediates the relationship between work hours and burnout. Using structural equation modeling, they found support for their hypothesis. They concluded that "employees whose work hours are more or fewer than they and their partner prefer and whose work hours are distributed differently than they and their partner prefer will be more disengaged, distracted, and alienated at work than will their counterparts who are working their preferred schedules" (p. 307). Furthermore, they argued that "the relationship between number of hours worked and burnout depends on the extent to which work schedules meet the needs of the worker, her or his partner, and their children, if any" (p. 307). While these conclusions lend support to the importance of Barnett's (1998) concept of family adaptive strategies, the study itself had many limitations. First, although the relationship between work hours and burnout was reduced when fit was controlled, a significant relationship still existed. Also, the substantive conclusion was that the nature of the relationship between work hours and burnout *depends* on work schedule fit. According to Stone (1988), "moderators are implied whenever a theory, model, or perspective argues that a

relationship between two variables is contingent on the value of a third variable” (p. 192). Therefore, it seems as though fit would have been better classified as a moderator than a mediator in this particular study. Using the best description of a relationship between the variables will help minimize the inconsistent findings in the literature. Also, the sample was comprised of 141 married physicians with reduced working hours in the Boston area. There was also no variation in the marital or parental status of the subject pool. Furthermore, the majority (82%) of the respondents were female. These factors, when taken together, undermine the study’s generalizeability.

Another study by Gareis and Barnett (2002) used schedule fit to test perceptions of time at work in a sample of full-time and part-time doctors. Using multiple regression analyses, they concluded that schedule fit was better than objective work hours and perceived job demands in predicting psychological distress, and that employees with good schedule fit reported no more distress if they worked longer or shorter hours than average. However, the subject pool was composed entirely of females in the medical field, and therefore its generalizeability is suspect.

These studies lend support to the argument that factors other than objective number of hours in a domain should be examined (e.g., Barnett & Gareis, 2000; George & Brief, 1996; Thompson & Bunderson, 2001; Wallace, 1997) in the work-family conflict literature. As yet, there is little known about the conditions under which long hours are associated with work-family conflict. The present study looks to contribute to this field of research.

Summary of Work Hours and Fit Research

Although the effect of time on work and family related variables has been well documented, there are many important topics that still must be addressed and others that need clarification. As discussed previously, there is limited research on work hours as a major variable (Major et al., 2002) and what research does exist is mostly inconsistent. Furthermore, work hours are mostly thought of as detrimental to the family; however, most measures of time at work are objective and single-source (Major et al., 2002). The reason that work hours are seen as the culprit may be due to the fact that employees' *perceptions* of their time at work are not being taken into account. It is generally assumed that more time on the job leaves less time for personal matters, which then leads to work-family conflict. However, excessive work hours may only be detrimental when it conflicts with the worker's particular strategy for balancing work and family life. Fit is proposed as one such indicator of employees' perceptions of their time spent at work in relation to their family adaptive strategy.

In the current study, it is argued that if enough workplace options are available for employees and their families to realize their family adaptive strategies (i.e., good fit), actual time spent at work will be of secondary importance; however, if the necessary workplace options are not available for employees to realize their work/family strategies (i.e. poor fit), this may lead to conflict both at home and at work. This conflict could emerge because of time pressures created when the employee is not allowed an appropriate level of work schedule flexibility to meet the needs of the family. Therefore, the following hypotheses are proposed:

Hypothesis 1: Work schedule fit moderates the relationship between work hours and time-based WIF such that the relationship is stronger when there is poor fit.

Hypothesis 2: Work schedule fit moderates the relationship between work hours and time-based FIW such that the relationship is stronger when there is poor fit.

Furthermore, a lack of appropriate workplace options may create stress for the employee, which may spill over into the family domain. Certain stressors may also stem from the family, which may then spill over into the work domain if appropriate family supportive policies do not exist. Therefore, the following hypotheses are proposed:

Hypothesis 3: Work schedule fit moderates the relationship between work hours and strain-based WIF such that the relationship is stronger when there is poor fit.

Hypothesis 4: Work schedule fit moderates the relationship between work hours and strain-based FIW such that the relationship is stronger when there is poor fit.

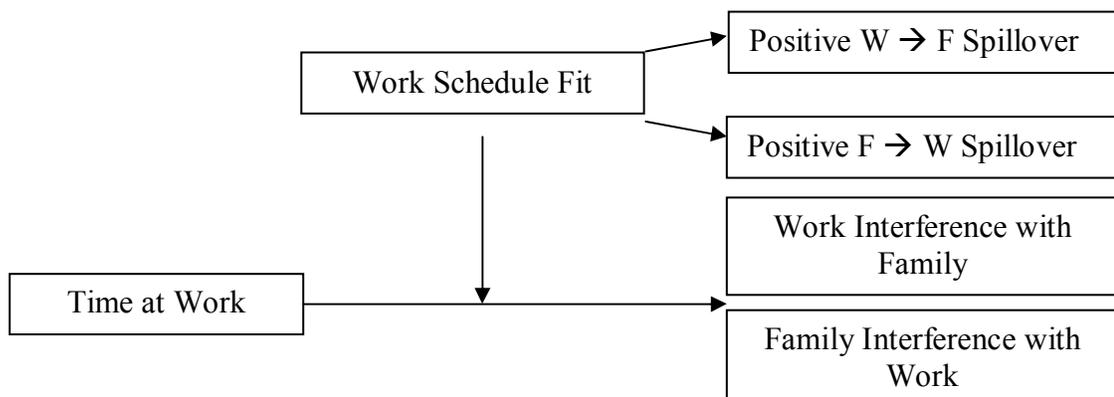


Figure 1. Model of relationship with fit as a moderator.

As explained above, the third dimension of WFC is behavior-based. The premise of behavior-based WFC is that behaviors that are useful in one domain are detrimental to the other domain. However, behaviors exhibited at home and at work are chosen by the individual and most likely have nothing to do with workplace policies and fit. Therefore, no hypotheses regarding behavior-based WFC are proposed.

Positive Spillover

Recent work-family research has gone beyond the conflict perspective by also examining the extent that experiences in one role improve the quality of life in another role. Among other names, such as work-family enhancement, work-family enrichment, and work-family facilitation, this construct has been labeled positive spillover between work and family and, like conflict, is bi-directional in nature. Positive work-to-family spillover occurs when resources, experiences, or opportunities at work improve the quality of family life, while positive family-to-work spillover occurs when resources, experiences, or opportunities gained from the family are used to improve work life. In a review of 21 enrichment research studies, Greenhaus and Powell (2006) report that the average enrichment scores are at least as high as the average conflict scores, and generally substantially higher. They also report that correlations between conflict scores and enrichment scores are generally small. This suggests not only that work and family roles can enrich each other (i.e., positive spillover), but that work-family conflict and work-family enrichment are independent constructs (Frone, 2003).

