

4-17-2009

A New Perspective on the Work-Family Interface: Linking Achievement Motivation and Work-Family Balance

Tiffany N. Smith
University of South Florida

Follow this and additional works at: <https://digitalcommons.usf.edu/etd>



Part of the [American Studies Commons](#)

Scholar Commons Citation

Smith, Tiffany N., "A New Perspective on the Work-Family Interface: Linking Achievement Motivation and Work-Family Balance" (2009). *USF Tampa Graduate Theses and Dissertations*.
<https://digitalcommons.usf.edu/etd/1777>

This Thesis is brought to you for free and open access by the USF Graduate Theses and Dissertations at Digital Commons @ University of South Florida. It has been accepted for inclusion in USF Tampa Graduate Theses and Dissertations by an authorized administrator of Digital Commons @ University of South Florida. For more information, please contact digitalcommons@usf.edu.

A New Perspective on the Work-Family Interface:
Linking Achievement Motivation and Work-Family Balance

by

Tiffany N. Smith

A thesis submitted in partial fulfillment
of the requirements for the degree of
Master of Arts
Department of Psychology
College of Arts and Sciences
University of South Florida

Major Professor: Walter Borman, Ph.D.
Tammy Allen, Ph.D.
Marcie Finkelstein, Ph.D.

Date of Approval:
April 17, 2009

Keywords: learning goal orientation, action orientation, growth need strength, conflict, facilitation

© Copyright 2010, Tiffany N. Smith

Table of Contents

List of Tables	iii
List of Figures	iv
Abstract	v
Chapter One – Introduction	1
Learning Goal Orientation	12
Growth Need Strength	16
Action Orientation	19
Chapter Two – Method	24
Participants and Procedure	24
Measures	26
Demographics	26
Work-Family Characteristics	26
Learning Goal Orientation	27
Action Orientation	28
Growth Need Strength	29
Work-Family Balance	29
Work-Family Conflict	29
Work-Family Facilitation	30
Chapter Three – Results	31
Preliminary Analyses	31
Testing Hypotheses of Direct Relationships	31
Testing Hypotheses of Moderation	34
Chapter Four – Discussion	46
Work-Family Characteristics	47
Learning Goal Orientation	48
Growth Need Strength	49
Action Orientation	51
Limitations and Future Directions	52
References	55
Appendices	67
Appendix A: Work-Family Characteristic Items	68
Appendix B: Learning Goal Orientation Scale Items	69
Appendix C: Action Orientation Scale Items	70
Appendix D: Growth Need Strength Scale Items	73

Appendix E: Work-Family Balance Scale Items	74
Appendix F: Work-Family Conflict Scale Items	75
Appendix G: Work-Family Facilitation Scale Items	76

List of Tables

Table 1	Means, Standard Deviations, and Intercorrelations	32
Table 2	Moderated Hierarchical Regression Results for LGO	39
Table 3	Moderated Hierarchical Regression Results for GNS	40
Table 4	Moderated Hierarchical Regression Results for AO	43

List of Figures

Figure 1	LGO by Schedule Flexibility Interaction on WFB	37
Figure 2	LGO by Schedule Flexibility Interaction on WFC	38
Figure 3	GNS by Supervisor Support Interaction on WFF	41
Figure 4	AO and Number of Dependents Interaction on WFF	44
Figure 5	AO by Supervisor Support Interaction on WFC	45

A New Perspective on the Work-Family Interface:
Linking Achievement Motivation and Work-Family Balance

Tiffany N. Smith

ABSTRACT

The purpose of this study was to identify whether three achievement motivation variables (LGO, GNS, and AO) were positively related to work-family balance, and to investigate plausible interactions between these variables and work-family stressors on balance perceptions. Relationships of these variables to work-family conflict and facilitation outcomes were also analyzed in order to identify differential relationships. Data were collected from 428 individuals through a web-based survey. Results indicated that all three achievement motivation variables were clearly related favorably to work-family balance and facilitation, while only AO was negatively related to conflict. The relationships between schedule flexibility and all work-family outcomes were moderated by both LGO and GNS. The majority of proposed interactive effects between achievement motivation variables and work-family stressors on balance were not significant. However, several interactions were significant when conflict or facilitation served as the criterion measure. Overall, the results provide support for LGO, GNS, and AO as both direct and indirect contributors to work-family balance.

Chapter One

Introduction

In recent decades, there has been a significant rise in the number of dual earner couples and single parents in the workforce (Bumpass, 1990; Zill, 1991). The percentage of working women has also increased considerably (Lerner, 1994), while men have become increasingly more involved with family and household responsibilities (Barnett & Rivers, 1996; Pleck, 1985). These trends reflect the declining adoption of traditional gender roles and the increasingly embraced egalitarian perspective on work and family issues (Grzywacz & Marks, 2000). However, this increased participation in multiple roles has presented both genders with relatively new challenges and responsibilities, highlighting the importance of examining the outcomes associated with dual-role involvement. Additionally, U.S. employees are working more weekly hours than ever before, and the number of employees responsible for both child and elder care is continually rising (Marks, 1996). With these growing demands on workers, research has become increasingly focused on identifying dispositional and situational variables which may help individuals to balance both work and family responsibilities, while avoiding the strain outcomes associated with work-family stressors (Eby et al., 2005; Grzywacz & Marks, 2000; Hill, 2005).

The primary focus of this research has been on the antecedents and outcomes of work-family conflict, which occurs when work and family roles are mutually incompatible, and participation in one role makes participation in the second role more

difficult (Greenhaus & Beutell, 1985). Several theoretical perspectives have been adopted to explain the mechanisms linking work and family domains. Early theorists proposed both causal and noncausal models of the work-family interface (for detailed reviews, see Edwards & Rothbard, 2000; Morf, 1989). The three main noncausal models included the segmentation model (which proposed independence between domains and therefore no relationship), the congruence model (which postulated that any relationship between domains is due to spurious common factors), and the integrative model (which proposed that work and family domains are so closely related that they are indistinguishable). Three primary causal models have also been used to explain relationships between work and family roles. The spillover model suggests that a change in one domain leads to a similar change in the other domain, resulting in a positive relationship between the two. In contrast, the compensation model proposes that individuals compensate for dissatisfaction in one role by increased involvement in another, thus creating a negative relationship between domains. Perhaps the most widely adopted explanation is the resource drain model, which also postulates a negative relationship between work and family roles due to limited resources (time, attention, energy, etc.) available to divide between the work and family domains. The resource drain perspective is the basis behind the idea that numerous demands from either work or family roles can lead to work-family conflict. Additionally, negative spillover between domains (such as emotion-based strain) can also lead to conflict between roles. However, research has found supporting evidence for all of these explanations, indicating that there is no one clear mechanism by which work and family roles intertwine (Lambert, 1990). Research on antecedents in the work-family interface has identified several demographic, familial, and work-related

characteristics which significantly relate to work-family conflict. These variables are typically referred to as work-family stressors, with work-family conflict and poor well-being serving as indicators of strain (Byron, 2005). In recent years, researchers have begun examining the predictors and outcomes of work interfering with family (WIF) independently of family interfering with work (FIW), due to empirical evidence suggesting that there are distinct role-related antecedents associated with each type of conflict (Byron, 2005; Frone, Yardley, et al., 1997). More specifically, work-related variables have been shown to predict WIF and familial variables have been shown to predict FIW. For example, a number of studies have demonstrated that weekly hours worked is positively related to WIF conflict, while weekly hours devoted to familial responsibilities and housework is positively related to FIW conflict (Byron, 2005; Frone, Yardley, & Markel, 1997; Grzywacz & Marks, 2000; Netemeyer, Boles, & McMurrin, 1996). In addition to time-based involvement, high psychological involvement in one domain has also been shown to be predictive of interrole conflict. Psychological involvement with family is positively related to FIW conflict, while high psychological job involvement serves as an antecedent of WIF conflict (Adams, King, & King, 1996; Carlson & Kacmar, 2000).

In support of the spillover and resource drain hypotheses, stress, dissatisfaction, and role ambiguity associated with a particular role are also positively related to conflict with the other role (Bernas & Major, 2000; Carlson & Kacmar, 2000; Frone, Yardley, et al., 1997, Grandey & Cropanzano, 1999; Grzywacz & Marks, 2000). For example, when an individual is experiencing extreme stress in the work domain, a drain in psychological and physical resources can occur, which may reduce the individual's ability to meet

responsibilities associated with the other domain. Negative affective responses to the work-related stress can also spillover into the family domain, leading to an increase in WIF conflict. However, the causal direction of the relationship between dissatisfaction or stress and work-family conflict is unclear, as these antecedents may instead be consequences of the conflict. Several studies have also demonstrated that social support in a particular domain is negatively related to interference with the other domain. More specifically, the instrumental (ex: assistance with household chores) and affective support of family members is associated with lower FIW conflict, while supervisor support (ex: support of family friendly policies, recognition of familial demands) is associated with lower WIF conflict (Adams et al., 1996; Bernas & Major, 2000; Frone, Yardley, et al., 1997; Grzywacz & Marks, 2000; Lapierre & Allen, 2006). A meta-analysis conducted by Byron (2005) on the antecedents of work-family conflict also found that work schedule flexibility was among the most strongly correlated ($p = -.30$) predictors of WIF.

Demographic variables associated with work-family conflict have also been examined, but with mixed results. For example, when gender is included as a predictor of work-family conflict, some studies have indicated that women experience greater levels of work-family conflict, while others have found no significant differences in perceived levels of work-family conflict between men and women (Brough & Kelling, 2002; Hill, 2005; Rothbard, 2001). However, Byron's (2005) meta-analysis demonstrated that when directional conflict was examined independently, men tended to experience greater WIF, and women tended to experience great FIW. The same meta-analysis also found that the number of children and the number of children living at home were significantly positively related to work-family conflict.

