Cognitive capacity for processing work-family conflict: an initial examination

Suzanne C. de Janasz
College of Graduate and Professional Studies, University of Mary Washington, Fredericksburg, Virginia, USA, and
Scott J. Behson
The Samuel J. Silberman College of Business Administration, Fairleigh Dickinson University, Teaneck, New Jersey, USA

Abstract

Purpose – The purpose of this study is to examine how individuals cognitively process work-family conflict (WFC), specifically whether differences in tolerance for uncertainty and cognitive complexity influence individuals' affective response to WFC.

Design/methodology/approach – Using a sample of 157 employees who completed a survey on work-family issues, the hypotheses were tested using correlation and regression analyses.

Findings – The results suggest that cognitive differences may moderate the negative impacts of WFC. It was found that while WFC (i.e. work interference with family) lowers job satisfaction, this effect is less strong for those high in tolerance for uncertainty. The same was true for the ameliorating effect of cognitive complexity and tolerance for uncertainty on the link between WFC and (i.e. family interference with work) organizational commitment.

Research limitations/implications – Because of its cross-sectional design, the causality of the findings cannot be confirmed. Further, while the sample contained both parents and non-parents, and men and women, due to power concerns, our analyses did not account for these demographic differences. Future research should be designed to correct for these issues.

Practical implications – Organizations may need to rethink their programs and policies aimed at assisting employees in balancing work and family. Simple options (e.g. time off) may appeal to all employees; however others (e.g. job sharing and flextime) require complicated arrangements or behavior changes and may only appeal to or be utilized successfully by employees with high tolerance for uncertainty and cognitive complexity.

Originality/value – Within work-family research, few studies look at how individual cognitive processes influence whether and how potentially conflictual situations are perceived and their impact on individual outcomes such as satisfaction and commitment. The research investigates two such cognitive differences and demonstrates the role that tolerance for uncertainty and cognitive complexity may play in reducing the negative impact of work-family conflict.

Keywords Job satisfaction, Cognition, Stress, Employee attitudes

Paper type Research paper

Recent work-family research has helped clarify the antecedents and consequences of work-family conflict (WFC) (see Eby *et al.*, 2005; Kossek and Ozeki, 1998, for recent reviews). We know that situational (e.g. role conflict and ambiguity) and demographic (e.g. hours worked, number of children) characteristics are often associated with WFC. We also know that once experienced, WFC can result in increased absenteeism, burnout, withdrawal and decreased satisfaction and commitment (Allen *et al.*, 2000; Batt and

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Valcour, 2003; Hammer *et al.*, 2003). However, the majority of this research assumes that similar individuals perceive and respond to their situation or environment (e.g. work and family requirements or challenges) WFC in a similar manner.

We challenge this assumption by examining how differences in tolerance for uncertainty and cognitive complexity may influence individuals' perceptions of WFC and its consequences. We suggest that because of their cognitive style or capacity for WFC and related stressors, some individuals are better equipped to process and perhaps resolve WFC, and therefore experience greater satisfaction and commitment in the presence of WFC, than those with reduced cognitive capacity. As such, this research complements recent research on coping strategies (e.g. Behson, 2002; Carlson and Fernandez, 1997; Tompson and Korsgaard, 1997; Voyandoff, 2002) and support systems (Carlson and Perrewe, 1999; Clark, 2001; Lapierre and Allen, 2006; Nielsen *et al.*, 2001; Thomas and Ganster, 1995) for dealing with WFC. Our study, while exploratory, offers important information to facilitate individuals' and organizations' efforts at coping with WFC.

WFC and the cognitive connection

Work-family conflict is "a form of interrole conflict in which the role pressures from the work and family domains are mutually incompatible in some respect" (Greenhaus and Beutell, 1985, p. 77). Simply put, one's participation in the work (family) role makes participation in the family (work) role more difficult. Today's workers are like to have many roles to fulfill (e.g. employee, spouse, parent, child, elder caregiver, child caregiver) and more responsibilities than time allows, potentially hampering their ability to perform and gain satisfaction from work or family domains. However, the demands that energize some may paralyze others, suggesting that individuals vary in how they process and perform their professional and personal roles and responsibilities. Despite the handful of studies that focus on the impact of individual differences on WFC (e.g. Bruck and Allen, 2003; Carlson, 1999; Stoeva *et al.*, 2002; Rantanen *et al.*, 2005; Wayne *et al.*, 2004), one important difference – cognitive style, or the way individuals perceive and process work and family roles and demands – has yet to be explored.