Spillover research. Although there is research on the existence of positive spillover between work and family and its qualities as a unique construct, not much is known beyond this. Grzywacz and Marks (2000) used data from the National Survey of

Midlife Development in the United States and found further support for distinct dimensions between negative and positive spillover from family to work and from work to family, using factor analysis. Furthermore, in a comparison between working hours and workplace resources (e.g., decision latitude, pressure at work, support at work), they concluded that “resources within the workplace clearly were the most robust correlates of positive spillover from work to family among both men and women” (p. 119). Support was also found for relationships between decision latitude, support at work, and pressure at work, and positive spillover from work to family. It was argued that the reason for the significant relationship between pressure at work and positive spillover could have been due to other aspects of job quality that correlate with pressure at work.

Spillover and fit. As described above, fit is conceptualized as the degree that enough workplace options are available to realize one’s family adaptive strategy. If limited options exist within the workplace, this may inhibit the worker’s ability to meet the needs of the family, which may result in work interference with family. According to Adams et al. (1996), work interference with family will result in less emotional and instrumental support from the family, which is associated with more family interference with work. Thus, there may be a relationship between poor work schedule fit and negative spillover between work and family, in both directions. On the other hand, if enough workplace options exist to allow the employee to meet the needs of his/her family, the family, in turn, will likely be more supportive of the employee. This may not only result in less family interference with work (Adams et al., 1996), but may also pave the way for positive spillover between work and family. So it seems that work schedule

fit may be associated with both positive and negative spillover in both directions of work and family.

Summary of Spillover and Fit Research

Positive spillover has shown promise as a useful construct for individuals and organizations. However, very little is known about which factors actually promote positive spillover. The concept of fit is one way of assessing the degree that work options allow employees to realize their strategies for dealing with work and family life. It is argued that if employees' work options permit them to realize their work/family strategies, this will facilitate positive spillover between the domains of work and family. For example, an employee may value vacation time during the holidays because it allows the employee to spend time with his/her extended family. If the employee's work schedule provides holiday vacation time, the employee will likely have more incidences of positive spillover between work and family during the holiday period. This may also improve the employee's satisfaction with family life, which, in turn, may result in increased work performance. In the current study, it is proposed that work schedule fit will be positively related to both directions of positive spillover between work and family.

Hypothesis 5: Work schedule fit is positively related to positive spillover from home to work.

Hypothesis 6: Work schedule fit is positively related to positive spillover from work to home.

Method

Participants

A total of 206 individuals participated in the study. To ensure that study participants had work and family responsibilities, participants had to be working at least 20 hours per week in paid positions in addition to being married, cohabitating, or having at least one child living in the same house. Participants ranged in age from 19 to 67, with a majority (85.4%; $n = 186$) between the ages of 25 and 60. Two (1%) participants were below 20 years of age, 26.7% ($n = 55$) were 20-29, 27.6% ($n = 57$) were 30-39, 27.6% ($n = 57$) were 40-49, 18.4% ($n = 38$) were 50-59, and 3.4% ($n = 7$) were 60 and older. Most participants were Caucasian (87.4%), and there were slightly more females (54.9%) than males (45.1%). There was considerable variance in participants' education levels. Specifically, 11.7% ($n = 24$) had a high school degree, 20.9% ($n = 43$) attended college, 35.4% ($n = 73$) obtained a bachelor's degree, 14.6% ($n = 30$) had a master's degree, 15% ($n = 31$) held a doctoral degree, and 2.4% ($n = 5$) indicated that they had "other" degrees. Participants indicated their household income level by endorsing one of five categories: 4.4% ($n = 9$) indicated that their income was \$25,000 or less per year, 17% ($n = 35$) indicated \$25,001 - \$50,000, 23.8% ($n = 49$) indicated \$50,001 - \$75,000, 22.3% ($n = 46$) indicated \$75,001 - \$100,000, and 32.5% ($n = 67$) indicated that their income was above \$100,000 per year.

Procedure

Data collection. Businesses and individual employees were asked to take part in the study. A variety of job types were included to increase the generalizeability of the

study's findings. Table 1 provides a break down of the businesses used in the current study.

Table 1. Industry sector frequencies.

<i>Sector</i>	<i>n</i>	<i>% of sample</i>
Manufacturing	15	7.3
Shipping/Transportation	23	11.2
Service	49	23.9
Education	20	9.8
Finance	34	16.6
Medical/Social Services	16	7.8
Consulting	12	5.9
Other	36	17.5

Several different methods were used to invite study participants. In order to generate interest from a variety of individuals, a general email describing the study was initially posted to the department of psychology listserv at USF. The email contained a brief description of the study and the inclusion criteria. Interested respondents ($n = 17$) were told to contact the author directly to verify that they fit the inclusion criteria, or were able to send the survey to potential participants who met the criteria. Respondents were then provided a link to the online survey and asked to complete the survey at their convenience. They were also asked to give the link to other individuals with whom they were in contact that fit the inclusion criteria. The survey itself also included a request for participants to pass along the website link to others who fit the inclusion criteria. This process yielded 97 responses. Given the nature of this data collection process, a verifiable response rate could not be calculated.

Other businesses were contacted via email and personal communication. First, a general email describing the study and providing the survey's link was sent to 30 members of a financial firm that were eligible for the study. Of these, 21 participants

responded, for a response rate of 70%. A similar approach was used with a consulting firm, where a general email was sent to 40 employees. Of these, 22 responded, for a response rate of 55%. For one particular organization in the transportation industry, it was more convenient to use paper and pencil questionnaires instead of the online survey. Surveys were mailed to this organization, and respondents were instructed not to display any identifiable information upon its completion. Surveys were then collected in a drop box and mailed back to the author. Of the 50 that were mailed, 38 completed surveys were returned, for a response rate of 76%. Finally, paper and pencil surveys were given to 19 undergraduate students who either fit the criteria or knew of employees who fit the criteria. The students then completed the survey or gave it to other participants. This process yielded an additional 29 completed surveys.

Measures

Work hours. The amount of time individuals spent at work was assessed using the question “How many hours do you spend at work in a typical week?”