A large body of research has also been devoted to identifying the consequences associated with work-family conflict. Research has linked work-family conflict with a variety of poor outcomes, including decreased performance and satisfaction in both domains, as well as poor mental and physical health outcomes (Allen, Herst, Bruck, & Sutton, 2000; Frone, Russell, & Cooper, 1997; Frone, Yardley et al., 1997; Grandey & Cropanzano, 1998; Grzywacz & Marks, 2000). Distinct role-related outcomes associated with WIF conflict and FIW conflict have also been identified, leading many researchers to also examine the consequences of each conflict type independently (Frone, Yardley, et al., 1997). Interference from demands in one domain is thought to result in negative outcomes in the other domain. For example, FIW conflict is associated with more work-related absenteeism and tardiness, and WIF is also associated with family-related absenteeism and tardiness (Frone, Yardley, et al., 1997; MacEwen & Barling, 1994). Interference from one domain is also related to lower levels of performance and satisfaction in the other role (Carlson & Kacmar, 2000; Kossek & Ozeki, 1998).

Research has also extensively explored health consequences associated with work-family conflict, including mental and physical health as well as health-related behaviors. For instance, several studies have shown that FIW and WIF conflict are positively and independently associated with psychological distress (Frone, Russell, & Barnes, 1996; MacEwen & Barling, 1994; Marks, 1998), and depressive symptoms (Frone, Russell, et al., 1997). Work-family conflict is also related to poor self-reported physical health (Frone, et al., 1996, Frone, Russell, et al, 1997, Marks, 1998), and increased use of alcohol (Frone et al., 1996, Frone, Russell, et al., 1997). Furthermore, recent research conducted by Allen and Armstrong (2006) found that high levels of work-

family conflict may also have a negative impact on eating habits and physical activity, which further illuminates the potential consequences associated with excessive interrole conflict.

Despite the noted detrimental effects associated with conflict between roles, there can also be positive outcomes associated with dual role-involvement. Participation in one role can lead to more positive outcomes in a second role due to skills and other resources accrued in the first role (Frone, 2003). In accordance with the spillover hypothesis, these skills and resources can then be applied to promote growth and more effective functioning in the second domain (Sieber, 1974). Positive affective responses to experiences in the family domain may also carry over to the work domain (or vice versa). This is typically referred to as work-family facilitation (also known as work-family enrichment or positive spillover), and is thought to occur independently of (and often simultaneously with) interrole conflict (Grzywacz & Marks, 2000; Powell & Greenhaus, 2006). Barnett and Hyde (2001) outline several processes by which involvement in multiple roles can lead to beneficial outcomes. One such explanation is buffering, an interactional process in which being satisfied and fulfilled in one role can weaken the negative effects of stressors in another role. Increased income and social support (i.e. resource generation) are also provided as explanations for positive spillover. In addition, Barnett and Hyde (2001) describe how participation in multiple roles allows for increased opportunities for experiencing success, a broader frame of reference on which to base perspectives, increased self-complexity, and greater similarity of experiences between spouses (which may increase marital and communication quality).

Although several researchers have theorized that negative and positive spillover are opposing ends of a continuous spectrum, empirical evidence supports the idea that these effects of dual-role involvement are actually two distinct constructs. Greenhaus and Powell (2006) examined 15 studies which assessed both work-family conflict and facilitation, and found that only 8 of the 21 correlations identified were statistically significant; those which were significant were weakly correlated (mean $r = -.02$). Powell and Greenhaus (2006) suggest that certain role or individual characteristics may serve as antecedents for both conflict and facilitation. For example, the preference for high role integration (rather than segmentation) could lead to increased experience of both work-family conflict and facilitation. The authors highlight the need for future research to identify factors which are uniquely related to work-family facilitation.

Compared to the abundant literature on work-family conflict, research on the positive effects of dual-role involvement has been limited. In recent years, however, several studies have examined the antecedents and outcomes of work-family facilitation. Grzywacz and Marks (2000) conducted the first study to examine the variables related to work-to-family facilitation (WFF) and family-to-work facilitation (FWF) independently, with the assumption that the antecedents of work-family facilitation were similar to those of work-family conflict. However, the authors found that several variables associated with work-family conflict (behavioral involvement at work, family and work demands, and family conflict) were unrelated to both forms of facilitation. These findings support the notion that conflict and facilitation lie on distinct scales, rather than on a continuum. Work autonomy and family support were found to be positively related to facilitation, while work barriers (such as family conflict and job pressure) were negatively related to

facilitation. In a study on the relationships between job characteristics and WFF, Grzywacz and Butler (2005) found that individuals with jobs high in autonomy, variety, substantive complexity and required social skills experienced higher levels of work-family facilitation. Similarly, Hill (2005) found that supervisor support and spousal support related positively to FWF, while work group support was positively related to WFF.

In the last decade, a few researchers have begun to examine both the health and role-related outcomes of bidirectional facilitation. Grzywacz and Marks (2000) examined health-related outcomes, identifying a negative relationship between both types of facilitation and poor mental health. Balmforth and Gardner (2006) also examined work-related outcomes of bidirectional work-family facilitation, showing that both types of facilitation were positively related to job satisfaction and affective organizational commitment, and negatively related to turnover intentions. Also, WFF was positively related to organizational citizenship behavior. Furthermore, Hill (2005) found that WFF predicted job satisfaction, while FWF predicted family and marital satisfaction. Both forms of facilitation significantly predicted overall life satisfaction.

Many researchers consider both conflict and facilitation to play a role in shaping perceptions of harmony and balance between work and family domains. However, discrepancies in how the overall concept of work-family balance has been defined in the literature have made interpreting and comparing findings on the construct difficult (Greenhaus & Allen, in preparation). For example, several researchers have used the term balance as an antonym for work-family conflict, so that absence of conflict is an indicator of balance between roles (Hill, Hawkins, Ferris, and Weitzman, 2001; Saltzstein, Ting, &

Saltzstein, 2001). However, this definition does not adequately explain the role of work-family enrichment in overall perceptions of balance, and the potential for simultaneous occurrence of positive and negative spillover. The more recent introduction of work-family facilitation has led some researchers to adopt a fourfold taxonomy of work-family balance, in which minimized conflict and maximized facilitation constitutes balance (Aryee, Srinivas, & Tan, 2005; Frone, 2003). Other researchers, such as Halpern and Murphy (2005), define balance as roughly equal role involvement, reflected by the amount of time and effort expended in each domain. This definition can also be problematic if domains are highly integrated, or if the personal identity of the individual lies primarily within one role. While the benefits from dual role involvement cannot be obtained without a certain degree of participation in both domains, an individual may obtain fulfillment and satisfaction from both roles without equal role involvement. Also, effective performance in each domain may not require the same level of physical presence, effort, or psychological involvement.

More recently, Greenhaus and Allen (in preparation) have proposed that work-family balance is achieved when “an individual’s effectiveness and satisfaction in work and family roles are compatible with the individual’s life role priorities at a given point in time”. Thus, when dispositional characteristics and other variables serve to enable an individual’s effectiveness and satisfaction in a high-priority role, these variables are thought to facilitate work-family balance. This interpretation allows for differences in involvement, performance, and satisfaction between domains, so that individuals who are career focused, family focused, or equally career *and* family focused may each perceive an overall sense of balance despite respective role priorities (Greenhaus & Allen, in

preparation). In addition, the concepts of conflict and facilitation, while playing a role in the perception of role satisfaction and effectiveness, are distinct from the overall concept of balance. Instead, the authors define work-family balance in terms of the perceptions of outcomes associated with both domains, rather than the processes which contribute to those outcomes.

Under the present definition, experiences in the work and family domains (along with situational, demographic, and dispositional characteristics) serve to collectively enable or prevent individuals from being highly satisfied and effective in high priority roles (i.e. balanced) (Greenhaus & Allen, in preparation). Research has not identified situational or demographic characteristics which serve as antecedents of overall perceptions of work-family balance or imbalance. Therefore, the current study focuses on work-family stressors which have been empirically supported as antecedents of work-family conflict, namely work hours, number of (dependent) children, schedule flexibility, supervisor support, and family support. Supervisor and family support have also been identified as significant predictors of work-family facilitation. Figure 1 shows predicted relationship between work-family stressors and perceived work-family balance.

Hypothesis 1: Work hours, number of children, schedule inflexibility, lack of supervisor support, and lack of support from family will be negatively related to and predictive of work-family balance

Despite some confusion in how the balance concept should be defined and interpreted, it can certainly be argued that balancing work and family demands can be a persisting and difficult challenge, requiring individuals to continually adapt coping strategies, skills, and resources necessary for success in high priority or both domains.

Although research has identified several situational and demographic antecedents of both work-family conflict and enrichment, only a few studies have examined personality traits which moderate the work-family stressor-strain relationship or directly improve an individual's ability to balance the demands of multiple roles. One method of coping with stress is problem-focused coping, which was found to be negatively related to strain-based FIW conflict (Lapierre & Allen, 2006; Rotondo, Carlson, & Kincaid, 2002). Problem-focused coping involves defining the problem, generating alternative solutions, and taking action (Lazarus & Folkman, 1984), which is thought to enable individuals to more effectively manage stressors (particularly in the family domain, where situational control may be higher) (Lapierre & Allen, 2006). Hardiness was also found to significantly relate to perceived levels of work-family conflict (Bernas & Major, 2000). In addition, a study by Wayne, Musisca, and Fleeson (2003) explored the relationships between the Big Five personality traits and conflict and facilitation, finding that neuroticism related positively to conflict, conscientiousness related negatively to conflict, and extraversion related positively to facilitation.