Demographic and organizational trends have contributed to increasing levels of WFC (Galinsky and Bond, 1998; Goodstein, 1994), and concerned organizations have attempted to reduce WFC by offering family friendly benefits (Goff *et al.*, 1990; Thomas and Ganster, 1995). However, evidence for the efficacy of these programs is mixed (Batt and Valcour, 2003; Blair-Loy, 2002; Kirby and Krone, 2002; Kossek *et al.*, 1994). We suggest that cognitive style may explain why, despite similar demographics and domain demands, some individuals are consummate jugglers while others seem perpetually stressed. In the next section, we take a closer look at two cognitive characteristics that likely impact how individuals perceive and respond to WFC: cognitive complexity and tolerance for uncertainty.

Organizational scholars have been paying increasing attention to the role of cognition in individual and organizational outcomes (Hayes and Allinson, 1998; Walsh, 1995). How people perceive and react to their situation – sometimes referred to as cognitive style – differs among individuals (e.g. Barnes, 1984; Fahey and Narayanan, 1989; Feldman, 1981; Hayes and Allinson, 1998). While a complete review of the cognition literature is beyond the scope of this study, previous research suggests that cognitions "might mediate stimulus response relationships" (Walsh, 1995, p. 281).

Individuals process their environment through a complex maze of thoughts and feelings and respond to these inputs in different ways. For example, when two demographically similar individuals experience comparable levels of WFC, the degree to which each one is adversely impacted may depend upon his or her cognitive style or preference for perceiving, processing, and organizing environmental inputs (Hayes and Allinson, 1998). Comparable work and family demands can be perceived as manageable to some and overwhelming to others. Cognitive style, also referred to as information processing style, refers to individuals' stable preferences in how they perceive, organize, and categorize their environment (Hayes and Allinson, 1994). In their recent review of well-being and emotional health, Sparks *et al.* (2001) report that recent research has been unable to replicate Karasek's (1979) demand-control model. This model suggests that job demands interact with job control, e.g. high job demands only brought about stress when control was low or nonexistent. Sparks *et al.* (2001) conclude that individual differences, such as the desire for control (Hackman and Oldham, 1980), may explain mixed findings. Whereas some employees prefer minimal control in their jobs, others find the ambiguity of expectations a great source of stress. Empirical support for the moderating effect of individual differences in autonomy needs on the job control-health relationships (e.g. de Jonge *et al.*, 1994) strengthens our conviction that cognitive style may moderate the WFC-job satisfaction/commitment relationship. In the next section, we discuss two dimensions of cognitive style addressed by this study: cognitive complexity and tolerance for uncertainty.

Cognitive complexity

Cognitive complexity refers to the amount and variety of information, concepts and methods that a person uses in his/her life (Brousseau, 1988). The higher the complexity, the greater the breadth of inputs and outputs to which individuals respond. Early research by Driver *et al.* (1969) revealed that when cognitive complexity was low, individuals perceived few choices to resolve conflict, and their likelihood of aggression was significantly higher than those with high cognitive complexity. Applied to the work/family context, when work and family domains coincide (i.e. WFC), individuals with low cognitive complexity likely perceive an "either/or" proposition ("either I fulfill my job or family requirements … one wins, one loses") and experience reduced satisfaction in and commitment to one or both domains. By contrast, a highly cognitively complex person is more likely to brainstorm and discover a solution that might fulfill both demands (e.g. "after watching my daughter's soccer game, I'll take the client out to dinner"). Because of their cognitive capacity to juggle multiple and perhaps conflictual demands, high complexity individuals are more likely to find several satisfactory solutions to their conflict. Since WFC has been associated with decreased job satisfaction (e.g. Adams *et al.*, 1996; Behson, 2005; Frone *et al.*, 1992) as well as increased intentions to leave an organization (e.g. Batt and Valcour, 2003; Burke and McKeen, 1988; Frone *et al.*, 1992), we expect that individuals with high cognitive complexity will be less likely to experience the negative effects (e.g. reduced job satisfaction and organizational commitment) of WFC than their low cognitive complexity counterparts.