Work schedule fit. For this study, work schedule fit was conceptualized in the same manner as Barnett et al. (1999). Specifically, fit was defined as “the extent to which workers realize the various components of their work-family strategies, that is, their plans for optimizing their own work and non-work needs as well as those of other members of their work-family social system” (p. 307). Fit was assessed using a portion of the Work Schedule Fit measure developed by Barnett et al. (1999). This measure asks respondents to report from 1 (extremely poorly) to 7 (extremely well) how well their working hours and flexibility meets their needs and the needs of their spouse/partner and child(ren). The original nine-item scale contained three items that asked how well the

spouse's work schedule meets the needs of the respondent, the spouse, and the child(ren). These three items were dropped in the current study to ensure that fit was being assessed at the individual employee level. This was done because organizations can only manipulate the employee's schedule, and not that of the spouse. If information about the spouse's schedule is included in the work schedule fit measure, it is then better conceptualized as a "dual-worker" work schedule fit variable, and results using this type of measure would be less practical for any single organization. Therefore, the six-item scale used in the current study only measures the effects of the employee's work schedule, without the additional effects of the spouse's work schedule. Barnett et al. (1999) reported an internal consistency coefficient of .85 and a test-retest correlation over a one to three month period of .78 for the fit scale. In the current study, $\alpha = .83$. See appendix A for a copy of the fit scale.

Work interference with family / family interference with work. Both directions of WFC were assessed using a measure developed by Carlson, Kacmar, and Williams (2000). All items used a Likert scale that ranged from 1 (strongly disagree) to 7 (strongly agree), with higher scores indicating greater amounts of conflict. Time-based WIF (three items) and strain-based WIF (three items) were examined separately. In a previous study, Carlson et al. (2000) reported an alpha of .85 for the time-based WIF scale and .87 for the strain-based WIF scale. In the current study, $\alpha = .83$ for the time-based scale and .87 for the strain-based scale. Time-based FIW (three items) and strain-based FIW (three items) were also examined separately. Carlson et al. (2000) reported alphas of .79 and .87 for these scales in a previous study. In the current study, $\alpha = .82$ for the time-based FIW scale and .90 for the strain-based FIW scale.

Positive spillover. Positive spillover was assessed using subscales from the Work-Family Linkages Questionnaire (WFLQ), developed by Sumer and Knight (2001). Respondents were asked to indicate on a scale from 1 (strongly disagree) to 7 (strongly agree) the extent that they agreed with each statement. Higher scores indicated greater positive spillover. Positive spillover from family to work was assessed using five items from the Positive Spillover from Home subscale. Positive spillover from work to the family was assessed using four items from the Positive Spillover from Work subscale. Both subscales had acceptable previous alphas of .68, as reported by Sumer and Knight (2001). In the current study, $\alpha = .70$ for the Positive Spillover from Home subscale and $.71$ for the Positive Spillover from Work subscale.

Demographics. Participants were asked to report their age, marital status, level of income, gender, employment status of spouse, and race/ethnicity.

Control Variables

Control variables shown to correlate with WFC in past research were considered. For example, a relationship between individual income and WFC has been supported in previous studies (e.g., Bolino & Turnley, 2005). Number of children in the home has also been associated with WFC (e.g., Carlson & Perrewe, 1999; Frone et al., 1992a). Caring for children takes time and energy, and more children in the home means more time and energy is needed to care for them. In a study by Carlson and Perrewe (1999), it was found that the number of children living at home had one of the largest and most consistent relationships with WFC among demographic, situational, and dispositional predictors. Literature on WFC has also consistently shown differences in levels of WFC based on gender. Specifically, women tend to report greater levels of work interfering

with the family than do men (Gutek et al., 1991). It has also been argued that single persons tend to have more flexibility in the use of their time and energy, and that they have fewer familial obligations. Thus, they are less likely to experience WIF conflict. However, spouses could also share familial obligations, which would result in fewer instances of family interfering with work. In a recent meta-analysis, Byron (2005) analyzed 14 studies that included marital status and both forms of WFC. She found a positive relationship between marriage and WIF ($\rho = .03$, 95% C.I.: $+.01/+.05$) and a negative relationship between marriage and FIW ($\rho = -.05$, 95% C.I.: $-.07/-.05$), with neither relationship including zero in the 95% confidence interval. For those who are married, the employment status of their spouse is also a potentially important influence on FIW conflict. Greenhaus, Parasuraman, Granrose, Rabinowitz, and Beutell (1989) proposed that the number of hours worked per week by spouses was positively associated with conflict between work and family. Non-working spouses typically assume most of the family responsibilities. This frees the employed partner to more fully concentrate on his/her work. In contrast, families with both partners working full-time (or part-time) face dual demands from work and family activities, resulting in increased levels of FIW conflict.

Number of children. For this item, respondents were asked to indicate how many children in each of seven different age ranges they had both living with them and not living with them. The age ranges were: 1- under one year of age; 2- one to two years old; 3- three to five years old; 4- six to nine years old; 5- 10 to 14 years old; 6- 15 to 18 years old; 7- over 18 years old. The number of children in each category was then summed to indicate the respondent's total number of children.

Income. Income was assessed at the family level using the question, “What is your current household yearly income?” Participants were asked to indicate which of five different income ranges their household income fell. The income ranges were: 1- \$25,000 or less; 2- \$25,001 to \$50,000; 3- \$50,001 to \$75,000; 4- \$75,001 to \$100,000; 5- \$100,001 or more.

Gender. Respondents were asked to report their gender. This variable was coded 1 = male, 2 = female.

Marital status. Respondents were asked to report their marital status. This variable was coded 1 = married/cohabitating, 2 = unmarried/separated.

Employment status of spouse/partner. Respondents who indicated that they were married or cohabitating were also asked to indicate if their spouse/partner was currently employed. This variable was coded 1 = yes, full-time, 2 = yes, part-time, 3 = no, does not work.

Results

Table 2 contains descriptive statistics for the study variables. As is typically found in the literature, employees reported more WIF than FIW. This applied to the aggregated scales as well as each separate dimension of WIF and FIW. Another interesting note is the relatively high levels of both work schedule fit and positive spillover in both directions. This implies that, on average, employees' work schedules are meeting their needs. Additionally, employees' families benefit from their time spent at work, and the workplace benefits from having employees with families.

Table 2. Descriptive statistics of study variables.