Examining the direct and moderating influences of dispositional characteristics in the work-family context is elemental in informing our picture of "balance". In particular, it is critical for researchers to identify individual differences which influence stress resilience, coping strategies, and goal persistence, as these characteristics are likely to be significantly influential to the work-family stressor-strain relationship. Researchers have identified individual differences in resilience to stress and susceptibility to environmental pressures (Lefcourt, 1985), and unveiling the traits which contribute to these individual response differences could be a critical step in predicting and avoiding strain-related

outcomes. Research in the area of achievement motivation may provide some insight into which dispositional characteristics enable individuals to effectively self-regulate and cope with stressors in order to accommodate work and family responsibilities. In particular, traits such as learning goal orientation, growth need strength, and action orientation may buffer the negative effects of work-family stressors and help individuals to maintain balance between work and family roles.

Learning Goal Orientation

The focus of goal orientation is on how individuals define and strive for success. Learning goal orientation (LGO) involves consistently striving toward mastery of a skill or task in an effort to increase competence (Nicholls 1975; 1984), and is also known as task or mastery orientation. In contrast, the focus of performance-goal oriented (ego orientation; PGO) individuals is on demonstrating competence and superiority to others. While LGO and PGO have been theorized by some to be opposing ends of a unidimensional trait, many researchers have failed to detect significant correlations between the two dimensions, and recent factor analyses indicate that the two orientations are indeed distinct factors (Button, Mathieu, & Zajac, 1996). Furthermore, factor analyses have provided evidence that PGO can be divided further still into performance prove orientation (PPGO) and performance avoid orientation (PAGO; Attenweiler & Moore, 2006). For individuals high in PPGO, emphasis is placed on demonstrating superior performance, while the focus for individuals high in PAGO is on avoiding goal failure, performance inferiority, and criticism.

Research has consistently found LGO to be positively related to job, task, and academic performance (Button, Mathieu, & Zajac, 1996; Wood & Bandura, 1989), while

the relationships between performance orientations and these criteria have been less consistent. For example, Payne, Youngcourt, and Beaubien (2007) found that LGO was positively related to learning, job performance, academic performance, and task performance, and was able to predict job performance above and beyond cognitive ability and dispositional traits. In contrast, the authors found that these performance criteria were uncorrelated with PPGO and negatively correlated with PAGO. VandeWalle (1997) also found that LGO was positively related to academic performance, while PPGO and PAGO showed weak and inconsistent relationships. Bell and Kozlowski (2002) obtained similar results with a study on goal orientation and task performance, which indicated that strategic task performance was positively related to LGO, unrelated to PPGO, and negatively correlated with PAGO.

Although some studies have found that high levels of both LGO and PGO predict high performance, the PGO-performance relationships tend to be moderated by perceived ability. For example, Duda and Nicholls (1992) found that individuals high in PGO perceived success to require high ability, while individuals high in LGO attributed success to interest, effort, and peer collaboration. Elliot and Dweck (1988) also found that high ability children with PGO's had performance levels similar to those with learning goals, but they tended to avoid adopting more challenging goals over time. Also, learning goals still led to higher performance when perceptions of ability were low. These results suggest that the tendency to adopt learning (rather than performance) goals may be directly linked with high effectiveness and performance in a variety of domains. Additionally, the increased knowledge, strategy and skill acquisition which enables learning oriented individuals to achieve higher performance can be beneficial in both the

domain in which they are accrued, and when applied to a second domain (i.e. facilitation).

Goal orientation has also been shown to have important influences on self-regulatory behavior. For instance, studies show that following goal failure, high LGO individuals are more likely to increase attentional effort toward the goal, while individuals high in PGO show tendencies toward disengagement (Kanfer, 1990; Payne et al., 2007). These studies also indicate that adopting learning goals leads to greater success at modifying learning strategies and goals to adapt to challenges. Similarly, Dweck and Leggett (1988) found that LGO is positively related to goal commitment and goal persistence following failure. Other studies comparing LGO and PGO have also found that individuals high in LGO tend to use deeper-level processing strategies, set higher performance goals for themselves, and demonstrate greater goal persistence (Nolen, 1988; Wood & Bandura, 1989). LGO may positively contribute to effective self-regulatory behavior by enabling greater maintenance of positive perceptions. For example, a study conducted by Klein, Noe, and Wang (2006) indicated that compared to performance-oriented individuals, those high in LGO had more positive self-reactions and task-specific self-efficacy following goal failure. Also, VandeWalle, Cron, and Slocum (2001) showed that following performance feedback, the LGO-performance relationship remained positive, while the relationship between PPGO and performance became nonsignificant, and the PAGO-performance relationship remained negative. The ongoing challenges (i.e. stressors) associated with balancing work and family responsibilities certainly have potential for negatively influencing perceptions of self-efficacy and situational control. Dispositional LGO may be a key factor in maintaining a

positive outlook and persisting with personal goals in both work and family roles. Thus, LGO may serve as a moderator between work-family stressors and work-family balance perceptions.

Learning goal orientation may also serve as a moderator between the work-family stressor-strain relationship by indirectly enabling individuals to effectively cope with and remain resilient towards work-family stressors. Having a LGO is associated with the increased use of problem-focused coping, which in turn is significantly related to lower work-family conflict (Dweck & Leggett, 1988; Lapierre & Allen, 2006; Rotondo, Carlson, & Kincaid, 2002). Pensgaard and Roberts (2002) found that having a high task/low ego orientation was associated with greater use of active coping and growth strategies, and greater use of social emotional support and positive redefinition. In contrast, individuals with low task/high ego orientations were less likely to use active planning, and more likely to use denial as a coping strategy. Morris, Brooks, and May (2003) also found that compared to performance goals, learning goals were more predictive of both task-oriented coping and emotion-oriented coping strategies. Additionally, Dykman (1998) found that in highly stressful circumstances, LGO was negatively predictive of anticipatory anxiety, loss of self-esteem, and task disengagement, while PGO was positively related to these outcomes. Interestingly, a recent study revealed that the relationship between job demands (i.e. work overload) and job satisfaction is moderated by goal orientation, such that demands were negatively related to job satisfaction only when LGO was low and PGO was high (Van Yperen & Janssen, 2002). This suggests that when learning goals are adopted, new challenges may be

perceived as growth opportunities rather than performance obstacles, leading to greater persistence towards goal achievement and task mastery.

Considerable research has demonstrated that LGO may have a significant positive influence on the ability to acquire skills, resources and knowledge, which in turn may be applied to relevant domains and directly enable work-family facilitation. Moreover, an abundance of research on the relationship between LGO and performance outcomes supports the idea that being highly learning-oriented is likely to increase effectiveness (i.e. performance) and satisfaction in both work and family domains. See Figure 2 for predicted relationship between LGO and work-family balance. LGO may also play a moderating role in the relationship between work-family stressors and work-family balance, in that LGO enables more effective coping strategies and thus buffers the harmful effects of excessive work-family demands. Figure 3 shows the predicted interaction effect of LGO on the relationship between work-family stressors and work-family balance.

H2a: Learning goal orientation will be positively related to work-family balance

H3a: Learning goal orientation will moderate the relationship between work-family stressors and work-family balance, such the stressor-strain relationship will be stronger for individuals low in LGO

Growth Need Strength

Growth need strength (GNS) is the extent to which an individual has strong needs for learning, professional growth, and personal challenges (Oldham, Hackman, & Pearce, 1976). Individuals with high need for personal growth place a high value on the internal satisfaction which can be gained from effort and performance on challenging tasks. GNS

has been widely studied within the work context, and several studies have provided evidence for the moderating influence of GNS on the relationship between job characteristics and internal motivation, job performance, and job satisfaction (Abdel-Halim, 1979; Brief & Aldag, 1975; Champoux, 1980; Oldham, Hackman, & Pearce, 1976; Pierce, Dunham, & Blackburn, 1979; Pokorney, Gilmore, & Beehr, 1980).

Hackman and Lawler (1971) conducted the first study which examined the moderating role of GNS on the relationship between four core job characteristics and satisfaction and effectiveness outcomes. The authors found that when the desire to satisfy “higher order needs” was high, there was a more prominent positive relationship between the job characteristics and employee job satisfaction, work motivation, supervisor performance ratings, and attendance records. Brief and Aldag (1975) identified similar moderating effects, with the exception of GNS moderating the relationship between task identity and work outcomes. Oldham, Hackman, and Pearce (1976) also examined the moderating role of growth need strength, similarly demonstrating that individuals with strong growth needs benefited more from job enrichment. More specifically, there was a stronger relationship between enriching job characteristics (such as skill variety, autonomy, task significance, etc.) and performance effectiveness, salary, and internal work motivation outcomes. Similar effects have been replicated across several other studies (Abdel-Halim, 1979; Pierce, Dunham, & Blackburn, 1979), although the moderation results were inconsistent at times (Champoux, 1980; Evans, Kiggundu, & House, 1979; Pokorney, Gilmore, & Beehr, 1980). A meta-analysis conducted by Loher, Noe, Moeller, and Fitzgerald (1985) also confirmed the moderating role of GNS in the job characteristics-job satisfaction relationship.

Other researchers have focused on the influence of GNS on other work attitudes and behaviors. For instance, a field experiment conducted by Graen, Scandura, and Graen (1986) found that GNS was associated with increased response to growth opportunities. This suggests that the desire to satisfy higher order needs may be linked with seeking growth opportunities in a variety of domains. In turn, engaging in those desired growth opportunities may lead to increased role satisfaction and effectiveness. Individuals with strong growth needs may also be more likely to seek creative ways to engage in growth opportunities. This is demonstrated in a study by Krausz and Hermann (1981), which found that individuals high in GNS were more likely to engage in the use of flextime at work. Additionally, Tharenou and Harker (1982) found that perceived task competence was positively related to job satisfaction and performance, but that these relationships were moderated by GNS. Houkes, Janssen, de Jonge, and Bakker (2003) also identified direct relationships between GNS and psychological outcomes such as turnover intentions and work motivation.