The stress and coping literature also lends support to our belief that cognitive style may moderate the WFC-satisfaction link. Coping has been defined as "the cognitive and behavioral efforts a person makes to manage demands that tax or exceed his or her personal resources" (Lazarus, 1991; also see Folkman and Lazarus, 1988). Two general

coping strategies, emotion-focused coping and problem-focused coping, have been identified. Problem-focused coping consists of efforts to alter the current person-environment relationship, including proactively seeking out information, changing one's behavior, or attempting to change the environment (Lazarus, 1991). Such coping activities (e.g. negotiating changes in work or family responsibilities) require at least a moderate level of cognitive complexity to perform effectively, however research has yet to explore the role that cognitive complexity may play in motivating individuals to use (or not) various coping strategies. It is possible that individuals with low cognitive complexity are unable or unwilling to recognize or learn a particular coping strategy or skill. Only a few studies have extended the research on problem-focused coping to WFC. Bhagat *et al.* (1991) examined the moderating effects of emotion-focused and problem-focused coping styles on the relationships between organizational and life stressors and various indicators of strain (e.g. depression, dissatisfaction, exhaustion). Problem-focused coping was found to moderate the relationships between organizational stress and strain and between personal-life stress and strain. Specifically, when faced with stressors, individuals who utilized a problem-focused coping strategy exhibited less strain than those who did not. Similarly, Rotondo *et al.* (2003) found that individuals who used problem-focused coping behaviors at home reported lower WFC, specifically family interference with work. Behson (2002) investigated a set of coping behaviors for work-family conflict that was correlated with the use of general problem-focused coping behaviors. Finally, Carlson and Fernandez (1997), Tompson and Korsgaard (1997), and Voyandoff (2002) found evidence of problem-focused coping being important in a work-family context.

However, we lack important information about individuals' cognitive capacity to consider and utilize particular coping strategies to deal with or resolve organizational and life stressors. By connecting these streams, this research helps shed light on individuals' cognitive experience of WFC, and potentially facilitates the matching of coping strategies to individual needs. Learning and using time- or stress-management techniques – two common though fairly complicated problem-focused coping strategies – can appear daunting to a person with low cognitive complexity. Effectively utilizing flexible working policies or arrangements – offered by many large organizations to help employees cope with or reduce the stress that accompanies WFC (Warren and Johnson, 1995) – may require an ability to manage complexity. Facing conflicting demands from multiple roles, individuals with low cognitive complexity may have limited if any capacity to invoke problem-solving coping strategies or techniques, thereby experiencing greater stress and lower satisfaction than individuals with high cognitive complexity. We expect:

H1. Cognitive complexity will moderate the relationship between WFC and job satisfaction. That is, the negative relationship between WFC and job satisfaction will be weaker for individuals with a high level of cognitive complexity than those with low cognitive complexity.

Previous research has also demonstrated a negative relationship between WFC and organizational commitment (e.g. Allen *et al.*, 2000). When individuals perceive a lack of fit between themselves and the organization, psychological and behavioral strain may result (Edwards and Rothbard, 1999). As WFC increases, individuals with low cognitive complexity are likely to experience rising tension between the most

demanding of domains: work and family. When a low-complexity employee perceives few if any solutions to his/her predicament, and as the WFC and related stress continues or increases, he/she will likely experience greater strain. This strain would likely result in reduced commitment to the organization (e.g. Boles *et al.*, 2001). We suggest reduced commitment will show up in the work as opposed to the family domain for two reasons. First, research demonstrates that commitment is higher among individuals who believe their organizations provide resources to facilitate work-life balance (Allen, 2001). Second, loyalty to one's organization has been all but replaced by loyalty to one's profession (Sullivan, 1999). Current conceptualizations of a career as protean or boundaryless demonstrate that employees seek to develop skills that are marketable and transferable outside their current organizations (e.g. Kram and Hall, 1996). Therefore, we expect:

H2. Cognitive complexity will moderate the relationship between WFC and organizational commitment. That is, the negative relationship between WFC and organizational commitment will be weaker for individuals with a high level of cognitive complexity than those with low cognitive complexity.