<i>Variable</i>	<i>Observed Minimum</i>	<i>Observed Maximum</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>Alpha</i>
Work Schedule Fit	2.20	7.00	5.42	.98	.83
WIF- Time	1.00	7.00	3.75	1.43	.83
WIF- Strain	1.00	7.00	3.48	1.46	.87
FIW- Time	1.00	7.00	2.98	1.37	.82
FIW- Strain	1.00	7.00	2.55	1.23	.90
PSFW	1.75	7.00	5.23	.95	.71
PSFH	2.40	7.00	5.22	.88	.70
Hours at work	20.00	80.00	43.30	10.58	NA
Number of children	0.00	8.00	1.80	1.50	NA
Income level	1.00	5.00	3.62	1.23	NA
Gender ^a	1.00	2.00	1.55	.50	NA
Marital status ^b	1.00	2.00	1.09	.28	NA
Emp. status of spouse	1.00	3.00	1.46	.76	NA

Note. N = 205, except employment status of spouse variable (N = 186).

^a: 1 = male; 2 = female. ^b: 1 = married/cohabitating. WIF = work interference with family. FIW = family interference with work. PSFW = positive spillover from work to home. PSFH = positive spillover from home to work.

Hypothesis Testing

Hypotheses 1-4 were tested using moderated multiple regression, as outlined by Baron and Kenny (1986). Hypothesis 1 stated that work schedule fit would moderate the

relationship between work hours and time-based WIF. To test this, it was first necessary to include control variables that showed a significant relationship with time-based WIF.

Table 3 shows the correlations among the study variables. As can be seen from the table,

Table 3. Correlation matrix of study variables.

	1	2	3	4	5	6
<i>Variable</i>						
1. Work Schedule Fit	1.0					
2. WIF- Time	-.39**	1.0				
3. WIF- Strain	-.39**	.45**	1.0			
4. FIW- Time	-.03	.19**	.25**	1.0		
5. FIW- Strain	-.15*	.24**	.42**	.48**	1.0	
6. PSFW	.22**	-.04	-.07	-.10	-.09	1.0
7. PSFH	.29**	-.01	-.15*	-.14	-.17*	.40**
8. Hours at work	-.30**	.38**	.17**	-.19**	-.04	.07
9. No. of children	.10	.01	-.11	.04	-.02	.04
10. Income level	.00	.00	-.07	.02	.03	.18*
11. Gender	-.04	-.15*	.15*	.01	.08	-.09
12. Marital status	.09	.00	.11	.19**	.17*	.07
13. Sp. empl. status	.03	.15*	-.08	.07	.00	.01

Table 3 (continued).

7	8	9	10	11	12	13
1.0						
.07	1.0					
.07	.24**	1.0				
.17*	.24**	.19**	1.0			
-.04	-.36**	-.21**	-.12	1.0		
-.12	-.02	-.05	-.16*	.11	1.0	
.02	.16*	.06	-.17*	-.43**	NA	1.0

Note. Ns ranged from 187-205. WIF = work interference with family. FIW = family interference with work. TB = time-based. SB = strain-based. BB = behavior-based. PSFW = positive spillover from work. PSFH = positive spillover from home.

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

both gender ($r = -.15, p < .05$) and employment status of the spouse ($r = .15, p < .05$) had significant relationships with time-based WIF. As indicated in Table 4, gender and employment status of the spouse were entered as the first block of the equation. Hours at work and work schedule fit were entered second. Finally, the work hours and the work schedule fit interaction term was entered to test for moderation. This interaction term did not produce a significant beta weight ($\beta = -.41, n.s.$). Thus, Hypothesis 1 was not supported.

Table 4. Moderated regression analysis for time at work, fit, and time-based work interference with family.

<i>Variables</i>	<i>TBWIF</i> β
<u>Step 1</u>	
Gender	-.09
Spouse Employment Status	.12
ΔR^2	.03*
<u>Step 2</u>	
Hours at Work	.29***
Work Schedule Fit	-.29***
ΔR^2	.20***
<u>Step 3</u>	
Hours at Work * Work Schedule Fit	-.41
ΔR^2	.00
Total R^2	.24
Overall F	11.25***

Note. β is based on full model. Ns ranged from 186-205. TBWIF = time-based work interference with family.

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

Hypothesis 2 stated that work schedule fit moderated the relationship between work hours and time-based FIW. As indicated in Table 3, marital status was the only control variable that was significantly related ($r = .19, p < .01$) to time-based FIW.

Therefore, marital status was entered as a control variable in the first block of the model

(see Table 5). The hours at work and work schedule fit predictors were then entered in the second block. Finally, the interaction term for work hours and work schedule fit was entered, but this term did not have a significant relationship with time-based FIW ($\beta = .24$, n.s.). Therefore, no support was found for Hypothesis 2.

Table 5. Moderated regression analysis for time at work, fit, and time-based family interference with work.

Variables	TBFIW β
<u>Step 1</u>	
Marital Status	.19**
ΔR^2	.04**
<u>Step 2</u>	
Hours at Work	-.22**
Work Schedule Fit	-.12
ΔR^2	.05**
<u>Step 3</u>	
Hours at Work * Work Schedule Fit	.24
ΔR^2	.00
Total R^2	.08
Overall F	4.60***

Note. β is based on full model. N = 205. TBFIW = time-based family interference with work.

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

Hypothesis 3 stated that work schedule fit would moderate the relationship between work hours and strain-based WIF. Again, the first step was to enter control variables related to strain-based WIF. As Table 3 shows, the only significant control variable was gender ($r = .15$, $p < .05$). This variable was entered into the model first, as indicated in Table 6. The predictors were then entered. Lastly, the interaction term for work hours and work schedule fit was entered, but the beta weight was not significant ($\beta = -.09$, n.s.). Thus, Hypothesis 3 was not supported.

Table 6. Moderated regression analysis for time at work, fit, and strain-based work interference with family.

Variables	SBWIF β
<u>Step 1</u>	
Gender	.15*
ΔR^2	.02*
<u>Step 2</u>	
Hours at Work	.13
Work Schedule Fit	-.34***
ΔR^2	.16***
<u>Step 3</u>	
Hours at Work * Work Schedule Fit	-.09
ΔR^2	.00
Total R^2	.18
Overall F	10.97***

Note. β is based on full model. N = 205. SBWIF = strain-based work interference with family.