Since research has shown that growth need strength influences the relationship between job characteristics and job performance (i.e. effectiveness) and job satisfaction, it is plausible that this trait may also act as a moderator in the relationship between situational characteristics and satisfaction/effectiveness in the family domain by buffering the negative effects of work-family stressors. A direct relationship between growth need strength and balance may also exist if greater growth and learning needs lead to increased engagement in growth opportunities, and thus higher performance in high priority domains. Growth need strength is thought to be a dispositional trait (Hackman & Lawler, 1971; Oldham, Hackman, & Pearce, 1976). However, it is reasonable to assume that

levels of growth need may vary by domain, particularly if psychological involvement and role identity are not equally divided across work and family domains. This is supported in a study by Kanungo and Misra (1988), which demonstrated that while growth needs are the most important needs in the work context, affiliative needs are most salient in the family domain. The authors also found that role involvement depended on perceived need satisfaction potential of the respective domains, suggesting that individuals high in GNS could be more likely to be primarily psychologically involved with the work role. However, let us recall that Greenhaus and Allen's (in preparation) definition of work-family balance does not require role involvement or perceived satisfaction and effectiveness to be equivalent in both domains. If both roles are of high priority to an individual, it is expected that either the need for personal growth will be salient in both domains, or that the positive effects of satisfying growth needs in the work role will facilitate positive perceptions in the family domain. Figure 4 shows predicted moderating role of GNS on the work-family stressor-balance relationship.

H2b: Growth need strength will be positively related to work-family balance

H3b: Growth need strength will moderate the relationship between work-family stressors and work-family balance, such that the relationships between stressors and balance will be weaker for individuals with strong growth needs

Action-State Orientation

Action-oriented individuals are able to commit to action, manage time properly, avoid distractions, and persevere until tasks are complete (Kuhl, 1981). In contrast, state-oriented individuals are hesitant, indecisive, are more likely to lose focus on an activity easily, and demonstrate low persistence toward goals. Being highly action-oriented

(rather than state-oriented) is associated with an increased likelihood of following through with behavioral intentions, particularly when external conditions are demanding (Kázen, Kaschel, & Kuhl, 2008; Kuhl & Beckmann, 1994). Song, Wanberg, Niu, and Xie (2006) also found that action orientation is a moderator between attitude and intention, and between intention and action-intensity.

Several studies have also demonstrated that action-state orientation is an influential factor in the ability to self-regulate effectively. For example, a study by Calero et al. (2007) found that in a sample of high IQ children, highly action-oriented participants demonstrated greater self-regulation efficiency. In addition, Jostmann and Koole (2007) demonstrated that action orientation was associated with increased cognitive control under demanding conditions (i.e. better ability to override strong but inappropriate actions). A second study by Jostmann and Koole (2006) showed that action-oriented participants had better working memory under demanding relationship primes, compared to state-oriented participants. Similarly, Kázen, Baumann, and Kuhl (2005) utilized terror management theory to show that action-oriented individuals used more effective self-regulation after threatening mortality primes. Diefendorff et al. (2000) also found a positive link between action orientation and performance efficiency, and the ability to complete tasks after minor setbacks.

Other researchers have examined the influence of action orientation on the psychological processes underlying goal and affect regulation. Action oriented is associated with the ability to demonstrate flexible, efficient, and nonrepressive control over one's own affective state (Koole & Jostmann, 2004). In accordance with this finding, Jostmann, Koole, van der Wulp, and Fockenberg (2005) demonstrated that the

basic affective reactions of action-oriented participants were significantly less sensitive than those of state-oriented participants when subliminally primed with facial expressions. This finding suggests that being highly action-oriented may cause lower susceptibility to environmental influences which could deter or distract individuals from meeting their goals. Koole (2004) also found that when external demands were high, action-oriented individuals more frequently used volitional shielding as a defense mechanism, thus enabling them to maintain better perceptions of intrinsic psychological needs. Similarly, action orientation is associated with lower resistance to external demands when formulating personal goals (Kázen, Baumann, & Kuhl, 2003).

Action orientation may help explain significant performance differences between individuals with similar goals, knowledge, and ability. Satisfaction and effectiveness in high priority roles (i.e. balance) may be more easily maintained when individuals implement intended behavior while avoiding both emotional and physical distractions in other domains. Furthermore, highly action-oriented individuals may be less sensitive to demanding or stressful conditions while striving toward goals, and may be more likely to persist in unpleasant situations. Thus, action orientation may serve as a moderator to buffer the effects work-family stressors on overall perceptions of balance. Figure 5 illustrates predicted interaction between action orientation and work-family stressors on work-family balance perceptions.

H2c: Action orientation will be positively related to work-family balance

H3c: Action orientation will moderate the relationship between work-family stressors and work-family balance, such that the stressor-balance relationship will be weaker for highly action-oriented individuals

Much of the previous research on achievement motivation has focused on the goal-related behavior of individuals for specific, achievement-oriented tasks (Kanfer, 1990; Nicholls, 1984). Motivation in relation to work-family balance is likely to be less specific and formal, and may reflect a variety of performance outcomes such as learning/skill acquisition, effective time management, generation of various resources, and successfully coping with stress. It is likely that these achievement motivation variables exert a moderating influence on the relationship between work-family stressors and work-family balance through both learning and resource acquisition, as well as the ability to directly apply those resources efficiently and effectively. The ability of individuals with high levels of these variables to remain persistent and optimistic in the face of failure may also help individuals to cope with conflicting work and family needs, and maintain high levels of satisfaction in high priority domains. Using resources, skills, and coping techniques effectively may lessen the negative impact of work-family stressors on work-family balance. These findings highlight the need for the direct and moderating influence of motivational traits to be considered and examined in the work-family context.

The proposed study will attempt to address those needs by examining the role of learning goal orientation, growth need strength, and action orientation in the work-family interface. In order to further identify differential correlates of work-family balance, conflict, and facilitation, exploratory analyses will also be conducted to include work-family conflict and work-family facilitation measures. Examining the relationships amongst these work-family interface variables (as well as relationships with work-family stressors) would provide empirical support for the extent to which previous findings on

these constructs can be interpreted and compared. Similarly, differential relationships of achievement motivation variables with work-family constructs would add to our theoretical understanding of the mechanisms underlying these relationships.

Chapter Two

Method

Participants and Procedure

Participants included employed individuals living in various areas of the United States. For inclusion in the current study, participants were required to be employed and working at least 20 hours per week. Participants were also required to either have dependents or a partner living with them. Web-based surveys were distributed through The Study Response Project website, an online social science research resource which recruits participants for research projects using a large database of volunteers. Hosted by Syracuse University's School of Information Studies, The Study Response Project distributed emailed participation requests to 3,400 employed, United States residents. Random, raffle-type incentives were provided for volunteers who completed the web-based survey. All survey responses were anonymous and confidential, and were automatically entered into a database following survey completion.

One disadvantage with using a web-based data collection method is the potential for coverage bias; individuals with low socioeconomic status and other demographic groups without access to a computer will be indirectly excluded from the sample. However, research comparing web-based survey data to traditional paper-and-pencil surveys has found promising results. For example, Birnbaum (1999) found that web-based survey response rates and response patterns were comparable to lab-based samples. Furthermore, several studies have shown that participants tend to be more

demographically diverse when web-based data is collected, compared to using other mediums (Birnbaum, 1999; Pettit, 1999; Stanton, 1998).

Of the 3,400 individuals requested to complete the survey, 679 surveys were completed. However, 251 participants were removed from the data because inclusion criteria was not met, leaving a final sample of 428. The average age of participants was 41.37 ($SD = 10.00$), and 60.5 percent of the sample was female. Participant ethnicities were as follows: 87.4% Caucasian, 4.2% African American, 2.6% Hispanic, 3.0% Asian or Pacific Islander, 1.2% Native American or Alaskan Native, 0.7% who indicated multiple/other, and 0.5% who did not respond. Participants worked an average of 40.86 ($SD = 8.26$) hours per week. 2.1% of participants had annual household incomes of \$10,000-\$19,000, 6.8% from \$20,000-29,000, 8.4% from \$30,000-\$39,000, 9.6% from \$40,000-\$49,000, 13.6% from \$50,000-59,000, 15.9% from \$60,000-69,000, 13.6% from \$70,000-\$79,000, and 29.7% with an annual household income of \$80,000 or more. Highest obtained education levels were as follows: some high school (0.9%), high school diploma/GED (12.1%), some college (25.9%), 2-year college degree (11.7%), 4-year college degree (25%), some graduate school (5.6%), and graduate degree (18.2%). 382 participants indicated that they lived with a partner (89.3%). Of those 382 participants, 290 (67.8%) indicated that their partner was employed full-time outside the home. Participants reported having an average of 1.61 ($SD = 1.36$) children, and an average of 1.40 ($SD = 1.41$) dependents.

Measures

Scores for all variables (except demographic variables) range from 1 to 5, with high scores reflecting higher levels of each variable.

Demographics. Demographic information collected from participants included age, gender, ethnicity, number of children and dependents, and employment status of partner (if applicable), annual household income, and education level.

Work-Family Characteristics. A total of 15 items were used to assess levels of 5 work-family stressors/characteristics (number of weekly hours worked, number of dependents, schedule inflexibility, lack of family-supportive supervision, and lack of family support). These five work-family stressors have been shown to be positively related to work-family conflict (Byron, 2005). Number of weekly hours worked was assessed with one item (“Number of hours worked per week”). Response ranges were coded between 1 and 5 for scoring purposes, with a higher score representing more hours worked. Number of dependents was also measured with one item (“Number of dependent children living with you”). Responses for this item were coded from 1 to 5, with a higher score representing a greater number of dependents. For ease of interpretation, schedule inflexibility, lack of supervisor support, and lack of familial support were coded positively (to reflect schedule flexibility, and degree of supervisor and familial support). Schedule flexibility was assessed using three items. A sample item is “I have almost no “say” about scheduling my work; the work and procedures are all laid out for me in detail”. Participants will respond to this item on a scale of 1 (Strongly Disagree) to 5 (Strongly Agree). A higher score reflects high schedule flexibility. The three-item scale had a cronbach’s alpha of 0.83.