Tolerance for uncertainty

Tolerance for uncertainty and related concepts (e.g. tolerance for ambiguity) have been examined as antecedents or correlates of innovation (e.g. Gupta and Govindarajan, 1984; Tabak and Barr, 1999) and entrepreneurial behavior (e.g. De Pillis and Reardon, 2001). Despite its obvious relationship with role ambiguity – an antecedent of WFC (e.g. Carlson, 1999), tolerance for uncertainty – or an individual's cognitive capacity for coping with the role ambiguity and uncertainty that often characterizes WFC – has not yet been examined by work-family researchers. We know that individuals build expectations about and develop a tolerance for the amount of incongruity or uncertainty they encounter based on their past experiences (Driver *et al.*, 1969), and develop adaptation patterns (Driver *et al.*, 1969; Helson, 1964) for coping with environments filled with ambiguity, novelty, risk, uncertainty and conflict (Driver, 1993). An individual who lived in numerous cities and attended multiple schools in childhood and adolescence is likely to expect his/her world to be very unpredictable – an environment filled with much uncertainty, ambiguity or novelty. Changes in job or family responsibilities are not only welcomed, but also may be sought by those with a high tolerance for uncertainty. For them, WFC may have only a minimal negative effect on job or life satisfaction.

Other individuals – whose past experiences were highly structured, certain, and unchanging – expect order and structure and find uncertainty both unexpected and unsettling (Driver, 1983, 1993). When their expectations for uncertainty are very low, even the slightest amount of uncertainty (i.e. role ambiguity) or incongruity (e.g. WFC) might cause discomfort and a desire to restore predictability, structure, and clarity (Driver, 1993). Further, due to their heightened sensitivity to uncertainty, these individuals are likely to exaggerate perceptually any bit of uncertainty or novelty they encounter, akin to the rhetorical "making a mountain out of a molehill" notion. At the extreme, one might expect that individuals with a low tolerance for uncertainty would perceive uncertainty in a particular situation or environment even when objective measures of uncertainty register none (e.g. no actual changes in requirements, expected outcomes, or supervision). As a result, even the slightest amount of conflict, specifically WFC, is likely to cause dissatisfaction with one's job. Thus, we expect:

H3. Tolerance for uncertainty will moderate the relationship between experienced WFC and job satisfaction. That is, the negative relationship between WFC and job satisfaction will be weaker for individuals with a high level of cognitive complexity than those with low tolerance for uncertainty.

Further, due to the strain experienced the conflict brought about by conflicting demands, individuals who have a low expectation for and comfort with conflict and its resulting uncertainty are likely to experience reduced commitment to their organization. For example, an employee who has a low tolerance for uncertainty and multiple bosses or frequently shifting expectations will find his or her work situation stressful. Such strain will likely spill over into the family domain and cause the employee to search for other options (e.g. jobs, organizations) that provide less discomfort. Based on this logic, and the established link between WFC and increased turnover in prior research (e.g. Thomas and Ganster, 1995), we expect:

H4. Tolerance for uncertainty will moderate the relationship between experienced WFC and organizational commitment. That is, the negative relationship between WFC and organizational commitment will be weaker for individuals with a high tolerance for uncertainty than those with a lower tolerance for uncertainty.

Methods

Sample

Following a pilot study, data were collected using a survey instrument in two waves. The first wave involved 69 employees at a large automotive textile manufacturer (a response rate of approximately 39 percent). The second wave included 88 fully-employed MBA students at a private West Coast university. Surveys were administered in person by the first author. To participate in the survey, respondents had to: work at least 20 hours per week, and either be married/in a serious relationship, have children (or elders) for whom to care or both. The demographic profile of the 157 respondents is as follows: an average age of 36.6, average weekly working hours of 45.5, average job tenure of 3.6 years, and 74 percent had an income of at least $60,000. Further, the sample was 40.1 percent female, 72 percent white, and 38.2 percent had one or more children living at home at least half time.

Measures

Measures for the study were selected from existing scales in the organizational behavior literature. Most of the scales used have been subjected to extensive development and have exhibited acceptable psychometric properties. Table I lists the mean, standard deviation and intercorrelations of the key study variables.

Dependent variables. Two affective outcome variables were used: job satisfaction and organizational commitment. Job satisfaction, an overall measure of the degree to which an individual is happy with his or her job, was measured using the global job satisfaction scale of Camman *et al.* (1979). Participants answered questions such as "in general, I am satisfied with my job," on a five point Likert scale where 1 = strongly disagree and 5 = strongly agree). When necessary, we reverse-scored items such as "most of the time I have to force myself to go to work" so that higher scores reflected greater job satisfaction. The internal consistency reliability estimate for scores on these five items was 0.91.