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

The last hypothesis that involved moderation was Hypothesis 4. This stated that work schedule fit was a moderator of the relationship between work hours and strain-based FIW. As Table 3 shows, marital status ($r = .17, p < .05$) was the only control variable related to strain-based FIW. This variable was entered into the regression model first, as indicated in Table 7. The hours at work and work schedule fit variables were then entered as a block. Finally, the interaction term for work hours and work schedule fit was entered to test for moderation. This term was not significant ($\beta = -.19, n.s.$), indicating moderation was not present. Thus, Hypothesis 4 received no support.

Table 7. Moderated regression analysis for time at work, fit, and strain-based family interference with work.

Variables	SBFIW β
<u>Step 1</u>	
Marital Status	.17*
ΔR^2	.03*
<u>Step 2</u>	
Hours at Work	-.09
Work Schedule Fit	-.19**
ΔR^2	.03*
<u>Step 3</u>	
Hours at Work * Work Schedule Fit	-.19
ΔR^2	.00
Total R^2	.06
Overall F	3.41**

Note. β is based on full model. N = 205. SBFIW = strain-based family interference with work.

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

Hypotheses 5 and 6 stated that work schedule fit relates to positive spillover from work and positive spillover from home. These hypotheses were tested using zero-order correlations. As shown in Table 3, the correlation between work schedule fit and positive spillover from home was significant ($r = .29, p < .001$). Thus, Hypothesis 5 was supported. The table also shows a positive correlation between work schedule fit and positive spillover from work ($r = .22, p < .001$). Thus, Hypothesis 6 was supported.

Exploratory Analyses

Barnett's (1998) concept of fit is defined as "the workers' ability to realize their work/family strategies given the existing distal conditions and the workers' characteristics." Barnett then later explains that "when available workplace options permit workers to realize their strategies, workers experience compatibility; when they do not, workers experience conflict." Thus, fit was originally proposed and defined as a mediating variable. As mentioned above, there is also empirical support for fit as a

mediator (Barnett et. al., 1999; Pittman, 1994). However, it is not always interpreted as such. In some studies, the fit variable is interpreted as a moderator, where the nature of the relationship between two variables depends on fit. Barnett et al.'s (1999) conclusion that "the relationship between number of hours worked and burnout depends on the extent to which work schedules meet the needs of the worker, her or his partner, and their children, if any" (p. 307) is a good example of how fit can also be interpreted as a moderator. In the current study, fit was hypothesized to act as a moderator; however, given the original conceptualization of this variable, it was also examined as a mediator instead of a moderator in the proposed relationships.

To see if work schedule fit functioned as a mediator in any of the original hypothesized relationships, a series of regression models were tested. The first model examined whether fit mediated the relationship between work hours and time-based WIF. To test this, it was first necessary to establish a direct relationship between work hours and time-based WIF while accounting for control variables. As indicated in Table 8, gender and employment status of the spouse were each entered as control variables in the first block, along with the work hours predictor. A significant relationship between work hours and time-based WIF was observed ($\beta = .39, p < .001$). Next, it was necessary to establish a relationship between work hours and work schedule fit. This again resulted in a significant relationship ($\beta = -.30, p < .001$). Finally, in order for mediation to be supported, work hours must no longer be significant (full mediation) or must have a substantial decrease in its relationship with time-based WIF (partial mediation) once fit is controlled (Baron & Kenny, 1986). Work hours and work schedule fit were entered into the regression equation together, and both variables retained their significant

relationships with time-based WIF ($\beta = .29$ and $-.30$, $p < .001$, respectively). However, the magnitude of the beta weight between hours at work and time-based WIF decreased from $.39$ to $.29$ when work schedule fit was included. In order to test the significance of this effect, it was necessary to conduct a Sobel test. According to procedures outlined by Preacher and Hayes (2004), this test required (1) the raw (unstandardized) regression coefficient for the relationship between work hours and time-based WIF, (2) the raw (unstandardized) regression coefficient for fit and time-based WIF when work hours were controlled, and (3) the standard errors for both of these relationships. These were each entered into a Sobel test program available on the web (www.unc.edu/~preacher/sobel/sobel.htm). The resulting test statistic of 3.44 was significant at the $.001$ level, indicating that the indirect effect of work hours on time-based WIF through the fit variable was significantly different from zero. Therefore, work schedule fit partially mediated the relationship between work hours and time-based WIF.

Table 8. Mediation analysis for work schedule fit and time-based work interference with family.

IV	DV	β
<u>Step 1</u>		
Gender	Time-Based WIF	.05
Spouse Employment Status		.11
Hours at Work		.39***
<u>Step 2</u>		
Hours at Work	Work Schedule Fit	-.30***
<u>Step 3</u>		
Work Schedule Fit	Time-Based WIF	-.30***
Hours at Work		.29***

N = 205.

*** $p < .001$

The second regression model was developed to test the mediating effects of work schedule fit on the relationship between work hours and strain-based WIF. It was again necessary to establish a relationship between the predictor and the criterion while accounting for significant controls. As shown in Table 9, the relationship between work hours and strain-based WIF was significant ($\beta = .25, p < .01$) after controlling for gender. Next, a relationship between the predictor and the mediator was necessary. This was found as well, as there was a significant relationship between work hours and work schedule fit ($\beta = -.30, p < .001$). Finally, the predictor and the mediating variable were entered as a block. This resulted in a non-significant relationship between work hours and strain-based WIF ($\beta = .06, n.s.$), while the relationship between work schedule fit and strain-based WIF remained significant ($\beta = -.37, p < .001$). Thus, work schedule fit fully mediated the relationship between work hours and strain-based WIF.

Table 9. Mediation analysis for work schedule fit and strain-based work interference with family.

IV	DV	β
<u>Step 1</u>		
Gender	Strain-Based WIF	.24**
Hours at Work		.25**
<u>Step 2</u>		
Hours at Work	Work Schedule Fit	-.30***
<u>Step 3</u>		
Work Schedule Fit	Time-Based WIF	-.37***
Hours at Work		.06

N = 205.

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

A third regression model was used to see if fit mediated the relationship between work hours and time-based FIW. As indicated in Table 10, the direct relationship between work hours and time-based FIW was tested while controlling for marital status.

A significant negative relationship was found ($\beta = -.19, p < .01$). The relationship between hours at work and work schedule fit was also supported ($\beta = -.30, p < .001$). Next, work hours and work schedule fit were entered as a block. This resulted in a non-significant relationship for work schedule fit ($\beta = -.10, n.s.$), while the work hours variable remained significant ($\beta = -.22, p < .01$). Because it is necessary for the former relationship to be significant and the latter to be non-significant or reduced to find support for mediation, it was concluded that work schedule fit did not mediate the relationship between work hours and time-based FIW.