Family-supportive supervision was assessed using a 5-item scale created by the Families and Work Institute. A sample item is “My supervisor accommodates me when I have family/personal business” (see Appendix A for complete list of items). Responses range from 1 (strongly disagree) to 5 (strongly agree), and were coded so that the higher the score, the more supportive of family the supervisor is. Anderson, Coffey, and Byerly (2002) reported an alpha of 0.89 for this measure. The Cronbach’s alpha for this scale in the present study was 0.93.

Perceived family support was examined using 5 items from the 44-item Family Support Inventory (King, Mattimore, King, & Adams, 1995). The original measure has two subscales: a 29-item emotional sustenance subscale and a 15-item instrumental assistance subscale. For inclusion in the work-family stressors scale, 3 emotional sustenance items and 2 instrumental assistance items were selected based on item-total correlations with the longer scales. Two of the five items were reverse coded to minimize response bias. The extent of agreement for each of the 5 items is rated on a Likert-type 5-point scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Aycan and Eskin (2005) reported a cronbach’s alpha of 0.94 for the original emotional sustenance scale and 0.93 for the original instrumental assistance scale. In the current study, the shortened 5-item scale had a cronbach’s alpha of 0.79. A sample item is “Members in my family always seem to make time for me if I need to discuss my work”. A complete list of all work-family characteristic items can be found in Appendix A.

Learning Goal Orientation. Trait-level learning goal orientation was measured using 8 items from Button and Mathieu’s (1996) 10-item scale. Items were selected based on variety and results from an initial confirmatory factor analysis conducted by Button

and Mathieu. These items were rated on a scale of 1 (strongly disagree) to 5 (strongly agree), so that a high scale mean score indicates a high level of learning goal orientation. Although two items were removed by Button and Mathieu following the confirmatory factor analysis, the authors reported an alpha level of 0.79 for the original 10-item scale. In the present study, the shortened 8-item scale has a cronbach's alpha of 0.93. A sample item is "I prefer to work on tasks that force me to learn new things". Appendix B lists all LGO scale items.

Action Orientation. Selected items from Kuhl and Beckmann's (1994) Action Control Scale (ACS90) was used to measure trait-level action orientation. The extensively validated original scale included 36 forced-choice items divided into preoccupation, hesitation, and volatility subscales. For each item, participants are asked to choose from two alternative responses the best description of how they react to a particular situation. One response reflects an action-oriented response, and the other reflects a state-oriented reaction. For the present study, 5 of 12 items were selected from each of the three subscales based on factor loadings from a confirmatory factor analysis conducted by Diefendorff, Hall, Lord, and Streat (2000). Diefendorff et al. reported a cronbach's alpha of 0.71 for the original preoccupation subscale, 0.75 for the original hesitation subscale, and 0.56 for the original volatility subscale. In the present study, the preoccupation scale had a reliability of 0.68, the hesitation subscale had a reliability of 0.72, and the volatility subscale had a reliability of 0.53. The number of action-oriented responses from each subscale was averaged to compute a mean action orientation score ranging from 1 to 5. A sample item from the hesitation subscale is "When I have a lot of important things to do and they all must be done soon: A. I often don't know where to

begin. B. I find it easy to make a plan and stick with it". All AO scale items are included in Appendix C.

Growth Need Strength. To assess trait-level need for growth opportunities and challenges, Hackman and Lawler's (1971) 12-item higher-order need strength scale was employed. Participants were asked to indicate the extent that various growth opportunities are important to them, with Likert-type responses ranging from 1 (very unimportant) to 5 (very important). Hackman and Lawler reported a cronbach's alpha of 0.89 for this scale. In the present study, the cronbach's alpha for this scale was 0.93. A sample item is "The opportunity, in my tasks, for participation in the determination of methods, procedures, and goals". Appendix D lists all GNS scale items.

Work-Family Balance. In order to assess work-family balance in terms of perceived satisfaction and effectiveness in high priority roles, a work-family balance scale by Greenhaus, Allen, and Foley (2004) was used. This measure contains 7 items with Likert-type responses ranging from 1 (strongly disagree) to 5 (strongly agree). The cronbach's alpha for the scale in the present study was 0.87. A sample item is "I am satisfied with the balance I have achieved between my work life and my family life". Appendix E shows a complete list of WFB items included in the survey.

Work-Family Conflict. Work-family conflict was measured using an 8-item negative spillover scale developed by Grzywacz and Marks (2000). Participants were asked how often in the previous year each type of conflict had been experienced, and responses were measured on a 5-point scale ranging from 1 (never) to 5 (all of the time). Grzywacz and Marks (2000) reported a cronbach's alpha of 0.80 for positive spillover from family to work, and 0.83 for positive spillover from work to family. In the present

study, the reliability of the 8-item scale was 0.89. A sample item is “Responsibilities at home reduce the effort you can devote to your job”. Appendix F lists all WFC scale items.

Work-Family Facilitation. Work-family facilitation was also assessed using 8 items from Grzywacz and Marks’ (2000) positive spillover scale. Again, participants were asked to indicate the frequency with which they had experienced different types of positive spillover (facilitation), with responses ranging from 1 (never) to 5 (all of the time). Grzywacz and Marks (2000) reported a cronbach’s alpha of 0.70 for positive spillover from family to work, and 0.73 for positive spillover from work to family. The cronbach’s alpha for the overall scale within the present study was 0.81. A sample item is “Providing for what is needed at home makes you work harder at your job”. A complete list of WFF scale items is included in Appendix G.

Chapter Three

Results

Preliminary Analyses

Data was first screened for non-normality (skewness and kurtosis), outliers, and values outside of the response range. Participant responses were slightly negatively skewed for several variables, while the skewness levels for supervisor support (skew = -.72), LGO (skew = -.58), and AO (skew = -.73) were more pronounced. Also, the data for number of dependents was highly positively skewed (skew = 1.5). Number of dependents (kurtosis = 4.11) and work hours (kurtosis = 3.10) were also leptokurtic variables. No outliers were identified within the dataset. Descriptive statistics (means, standard deviations) for each variable are shown in Table 1.

Testing Hypotheses of Direct Relationships

Table 1 also includes Pearson's correlation coefficients between variables in order to test for direct relationships between variables. As hypothesized, work-family balance was significantly positively related to schedule flexibility ($r = 0.23, p < .01$), supervisor support ($r = .44, p < .01$), and familial support ($r = .47, p < .01$). Work hours were negatively related to work-family balance ($r = -.10, p < .05$), while number of dependents and balance were not significantly related ($r = -.06, p = \text{n.s.}$). Thus, the correlational analyses supported hypotheses 1a, 1c, 1d, and 1e, while hypothesis 1b was not supported. Work-family facilitation was also positively related to schedule flexibility ($r = .28, p < .01$), supervisor support ($r = .43, p < .01$), and familial support ($r = .44, p < .01$).

Table 1

Means, Standard Deviations, and Intercorrelations

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. LGO	--													
2. GNS	.78**	--												
3. AO	.35**	.27**	--											
4. WFB	.33**	.28**	.30**	--										
5. WFC	-.07	-.07	-.45**	-.49**	--									
6. WFF	.49**	.42**	.19**	.40**	-.07	--								
7. Work hours	.09	.08	.06	-.10*	.14**	.02	--							
8. # Dependents	-.03	-.04	-.00	-.06	.07	-.05	.11*	--						
9. Flexibility	.23**	.21**	.06	.23**	-.12*	.28**	.07	-.05	--					
10. Supervisor Supp.	.32**	.25**	.15**	.44**	-.16**	.43**	-.02	.01	.45**	--				
11. Family Support	.26**	.20**	.19**	.47**	-.37**	.44**	.04	-.13*	.18**	.27**	--			
12. Age	.04	.05	.33**	.19**	.28**	.07	-.07	-.10*	.02	.11*	.16**	--		
13. Income	.01	-.02	.05	.06	-.01	.05	.16**	-.09	.08	.09	.11*	.06	--	
14. Education	.04	-.02	-.04	.04	.11*	.09	.13**	-.05	.02	.04	.09	-.09	.43**	--
<i>M</i>	4.04	4.14	3.69	3.64	2.69	3.34	40.86	1.40	3.41	3.64	3.37	41.37		
<i>SD</i>	0.67	.60	.98	.73	.74	.64	8.26	1.41	1.05	.91	.81	10.00		

Note. *N* = 428. **p*<.05 ***p*<.01

However, relationships between both number of dependents ($r = -.05, p = \text{n.s.}$) and work hours ($r = .02, p = \text{n.s.}$) were non-significant. In contrast, work-family conflict had negative relationships with schedule flexibility ($r = -.12, p < .05$), supervisor support ($r = -.16, p < .01$), and familial support ($r = -.37, p < .01$), although these relationships were generally weaker. Number of work hours was positively related to WFC ($r = .14, p < .01$), while the relationship between number of dependents and WFC was again non-significant ($r = .07, p = \text{n.s.}$). Interestingly, while work-family balance was positively related to WFF ($r = .40, p < .01$) and negatively related to WFC ($r = -.49, p < .01$), there was no significant correlation between WFF and WFC ($r = -.07, p = \text{n.s.}$).

There was a significant positive correlation between LGO and work-family balance ($r = .33, p < .01$), providing support for Hypothesis 2a. LGO also had an even stronger relationship with WFF ($r = .49, p < .01$), although it was not significantly related to WFC ($r = -.07, p = \text{n.s.}$). Growth need strength was also positively related to work-family balance ($r = .28, p < .01$), supporting Hypothesis 2b. Similarly to LGO, GNS showed positive associations with WFF ($r = .42, p < .01$), and no relationship with WFC ($r = -.07, p = \text{n.s.}$). In addition, Hypothesis 2c was supported in that AO was significantly positively related to work-family balance ($r = .30, p < .01$). Although the relationship was weaker, AO was also significantly related to WFF ($r = .19, p < .01$). Interestingly, there was a sizeable negative correlation between AO and WFC ($r = -.45, p < .01$).