Organizational commitment was measured by six items compiled from the 15-item organizational commitment questionnaire (OCQ) (Mowday *et al.*, 1979). Sample items include "I feel myself to be part of the company," and "I would leave this firm if offered the same job with another company" (reverse-scored). Scores from the six items, which were measured on a five-point (1 = strongly disagree to 5 = strongly agree) scale, were averaged to form a composite score. Internal consistency estimates were 0.88 for this construct, which nearly matches the median alpha reported by Mowday *et al.* (1979).

Independent variables. WFC was operationalized as a bi-directional construct: work interference with family (WIF) and family interference with work (FIW), following research by O'Driscoll *et al.* (1992) and others (e.g. Frone *et al.*, 1992; Higgins *et al.*, 1992; Carlson and Kacmar, 2000). The items used were developed and validated by Carlson *et al.* (2000) and represent time-based conflict between work and family domains. Three items were averaged to create WIF (e.g. The time I must devote to my job keeps me from participating equally in household responsibilities and activities; $\alpha = 0.89$), and three items comprise FIW (e.g. I have to miss work activities due to the amount of time I must spend on family responsibilities; $\alpha = 0.79$). WIF and FIW were measured on a five-point (1 = strongly disagree to 5 = strongly agree) scale.

Moderating variables. Tolerance for uncertainty was assessed using 16 items taken from Driver's general incongruity adaptation level (Streufert and Driver 1971)[1]. This instrument – in its complete form – has been used extensively and has demonstrated appropriate reliability and validity (Driver, 1993). Given that a small subset of items was used in place of the complete instrument, we created scores for tolerance for uncertainty by adding the responses to the 16 items (and reversing scores where warranted). The scores ranged from 2.6 to 7.0, with a mean of 4.66.

Cognitive complexity scores were computed by totaling participants' responses to the ten items included in the study survey instrument. Following the advice of one of the research colleagues of the co-creator of the complete complexity instrument, three of these ten items were double-weighted (Brousseau, 1998). While the reliability estimate of 0.62 shows room for improvement, the original instrument from which the ten-item general complexity measure was derived has been used consistently and demonstrated appropriate reliability and validity in past research by its creators (Driver and Rowe, 1979)[2]. The range of scores was 2.5-6.2; the mean was 4.53.

	Mean	SD	1	2	3	4	5	6
Job satisfaction	3.68	0.84	(0.91)					
Organizational commitment	3.64	0.76	0.66	(0.88)				
Work interference with family	3.35	1.07	−0.16	−0.23	(0.89)			
Family interference with work	2.45	0.89	−0.27	−0.19	0.38	(0.79)		
Cognitive complexity	4.53	0.67	−0.01	0.00	0.03	−0.01	(NA)	
Tolerance for uncertainty	4.66	0.84	−0.01	−0.04	0.04	0.08	0.48	(NA)

Notes: All correlations greater than 0.16 are statistically significant ($p < 0.05$); Reliability estimates, where computed, are shown in parentheses

Table I.
Study variable correlations

Results

The correlations among variables in this study are displayed in Table I. The hypothesized moderating effects of individual cognitive variables on the relationship between WFC and job affect were tested using hierarchical multiple regression (Jaccard *et al.*, 1990). At step one, the dependent variable was regressed onto the independent variable. At step two, the moderator variable is entered into the regression equation. At step three, after the main effects of these two variables have been accounted for, the interaction term was added to the model (using centered variables to control for multicollinearity concerns) (Jaccard *et al.*, 1990). In order to support to the hypotheses, the F(change) at step 3 should be statistically significant, and the beta weight for the interaction term (in the final equation) should be positive. This process was repeated for every combination of independent and moderator variable, resulting in eight sets of hierarchical (moderated) multiple regression analyses.

As can be seen in Tables II and III, three of eight statistical tests resulted in data supporting the study hypotheses. In Table II, it was found that tolerance for

Step	Variable added	R	R^2	ΔR^2	$F_{(change)}$	p	Beta (final equation)
1	Work interference with family	0.16	0.02	0.02	3.69	0.06	−0.165
2	Cognitive complexity	0.16	0.02	0.00	0.02	0.97	0.015
3	Interaction term	0.18	0.03	0.01	1.23	0.27	0.091
1	Family interference with work	0.27	0.07	0.07	11.84	0.01	−0.261
2	Cognitive complexity	0.27	0.07	0.00	0.00	0.96	−0.013
3	Interaction term	0.29	0.08	0.01	1.38	0.24	−0.094
1	Work interference with family	0.16	0.02	0.02	3.74	0.05	−0.142
2	Tolerance for uncertainty	0.16	0.02	0.00	0.00	0.98	0.035
3	Interaction term	0.24*	0.06*	0.04*	5.35*	0.02*	0.188*
1	Family Interference with Work	0.28	0.08	0.08	12.26	0.01	−0.278
2	Tolerance for uncertainty	0.28	0.08	0.00	0.06	0.81	0.019
3	Interaction term	0.28	0.08	0.00	0.09	0.77	−0.023