Table 10. Mediation analysis for work schedule fit and time-based family interference with work.

IV	DV	β
<u>Step 1</u>		
Marital Status	Time-Based FIW	.19**
Hours at Work		-.19**
<u>Step 2</u>		
Hours at Work	Work Schedule Fit	-.30***
<u>Step 3</u>		
Work Schedule Fit	Time-Based FIW	-.10
Hours at Work		-.22**

N = 205.

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

The final relationship tested for mediation was that between work hours and strain-based FIW. As seen in Table 11, the initial direct relationship between work hours and strain-based family interference with work was not significant ($\beta = -.03, n.s.$) after controlling for marital status. Therefore, no further testing of this model was necessary and it was concluded that work schedule fit did not mediate the relationship between work hours and strain-based FIW.

Table 11. Mediation analysis for work schedule fit and strain-based family interference with work.

IV	DV	β
<u>Step 1</u>		
Marital Status	Strain-Based FIW	.17*
Hours at Work		-.03
<u>Step 2</u>		
Hours at Work	Work Schedule Fit	-.30***
<u>Step 3</u>		
Work Schedule Fit	Strain-Based FIW	-.09
Hours at Work		-.17*

N = 205.

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

Discussion

As the U.S. workforce continues to grow in both size and diversity, it is becoming increasingly important to understand the effects of work on the family and vice versa. The current study looked to advance our understanding of the work and family interface by examining the effects of work schedule fit. As mentioned above, the scarcity hypothesis argues that there is a finite amount of time and energy, and the more time an individual dedicates to the work domain, the less time is available for the family, which ultimately results in work-family conflict. The current study examined work schedule fit as a moderator in the relationship between time at work and WFC. Support was not found for moderation, but exploratory analyses revealed that the work schedule fit variable partially mediated the relationship between work hours and time-based WIF and fully mediated the relationship between work hours and strain-based work interference with family. Further support for the importance of work schedule fit was evidenced by significant correlations between fit and both positive spillover from home and positive spillover from work.

Fit as a Moderator

The first four hypotheses stated that fit would moderate the relationship between work hours and time-based WIF, strain-based WIF, time-based FIW, and strain-based FIW. None of these hypotheses were supported. In examining the items that assess both time- and strain-based WIF, this is a surprising result. The time-based WIF items ask participants to indicate the extent that their work interferes with the activities that are performed in the family domain. The work schedule fit variable asks participants to indicate the extent that their work schedule meets their needs, as well as the needs of their

family. However, employees may interpret meeting the needs of the family as something different from being able to participate in family activities, as assessed by the time-based WIF items. For example, the employee may have a work schedule that allows them to take a certain amount of personal time off per week. The employee may then choose to use that time for personal relaxation instead of spending time with the family. Consequently, the employee may still report that their work schedule meets their family needs because they are more at ease once they come home due to their use of personal time. However, because the employee is not participating in family activities during that time off, they may still report high levels of time-based WIF. Furthermore, only two of the six items used to assess fit focus specifically on family needs. Most of the fit items assess the degree that an employee's work schedule meets his/her *individual* needs. Therefore, employees may have good overall work schedule fit because their personal needs are being met, yet still be unable to meet the needs of the family, thereby reporting high levels of time-based WIF.

In a similar manner, the relationship between work hours and strain-based WIF may not vary as a function of fit due to the measurement of these variables. Strain-based WIF items measure the degree that the job puts extra stress on the employee. An overstressed employee may be able to take time off work to alleviate stress, which is indicated by the significant negative correlation between fit and strain-based WIF in the current study. However, there are certain cases when the stress associated with the job remains, regardless of efforts to take time off. For example, a doctor may be granted a flexible schedule in order to perform his/her job at the greatest capacity, thus prompting the doctor to indicate that his/her work schedule is meeting his/her individual needs (i.e.,

high fit). However, given the nature of the job, psychological strain may spill over onto the family, regardless of the doctor's ability to take time off when needed. In this instance, work schedule fit would be high, but strain-based WIF would also remain high. Therefore, the degree that working hours affect strain-based WIF would not be dependent upon fit level.

The non-significant effect for fit as a moderator between work hours and both time- and strain-based FIW may also be due to the nature of the constructs involved. The fit variable only assesses the degree that the employee's work schedule meets his/her needs, therefore it may not fully capture the intricacies that exist when family interferes with work. For example, if a child's ride home from soccer practice does not show up, the child may then have to call a parent at work to pick them up. If the employee has good work schedule fit, he/she may be able to take off work to pick the child up, and therefore, work would not interfere with a family need, but at the same time, the family need would be interfering with work. However, if a certain agreement about child pick-up schedules and family activities exists within the family domain, this particular situation could be handled more easily and would not cause the family to interfere with work. Perhaps the relationship between work hours and FIW, when a direct relationship does indeed exist, may actually be moderated by a "family" schedule fit variable. This would be an interesting variable to pursue in future research efforts.

The fact that moderation was not found in any of these four relationships is quite meaningful. This indicates that the relationship between work hours and WIF is robust regardless of employee work schedule fit. This finding supports previous research where greater working hours are associated with higher levels of WFC (Gutek et al., 1991;

Galinsky, Kim, & Bond, 2001; Reynolds, 2003), but also shows that this issue cannot be resolved simply by adjusting employee work schedules to meet their needs. Although work schedule arrangements such as flextime have been reported as both commonly offered by organizations (SHRM Foundation, 2001) and commonly desired by employees (Golden, 2001), employers should also be mindful of other organizational factors, such as organizational culture, when implementing these policies. For example, in a recent review by Allen and Shockley (in press), it was suggested that organizations conduct a thorough evaluation of their HR policies when introducing flexible work arrangements (FWAs). They also discuss the importance of supportive supervisors and family-supportive work environments when implementing FWAs. Other research indicates that informal support is more important than formal mechanisms of support when measuring the outcomes of work-family policies (Behson, 2005). Therefore, the effectiveness of ideal work schedules can be definitively assessed only when these policies are available in an environment that facilitates their use.

While there are some studies that report no relationship between work hours and a variety of distress outcomes (e.g., Gareis & Barnett, 2002; Barnett & Gareis, 2000; Hughes, Galinsky, & Morris, 1992), and other studies that report positive outcomes for longer working hours (e.g., Staines & Pleck, 1983), findings from the current study indicate that the reason such discrepant findings exist is not due to employee work schedule fit. However, other moderators of this relationship could still account for these findings. For example, employees may find a great deal of enjoyment in their job and may wish to be at work more often than not. If these employees have little or no parental demands, odds are that longer working hours will produce more positive than negative

outcomes due to their desire to be at work. As discussed by Allen and Shockley (in press), the role of individual differences may play a large part in the relationship between work schedules and WFC. Future research should examine other potential moderators to develop a more complete understanding of the relationship between work hours and WFC.