As can be seen in Table 1, the achievement motivation variables did have significant positive relationships with some of the work-family characteristics. For LGO and GNS, this included schedule flexibility, supervisor support, and familial support. AO was also significantly positively related to both supervisor and familial support. The demographic

variables of age, income, and education were also correlated with study variables to examine whether these variables were potential confounds. Age was significantly correlated with AO ($r = .33, p < .01$), work-family balance ($.19, p < .01$), WFC ($r = .28, p < .01$), number of dependents ($r = -.10, p < .05$), supervisor support ($r = .11, p < .05$), and familial support ($r = .16, p < .01$). Income was significantly related to work hours ($r = .16, p < .01$) and familial support ($r = .11, p < .05$). Education was also positively related to work hours ($r = .13, p < .01$), and WFC ($r = .11, p < .05$).

Testing Hypotheses of Moderation

Moderated hierarchical regression was used to test the hypotheses (3a-3c) of an interaction effect between work-family characteristics and achievement motivation variables on work-family balance. These tests of moderation were also computed for WFF and WFC for exploratory purposes. First, all predictor variables were grand-mean centered prior to computing interaction terms (Aiken & West, 1991). Due to the large number of variables included in the study, tests of interaction effects were computed separately. Although analyzing each achievement motivation variable separately can increase Type I error rates, it also tends to improve power which may have been reduced due to multicollinearity between variables in a larger model. Tolerance statistics were also examined in order to determine if multicollinearity between predictor variables was problematic (Hays, 1994). Within each model, the first block included a work-family characteristic and an achievement motivation variable as predictors of work-family balance, WFF, or WFC. The second block included the interaction term between the two predictor variables. Due to the correlations of age, income, and education to some study

variables, all models were also run using each of these three variables as controls. This had no effect on the regression outcomes; thus, no control variables were utilized.

Table 2 shows moderated hierarchical regression results for LGO. As hypothesized, there was a significant moderation effect of LGO on the relationship between schedule flexibility and work-family balance, $F(1, 424) = 4.30, p < .05 (R^2 = .01)$. Consistent with expectations, the relationship between schedule flexibility and work-family balance was stronger when LGO was high versus low (see Figure 1). However, LGO did not significantly interact with any other work-family characteristics to influence work-family balance (see Table 2). Thus, Hypothesis 3a was largely unsupported. There was a significant interaction between LGO and schedule flexibility when WFF was the criterion, in that the flexibility-balance relationship was stronger when LGO was high versus low, $F(1, 424), 4.21, p < .05 (R^2 = .00)$. LGO also served as a moderator between flexibility and WFC, $F(1, 424), 4.22, p < .05 (R^2 = .01)$. However, this relationship occurred in the opposite direction, so that the negative relationship between flexibility and WFC was stronger for individuals high in LGO. Figure 3 shows the interaction between LGO and schedule flexibility on work-family conflict.

Table 3 shows moderated hierarchical regression results for the interactions between GNS and work-family characteristics. Similarly to LGO, GNS served as a significant moderator in the relationships between schedule flexibility and work-family balance, $F(1, 424) = 8.00, p < .01 (R^2 = .02)$, flexibility and WFF, $F(1, 424) = 9.37, p < .01 (R^2 = .02)$, and flexibility and WFC, $F(1, 424) = 9.37, p < .01 (R^2 = .01)$. As expected, the positive relationships between schedule flexibility and both balance and facilitation were stronger for high-GNS participants, while the negative relationship between

flexibility and conflict was also strengthened by GNS. GNS did not serve as a significant moderator in the relationships between other work-family characteristics (work hours, number of dependents, supervisor and familial support) and work-family balance (see Table 3). Therefore, only partial support was found for Hypothesis 3b. However, GNS did moderate the relationship between supervisor support and WFF, such that there was a stronger positive relationship between supervisor support and WFF when GNS was high versus low, $F(1, 424) = 7.50, p < .01 (R^2 = .01)$. Figure 3 depicts this relationship.