Note: *Indicates a significant interaction term

Table II.
Results of the regression analyses for job satisfaction

Step	Variable added	R	R^2	ΔR^2	$F_{(change)}$	p	Beta (final equation)
1	Work interference with family	0.23	0.05	0.05	8.18	0.01	−0.234
2	Cognitive complexity	0.23	0.05	0.00	0.02	0.88	0.019
3	Interaction term	0.23	0.06	0.00	0.47	0.49	0.056
1	Family interference with work	0.19	0.04	0.04	5.67	0.02	−0.218
2	Cognitive complexity	0.19	0.04	0.00	0.00	0.96	−0.156
3	Interaction term	0.25*	0.07*	0.03*	4.48*	0.04*	0.212*
1	Work interference with family	0.23	0.05	0.05	8.49	0.00	−0.287
2	Tolerance for uncertainty	0.23	0.06	0.00	0.15	0.70	−0.380
3	Interaction term	0.23	0.06	0.00	0.00	0.97	0.040
1	Family Interference with work	0.20	0.04	0.04	6.26	0.01	−0.215
2	Tolerance for uncertainty	0.20	0.04	0.00	0.09	0.77	−0.023
3	Interaction term	0.27*	0.07*	0.03*	4.95*	0.03*	0.177*

Notes: *Indicates a significant interaction term

Table III.
Results of the regression analyses for organizational commitment

uncertainty moderates the relationship between work interference with family and job satisfaction. Thus, tolerance for uncertainty attenuates the significant negative direct relationship between WIF and job satisfaction. In other words, WIF lowers job satisfaction, but this effect is less strong for those high in tolerance for uncertainty. This was the only significant moderator effect found with job satisfaction as the focal dependent variable. Both cognitive complexity and tolerance for uncertainty were found to moderate the relationship between family interference with work and organizational commitment[3]. The nature of this moderating effect is consistent with the study hypotheses. Thus, there is some evidence that the negative relationships between WFC and affect (i.e. job satisfaction and commitment) are diminished when individuals exhibit a high degree of cognitive complexity or tolerance for uncertainty.

Discussion

One possible implication of this research is that organizations may need to rethink the one-size-fits-all approach to offer programs and policies that aim to assist employees in balancing work and family. "Simple" options (such as time off) may appeal to all employees; however job sharing, flextime, or stress management classes – which require seemingly complicated arrangements or behavior changes – may only appeal to or be utilized successfully by employees with high tolerance for uncertainty and cognitive complexity.

That cognitive attributes may in fact ameliorate the effects of WFC offers important implications to practitioners and researchers alike. Previous research suggests that cognitive attributes are malleable (e.g. Allinson and Hayes and Allinson, 1998; Streufert and Nogami, 1989); individuals can develop their facility in using different cognitive styles and approaches. For example, self-efficacy, the "belief in one's capabilities to mobilize the motivation, cognitive resources, and courses of action needed to meet given situational demands" (Wood and Bandura, 1989, p. 408), has been shown to increase as a result of certain types of training interventions (e.g. Frayne and Latham, 1987; Gist, 1989). In addition, Ewert (1989) noted the benefits of an adventure experience (e.g. outward bound) for increasing problem solving abilities:

> The components of problem solving-identifying the problem, identifying and reviewing solutions, picking and implementing a solution, and evaluating the solution-lend themselves particularly well to an outdoor adventure situation (p. 53).

More recently, Parker and Axtell (2001) note that managerial development efforts include developing greater cognitive complexity in support of the premise that "the best managers will be able to see and understand organizational and environmental events from multiple, rather than single, perspectives" (p. 1086). In fact, they cite studies in which the development of cognitive complexity was been shown to be associated with reduced prejudice (Gardiner, 1972) and the ability to resolve conflicts cooperatively (Eiseman, 1978). Such evidence that training can increase cognitive attributes such as cognitive complexity, self-efficacy, and problem solving suggests that continued research in this vein can provide much needed insight to both WFC researchers and practitioners. We suggest that individuals with an enhanced cognitive style are able to effectively assess and interpret demands or changes in their work and family situation (learn), and then refine or redefine their approach to meeting those demands (perform). This characteristic – reflecting a flexible approach to information

processing – enables individuals to select a cognitive style appropriate to the situation (Hayes and Allinson, 1998). For example, whereas some situations might require time-consuming collection of all relevant information, other situations might be best served by ignoring details.