Fit as a Mediator

Because work schedule fit was originally proposed as a mediator in various studies (e.g., Barnett et al., 1999), it seemed important to explore whether it had a similar effect in the current study. Support was found for full mediation between work hours and strain-based WIF, and for partial mediation between work hours and time-based WIF. This indicates that the relationship between work hours and strain-based WIF is transmitted through work schedule fit, and the relationship between work hours and time-based WIF is weakened when fit is controlled. These two findings provide further support for previous research using fit as a mediator in the job stress-illness literature (Barnett, 1998; Barnett et al., 1999; Pittman, 1994). Employees who put in long hours are more likely to have work schedules that do not meet their needs. Because their work schedules do not meet their needs, the employees, in turn, are more likely to experience WIF. Thus, while the relationship between work hours and WIF does not vary as a function of fit, it is only through poor fit that the relationship between work hours and WIF exists.

Another interesting finding was the significant *negative* relationship between work hours and time-based FIW after the effects of marital status were controlled. This suggests that the more an employee works, the less the family will interfere with work,

regardless of marital status. Although the case could be made that working more often increases the potential frequency of family interference, the opposite effect was found in the current study. This supports previous research indicating that employees who spend the greatest amount of time working experience the least amount of distress from the family (Brett & Stroh, 2003). Recall that the scarcity hypothesis argues that time is a finite resource, and that an increase in time at work will decrease time available for the family. From a different perspective, this also means that as less time is committed to the family, there is more time available for work. Also note that the items used to measure time-based WIF assess the degree that time spent with the family interferes with general work activities, responsibilities, and specific activities that could be beneficial to one's career. It follows that, as one decreases the time commitment to family activities and responsibilities, this creates more time for general work activities, responsibilities, and activities that benefit one's career. Thus, employees who are at work more often most likely have less time commitment to the family and, therefore, have less of a potential for the family to interfere with work activities. Future research on family commitment levels may help clarify this relationship.

Fit and Positive Spillover

Support was also found for the importance of work schedule fit through its significant relationships with both positive spillover from work and positive spillover from home. This indicates that workers who have schedules that fit their needs and the needs of their family are more likely to have both improved functioning in the family domain due to experiences at work and improved functioning in the work domain due to experiences with the family. This particular finding is useful for research on work-family

enrichment, as little is known of the factors that allow work and family to benefit each other.

Theoretical Implications

This study advances research on work and family in several different ways. First, it provides further support for the idea of using more subjective measures of time in this field of research (e.g., Barnett & Gareis, 2000; George & Brief, 1996; Thompson & Bunderson, 2001; Wallace, 1997). This is very important, as time is the main focus of much research in work and family. The work schedule fit variable goes beyond objective indices of time spent at work and assesses the degree that the employee's work time affects the individual, the spouse, and the child(ren). By asking participants to report on their perceptions of time, instead of using raw, objective measures, researchers can develop a better understanding of time's effects on many different outcome variables.

In a similar manner, results of the current study counter the main argument proposed by the rational view of time in work and family research. According to the rational view, the more hours spent on activities in the work or family domain, the more conflict one will perceive (Gutek et al., 1991). In essence, the rational view argues that there is a direct, linear relationship between time at work and WFC. This argument has also received some support in the literature. However, moderators and mediators are rarely tested in this relationship. In the current study, the relationship between work hours and strain-based WIF was found only through poor schedule fit (i.e., an indirect relationship). With the testing of other moderators or mediators, more can be understood regarding the nature of the relationship between work hours and conflict, and why this relationship exists.

Lastly, this research provides further support for Barnett's (1998) model of work-family conflict. Recall that this model proposes that fit is a mediator between proximal and distal conditions and outcomes. In the current study, work schedule fit did indeed mediate the relationship between work hours, a proximal condition, and both strain- and time-based WIF, two negative work outcomes.

Practical Applications

Findings from this study can be applied to managers and policy makers within organizations. The importance of reducing work-family conflict has been documented in a wide range of research throughout the past few decades. However, research is now focusing on positive spillover between work and family, and how this affects the bottom line. This is especially true for positive spillover from home to work, as this can have a direct impact on employee performance. This study shows that work schedule fit is related to positive spillover from home to work. Policy makers should pay particular attention to this finding, as there is little known as to which workplace variables have an influence on positive spillover from the home. With more emphasis applied to increasing levels of employee work schedule fit, managers would give themselves the best possibility of increasing employee performance.

Limitations and Future Research

Although the current study findings are important for both theory and practice, there are some limitations that should be addressed. First, the cross-sectional design of the study does not allow causality to be inferred. High fit could result in increased spillover, or positive spillover could be increasing perceptions of fit. This would be the case, for example, if a spouse provides an idea that allows an employee to work more

efficiently. The more efficient work pace would result in projects being completed more quickly, which may then allow the employee greater control of his/her work schedule. Thus, the positive spillover from home to work would produce greater perceptions of work schedule fit. To increase the ability to rule out alternative explanations, a longitudinal design should be employed. For example, an organization may sample its employees to find out initial levels of work schedule fit and positive spillover. The organization may then take steps to increase levels of fit. At a later time, the organization would then re-assess levels of positive spillover. If there are increased levels of positive spillover at the second assessment as compared with a control group, the organization can be more confident that it is because of increased levels of work schedule fit.

Another limitation of this study is the exclusive use of self-report measures. While it would be somewhat difficult to use other methods to assess work-family conflict and positive spillover, the addition of peer- or supervisor-report data for objective measures (i.e., work hours) would decrease the risk of common method variance. The work schedule fit variable would also be improved by using spouse-report data in addition to the self-report items. The use of multiple sources of information would provide greater legitimacy to the important findings from this study by decreasing the risk of mono-method bias, instability of correlation coefficients, and other reporting biases (Spector, 1994).