Figure 1

LGO by Schedule Flexibility Interaction on W/F Balance

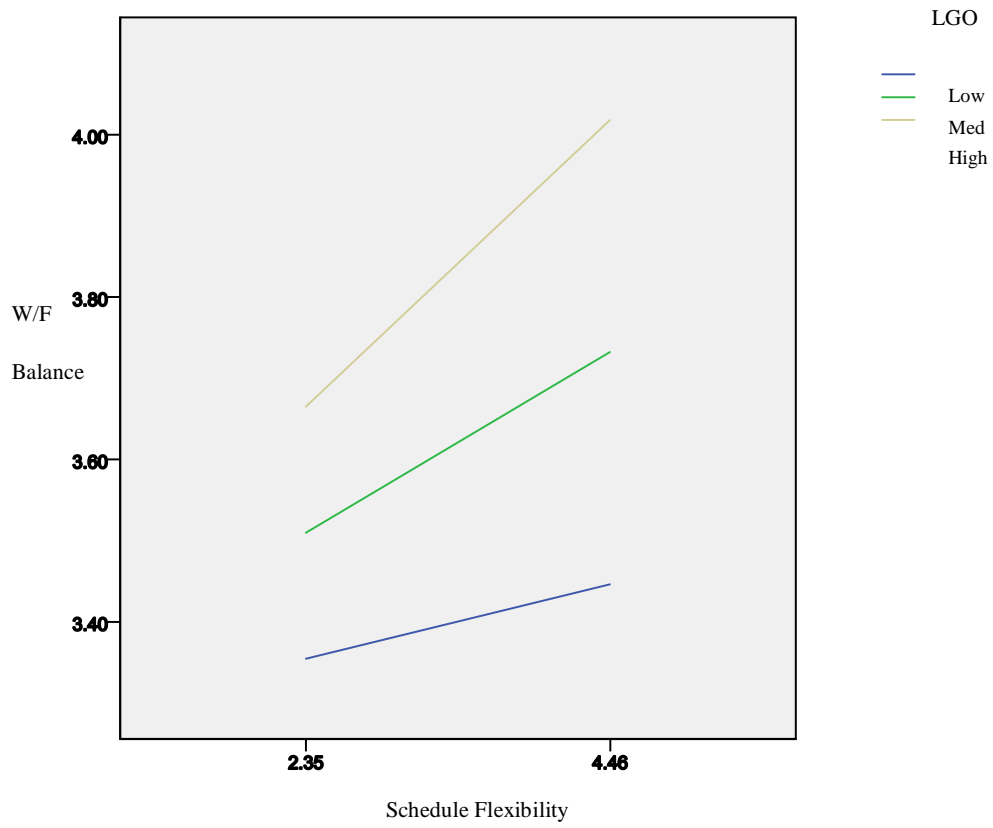


Figure 2

LGO by Schedule Flexibility Interaction on WFC

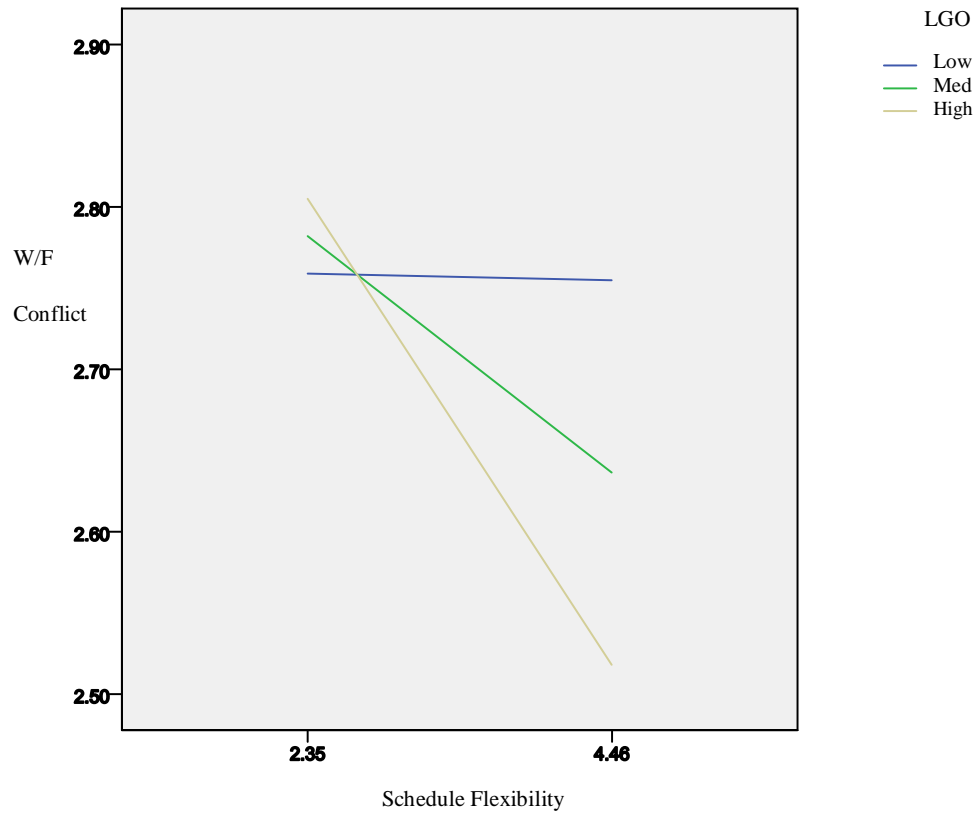


Table 2

Moderated Hierarchical Regression Results for LGO

	Work-Family Balance				Work-Family Conflict				Work-Family Facilitation			
	<i>B</i> (<i>SE</i>)	β	ΔR^2	<i>F</i>	<i>B</i> (<i>SE</i>)	β	ΔR^2	<i>F</i>	<i>B</i> (<i>SE</i>)	β	ΔR^2	<i>F</i>
LGO	.37 (.05)	.34**	.12	19.89	-.10 (.05)	-.09	.03	4.98	.47 (.04)	.49**	.24	44.57
Hours	-.01 (.00)	-.13**			.01 (.00)	.16**			.00 (.00)	-.03		
LGO*Hours	.00 (.00)	-.00	.12		-.01 (.01)	-.09	.03		.00 (.01)	.03	.24	
LGO	.35 (.05)	.32**	.11	17.55	-.08 (.05)	-.07	.01	1.56	.46 (.04)	.48**	.24	44.88
Number Dependents	-.02 (.02)	-.04			.04 (.03)	.07			-.01 (.02)	-.03		
LGO*Dependents	.03 (.04)	.04	.11		-.02 (.04)	-.02	.01		.03 (.03)	.04	.24	
LGO	.33 (.05)	.30**	.13	4.30	-.07 (.06)	-.06	.02	4.22	.44 (.04)	.46**	.27	4.21
Flexibility	.11 (.03)	.15**			-.07 (.04)	-.10*			.10 (.03)	.17**		
LGO*Flexibility	.09 (.04)	.19*	.14		-.10 (.05)	-.10*	.03		.07 (.04)	.09*	.27	
LGO	.23 (.05)	.21**	.23	42.87	-.05 (.06)	-.04	.03	4.64	.38 (.04)	.40**	.32	68.00
Supervisor Supp.	.30 (.04)	.37**			-.12 (.04)	-.15**			.22 (.03)	.31**		
LGO*Super. Supp.	-.01 (.04)	-.01	.23		-.08 (.05)	-.08	.03		.02 (.04)	.03	.33	
LGO	.24 (.05)	.22**	.26	50.32	.01 (.05)	.01	.14	23.72	.39 (.04)	.41**	.35	75.21
Family Support	.37 (.04)	.41**			-.35 (.04)	-.37**			.27 (.03)	.34**		
LGO*Family Supp.	.02 (.05)	.02	.26		-.09 (.06)	-.08	.14		.04 (.04)	.04	.35	

Note. *N* = 428. **p* < .05, ***p* < .01

Table 3

Moderated Hierarchical Regression Results for GNS

	Work-Family Balance				Work-Family Conflict				Work-Family Facilitation			
	<i>B (SE)</i>	β	ΔR^2	<i>F</i>	<i>B (SE)</i>	β	ΔR^2	<i>F</i>	<i>B (SE)</i>	β	ΔR^2	<i>F</i>
GNS	.35 (.06)	.29**	.09	14.80	-.11 (.06)	-.09	.03	5.08	.45 (.05)	.42**	.18	30.00
Hours	-.01 (.00)	-.13**			.02 (.00)	.16**			.00 (.00)	-.02		
GNS*Hours	.01 (.01)	.04	.10		-.01 (.01)	-.09	.04		.00 (.01)	.00	.18	
GNS	.34 (.06)	.28**	.08	12.70	-.08 (.06)	-.07	.01	1.46	.45 (.05)	.42**	.18	30.25
# Dependents	-.02 (.04)	-.04			.04 (.03)	.07			-.01 (.02)	-.03		
GNS*Dep.	.04 (.04)	.04	.08		-.02 (.04)	-.02	.01		.02 (.03)	.02	.18	
GNS	.32 (.06)	.26**	.11	8.00	-.08 (.06)	-.06	.02	4.92	.43 (.05)	.40**	.21	9.37
Flexibility	.11 (.03)	.16**			-.07 (.04)	-.10			.11 (.03)	.18**		
GNS*Flex	.14 (.05)	.13**	.13		-.12 (.06)	-.11*	.03		.13 (.04)	.13**	.23	
GNS	.22 (.05)	.18**	.22	40.79	-.06 (.06)	-.04	.03	4.83	.37 (.05)	.35**	.29	7.50
Supervisor Supp.	.31 (.04)	.39**			-.11 (.04)	-.14**			.23 (.03)	.33**		
GNS*Sup. Supp.	.03 (.06)	.02	.22		-.11 (.06)	-.08	.03		.13 (.05)	.11**	.30	
GNS	.24 (.05)	.20**	.25	48.20	.00 (.06)	.00	.14	23.66	.37 (.04)	.35**	.31	63.95
Family Support	.38 (.04)	.43**			-.33 (.04)	-.36**			.30 (.03)	.37**		
LGO*Fam. Supp.	.02 (.07)	.01	.25		-.12 (.07)	-.08	.14		.03 (.06)	.02	.31	

Note. $N = 428$. * $p < .05$, ** $p < .01$.

Figure 3

GNS by Supervisor Support Interaction on WFF

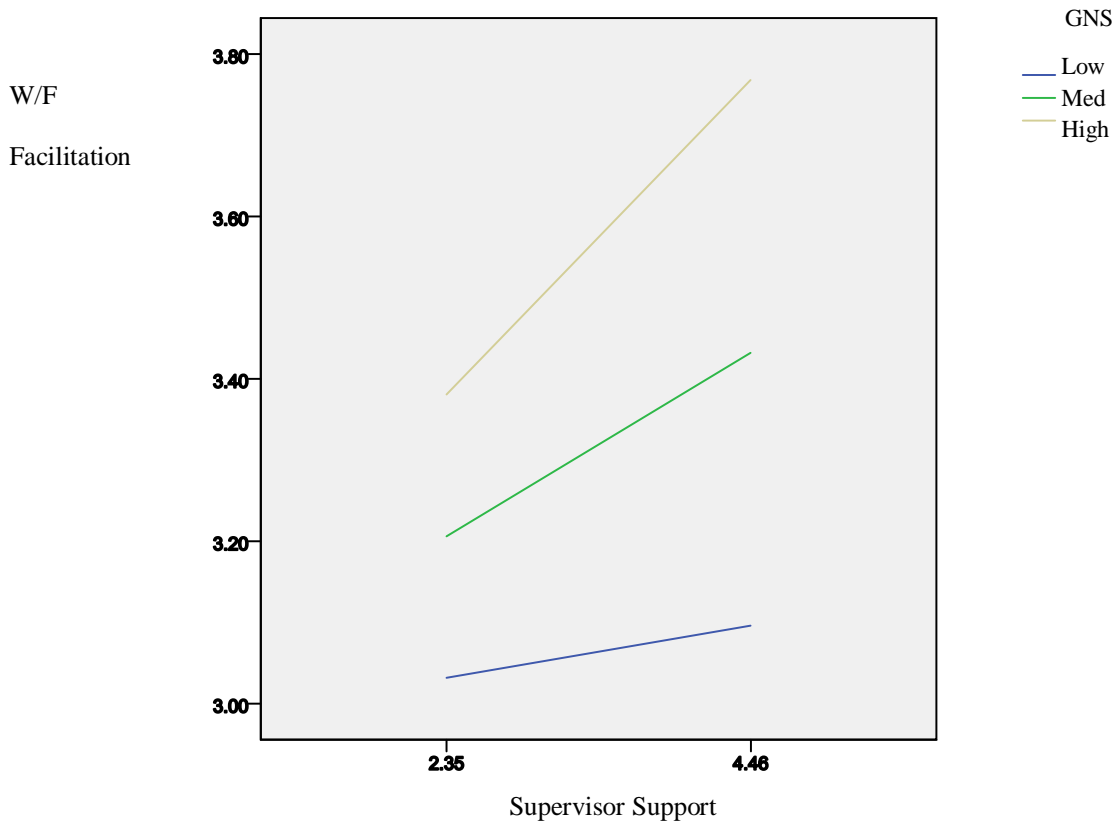


Table 4 shows moderated hierarchical regression results for AO. Hypothesis 3c was not supported, as AO did not moderate the relationships between any of the five work-family characteristics and work-family balance. However, although number of dependents was not directly related to work-family outcomes in this study, AO served as a significant moderator in relationship between number of dependents and WFF, $F(1, 424) = 4.58, p < .05 (R^2 = .01)$. Interestingly, for individuals high in AO, there was a positive relationship between number of dependents and WFF, while for individuals with moderate or low levels of this trait the relationship was negative (see Figure 4). AO also

moderated the relationship between familial support and WFF such that the positive relationship between these two variables was stronger for individuals high versus low in AO, $F(1, 424) = 9.12, p < .01 (R^2 = .02)$. Lastly, there was a significant interaction between AO and supervisor support when WFC was the criterion, $F(1, 424) = 9.27, p < .01 (R^2 = .02)$. Individuals with high or moderate levels of AO experienced a significant negative relationship between supervisor support and WFC, while this relationship was non-significant for individuals low in AO (see Figure 5).