Our findings, while modest, suggest that organizations should consider:

- offering training programs (utilizing multiple approaches to match learners' cognitive styles) that seek to increase employees' cognitive capacity and ability to adapt to, cope with, or alter the demands of their increasingly complex work and family environments; and
- offering an array of work-family alternatives so that individuals can match their work-family solution to their level of cognitive style or preferences.

Another contribution of this research is that it offers a refinement of both the work-family and stress literatures. The idea that cognition may moderate the relationship between WFC and affective outcomes offers an intervening explanation worthy of continued research. Further research should focus on determining which other individual difference variables (personality, cognitive, values) may play a role in explaining employee experiences with WFC. To this end, the research of Carlson (1999), Havlovic and Keenan (1991), and Sumer and Knight (2001) into the effects of individual differences, such as personality variables and attachment styles, are important contributions.

Further, future research should fully examine the variety of ways that cognitive and other variables may affect the work-family equation. Specifically, a full range of mediating, partial mediating, moderating, and direct effect hypotheses should be explored. It is possible that cognitive and personality variables play a role at various points of a work family model (e.g. they may have a direct effect on how one perceives work-family stressors, or they may mediate the relationships between stress and strain). In sum, more research is necessary to elucidate the nature of the effects of cognition in WFC models.

As with any study, the present one contains a number of limitations. First, the participants responded to self-report paper and pencil survey. While consistent with previous research in this area that presumes self-reports to be accurate reflections of respondents' circumstances (Near *et al.*, 1980), it is possible that biases such as self-presentation or hypothesis guessing may be operating. Further, the non-experimental nature of the study precludes us from drawing conclusions regarding causality.

Finally, while the sample contained both parents and non-parents, and men and women, due to power concerns, our analyses did not account for these demographic differences. Thus, it is possible that this study failed to test for and detect sub-sample differences that may have been of interest.

In conclusion, it appears that cognitive variables can play a role in the study of work and family. To date, there have been very few examinations utilizing these potentially important individual difference and cognitive variables. Despite our modest results, it is our hope that future researchers become more cognizant of the potential role of cognition in work family research.

Notes

1. To address time limitations of survey respondents, we factor analyzed an earlier dataset of nearly 500 respondents and used these 16 items which emerged as the factor with the largest eigenvalue.
2. These ten items were identified as a valid subset of the original 60-item Driver Streufert complexity index by a colleague of one of its co-creators to address time limitations of the study participants (Brousseau, 1998).
3. While we did not examine gender directly, we found no gender differences in cognitive complexity; however, males had a higher tolerance for uncertainty than females ($p = 0.002$).

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About the authors

Suzanne C. de Janasz is an Associate Professor at the University of Mary Washington and currently a Fulbright Scholar in Warsaw, Poland. She has published in the *Journal of Organizational Behavior*, the *Journal of Vocational Behavior*, and the *Academy of Management Executive*, among others, in the areas of careers/mentoring, leadership and work-family conflict. Dr de Janasz serves on the Board of the Organizational Behavior Teaching Society, has been Secretary and PDW chair for the Academy of Management's Careers Division, and served as Track Chair for the Southern Management Association. She is co-author of *Interpersonal Skills in Organizations* (3/e forthcoming from McGraw-Hill) and a forthcoming book on negotiation and dispute resolution (Prentice Hall). Suzanne C. de Janasz is the corresponding author and can be contacted at: sjanasz@umw.edu

Scott J. Behson is an Associate Professor of Management and Department Chair at Fairleigh Dickinson University, where he teaches, conducts research, and provides consulting services in change, HR management, and organizational behavior. His research interests are workplace flexibility, high-involvement work practices, and work-family balance. He has presented at numerous conferences including SIOP and Academy of Management, and has published in such journals as the *Journal of Vocational Behavior* and the *Journal of Health Care Management*. Dr Behson has also taught as a visiting professor at the International University of Monaco, in Monte Carlo, Monaco, and La Universidad del Salvador, Buenos Aires, Argentina, and has several years experience in Management and HR consulting.