As indicated above, future research would benefit from the development of a home schedule fit variable, as well as examining work schedule fit. According to the current study findings, when an employee's work schedule does not meet his/her needs, this will contribute to WIF. The concept of home schedule fit may work in a similar

manner within the family domain. That is, home schedule fit would measure the degree that an individual's time schedule while at home meets their needs. The measurement of this variable would need to take into account family composition and time arrangements that are made between the employee and their spouse and child(ren). It is argued that when employee subjective home schedule fit is not ideal, this will likely contribute to FIW. The home schedule fit concept is proposed because FIW and WIF have been consistently shown as separate constructs (Frone, Russell, & Barnes, 1996; Mesmer-Magnus & Viswesvaran, 2005), and family variables are more highly related to FIW (Byron, 2005). With the introduction of a home schedule fit construct, another factor associated with FIW may be discovered. This would be important for organizations, as they are constantly seeking ways to reduce this form of conflict.

New research on work-family conflict extends the traditional spillover role and looks at the extent that conflict affects performance in different roles. Greenhaus, Allen, and Spector (2006) offer a new definition of work-family conflict as "the extent to which experiences in the work (family) role result in diminished performance in the family (work) role" (p. 65). This is an important distinction, as traditional measures of conflict assess interference between domains, but not necessarily decreased performance. For example, one of the time-based WIF items used in this study is "My work keeps me from my family activities more than I would like." Essentially, this item measures the degree that work is an obstacle to performing family activities. A more complete item in terms of assessing Greenhaus et al.'s definition of conflict would be "My performance at home suffers because my work keeps me from my family activities." Carlson, Kacmar, Wayne, and Grzywacz (2006) recently developed a work-family enrichment scale that

specifically measures the effect of one domain on performance levels in the other domain. An interesting avenue for future research would be the development of a similar scale for work-family conflict. Researchers should continue to focus on the measurement of both conflict and enrichment between the work and family domains to see how deep this relationship truly runs.

Finally, this study did indicate that work schedule fit was related to positive spillover in both directions; however, this does not say much about actual performance on the job or with the family. In order to more thoroughly assess the importance of fit, actual performance indicators should be used in the future.

Conclusion

This study helps advance knowledge in the work and family literature. It is one of the only studies to assess a subjective measure of time at work, and the findings highlight the importance of doing so. Theoretical and practical implications for work schedule fit were discussed, and future research opportunities were proposed. With more of a focus on subjective perceptions of time, researchers and practitioners alike can gain a better understanding of time's effects on the individual – something that is becoming increasingly important in today's business world.

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Appendix A

Work Schedule Fit Scale (Adapted from Barnett et al., 1999)

The following items pertain to your current work schedule. Please mark your answer in the blank next to each statement using the following scale:

1	2	3	4	5	6	7
Extremely Poorly	Poorly	Somewhat Poorly	Neither Poorly nor Well	Somewhat Well	Well	Extremely Well

____ 1. How well does your current day schedule meet your needs (for example, you may work Monday through Friday or you may work weekends)?

____ 2. On the days that you work, how well does your schedule of work hours meet your needs (for example, you may work 9 to 5 or you may work 8 to 3)?

____ 3. How well does the overall flexibility of your current work schedule meet your needs?

____ 4. Taking into account your current work hours and schedule, how well is your work arrangement working for you?

____ 5. Taking into account your current work hours and schedule, how well is your work arrangement working for your spouse/partner? (skip if no spouse/partner)

____ 6. Taking into account your current work hours and schedule, how well is your work arrangement working for your child(ren)? (skip if no children)

Appendix B: WIF/FIW Scales

(Carlson, Kacmar, and Williams, 2000)

Time-based work interference with family

1. My work keeps me from my family activities more than I would like.
2. The time I must devote to my job keeps me from participating equally in household responsibilities and activities.
3. I have to miss family activities due to the amount of time I must spend on work responsibilities.

Strain-based work interference with family

1. When I get home from work I am often too frazzled to participate in family activities/responsibilities.
2. I am often so emotionally drained when I get home from work that it prevents me from contributing to my family.
3. Due to all the pressures at work, sometimes when I come home I am too stressed to do the things I enjoy.

Time-based family interference with work

1. The time I spend on family responsibilities often interfere with my work responsibilities.
2. The time I spend with my family often causes me not to spend time in activities at work that could be helpful to my career.
3. I have to miss work activities due to the amount of time I must spend on family responsibilities.

Strain-based family interference with work

1. Due to stress at home, I am often preoccupied with family matters at work.
2. Because I am often stressed from family responsibilities, I have a hard time concentrating on my work.
3. Tension and anxiety from my family life often weaken my ability to do my job.

Appendix C: Work-Family Linkage Questionnaire

(Sumer and Knight, 2001)

Positive Spillover from Work Items:

1. My job shows me ways of seeing things that are helpful outside of work.
2. My job develops skills in me that are useful at home.
3. Quality of my home life improves if I am satisfied with my job.
4. My job gives me access to certain facts/information that can be used to improve my home life.

Positive Spillover from Home Items:

1. My home life develops skills in me that are useful at work.
2. My family/“significant other” gives me support so I can face the difficulties at work.
3. Quality of my job performance improves if I am satisfied with my home life.
4. My home life energizes me so I can tackle the challenges of my job.
5. My family/“significant other” gives me ideas that can be applied on the job.

Appendix D: Demographic Items

Participants were asked to indicate:

Gender: Male Female

Age: _____ years

Marital Status: Married/Cohabiting Unmarried/Separated

If married/cohabiting, does your spouse/partner work?: Yes, full-time Yes, part-time
 No, does not work No spouse/partner

Current household income per year: \$25,000 or less \$25,001 to \$50,000 \$50,001 to \$75,000 \$75,001 to \$100,000 \$100,001 or more

Highest academic level reached: Secondary education (highest grade completed _____)
 Some university University degree
 MA/MSc PhD or doctorate
 Other (please specify): _____

Race/Ethnicity: Asian/Pacific Islander Black Hispanic White Other

How many hours do you spend at work in a typical week? _____ Hours

How many hours do you spend on household chores in a typical week? _____ Hours

How long have you been with your current employer? _____ years and _____ months

How many children do you have in each of the following categories?:

-Living with you: Under 1 year of age 1-2 years old 3-5 years old 6-9 years old
 10-14 years old 15-18 years old Over 18 years

-Not living with you: Under 1 year of age 1-2 years old 3-5 years old
 6-9 years old 10-14 years old 15-18 years old Over 18 years

Do you have any disabled or elderly relatives for whom you are the primary caregiver?: Yes No

Which best describes your industry sector?:

Manufacturing Shipping/
Transportation Service Education Finance Housing

Medical/Social Security/
Services Protection Government Consulting Other
Please Specify: _____