Table 4

Moderated Hierarchical Regression Results for AO

	Work-Family Balance				Work-Family Conflict				Work-Family Facilitation			
	<i>B</i> (<i>SE</i>)	β	R^2	<i>F</i>	<i>B</i> (<i>SE</i>)	β	R^2	<i>F</i>	<i>B</i> (<i>SE</i>)	β	R^2	<i>F</i>
AO	.23 (.03)	.31**	.10	16.30	-.35 (.03)	-.46**	.23	42.08	.12 (.03)	.19**	.03	6.16
Hours	-.01 (.00)	-.12*			.02 (.00)	.18**			.00 (.00)	.00		
AO*Hours	.00 (.00)	.01	.10		-.01 (.00)	-.05	.23		.01 (.00)	.09	.04	
AO	.22 (.03)	.30**	.09	15.01	-.34 (.03)	-.45**	.20	36.09	.12 (.03)	.18**	.04	4.58
Number Dependents	-.03 (.02)	-.06			.04 (.02)	.07			-.02 (.02)	-.04		
AO*Dependents	.03 (.03)	.06	.10		.00 (.03)	.01	.20		.05 (.03)	.10*	.05	
AO	.21 (.03)	.29**	.14	22.17	-.33 (.03)	-.44**	.21	37.70	.11 (.03)	.17**	.11	16.68
Flexibility	.15 (.03)	.22**			-.06 (.03)	-.09*			.16 (.03)	.27**		
AO*Flexibility	-.02 (.03)	-.03	.14		-.05 (.03)	-.06	.21		-.01 (.03)	-.01	.11	
AO	.18 (.03)	.24**	.25	47.24	-.33 (.03)	-.43**	.21	9.27	.08 (.03)	.12**	.20	35.70
Supervisor Supp.	.32 (.03)	.40**			-.08 (.04)	-.10*			.29 (.03)	.41**		
AO*Super. Supp.	-.03 (.03)	-.04	.25		-.11 (.04)	-.13**	.22		-.02 (.03)	-.02	.20	
AO	.16 (.03)	.22**	.26	50.92	-.30 (.03)	-.39**	.28	57.01	.07 (.03)	.11*	.21	9.12
Family Support	.38 (.04)	.42**			-.27 (.04)	-.29**			.33 (.04)	.42**		
LGO*Family Supp.	.05 (.04)	.05	.27		-.07 (.04)	-.07	.29		.11 (.04)	.13**	.22	

Note. *N* = 428. **p* < .05, ***p* < .01.

Figure 4

AO and Number of Dependents Interaction on WFF

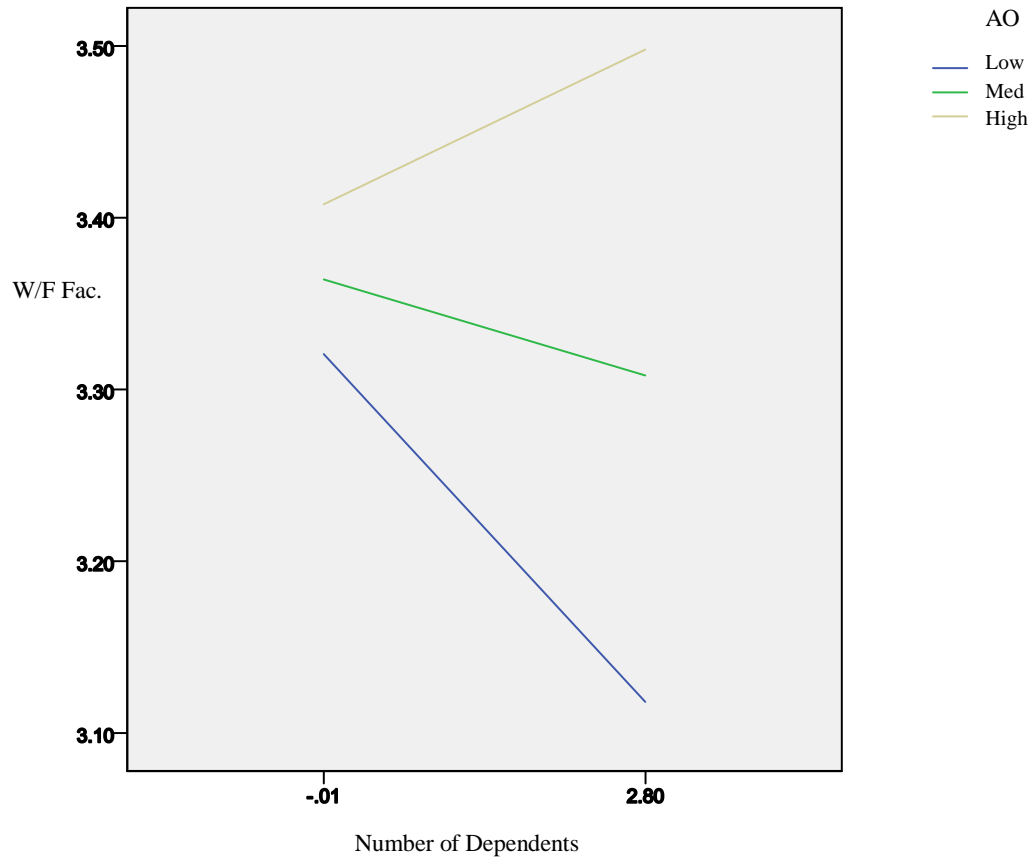
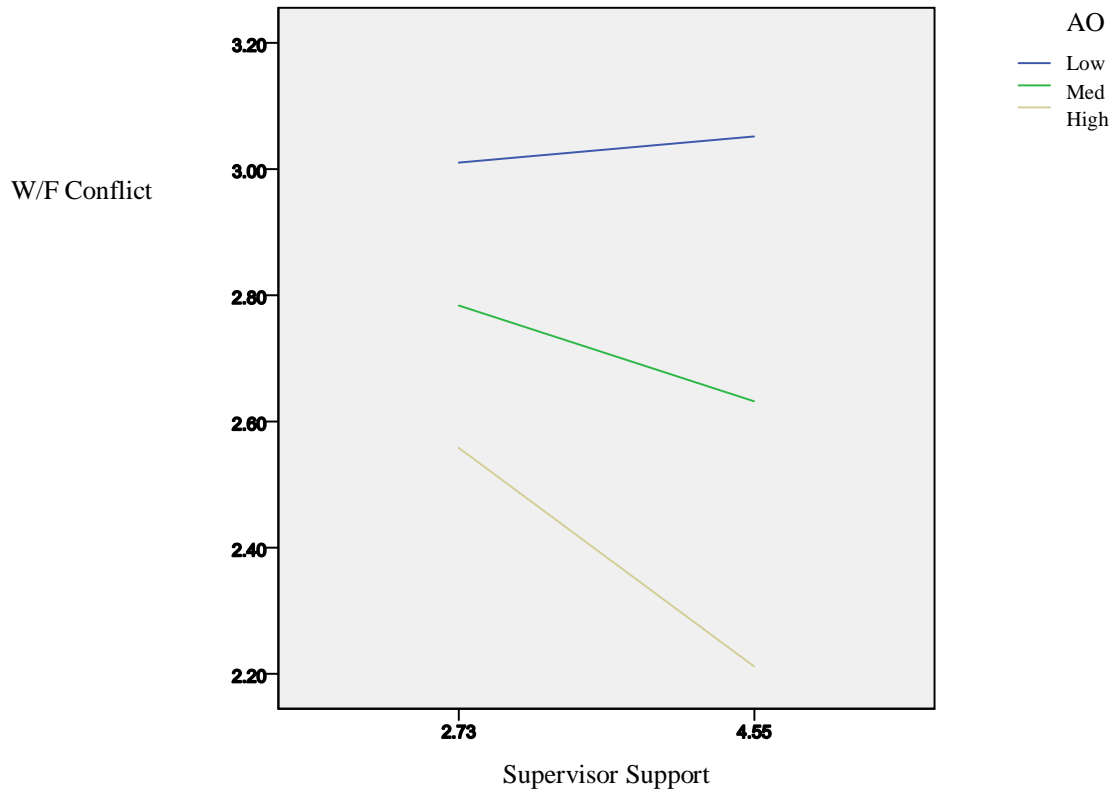


Figure 5

AO by Supervisor Support Interaction on WFC



Chapter Four

Discussion

This study contributes to our theoretical understanding of the work-family interface in three ways. First, this study adds to the relatively sparse literature on antecedents of overall work-family balance by including three previously unexamined variables (learning goal orientation, growth need strength, and action orientation) as antecedents of work-family balance. These variables are considered to be stable achievement motivation traits, and are thought to influence both perceptual thought processes and coping behavior. These types of traits are relatively under-researched in the balance literature, compared to other personality factors (e.g. positive affectivity) and demographic variables (Bernas & Major, 2000; Byron, 2005; Hill, 2005). Second, this study answers calls to integrate research on work-family conflict, facilitation, and overall work-family balance (Greenhaus & Allen, in preparation). By examining relationships amongst these variables within this study, and identifying differential relationships of these criteria with potential antecedents, distinctions between the constructs can be further clarified. Lastly, this study provides theoretical insight into potential mechanisms by which work-family stressors lead to work-family balance, facilitation, and/or strain (i.e. conflict) outcomes. Examining interactions between achievement motivation variables and work-family stressors provides support for the notion that individuals are differentially influenced by work-family characteristics. It is important that the variables influencing these stressor-strain relationships in the work-family domain be identified.

Work-Family Characteristics

Results of the present study are consistent with extant research in that schedule flexibility, supervisor support, and familial support were favorably related to perceptions of work-family balance. In order to remain consistent with the stressor-strain theoretical model, low levels of these variables (schedule inflexibility, lack of supervisor and familial support) can be considered work-family stressors, with low balance constituting a strain outcome. The exact mechanisms by which these characteristics influence perceptions of strain are unclear, as these variables are both positively related to work-family facilitation and negatively related to work-family conflict. Thus, these work-family characteristics may serve to prevent or relieve strain outcomes (e.g. conflict and/or low balance). However, they may also support positive spillover (facilitation) by providing individuals with means to transfer resources and skills accrued in one domain to the second. There is slightly more support for the latter hypothesis, as the relationships between these variables and conflict were weaker than for facilitation and overall balance. Also, the causal direction amongst these relationships is unclear. For example, supervisors and family members may be more inclined to be supportive of an individual who successfully minimizes interference between roles, and who is able to effectively apply resources to promote positive spillover between roles.

The role of work-hours in the work-family domain is more apparent within this study. Number of work hours was weakly related to work-family balance, suggesting that perceptions of overall balance between work and family roles are negatively affected when time demands are high in the work role. These demands thus reduce the availability of time as a resource within the family domain. While work hours were also related

positively to work-family conflict, they did not negatively influence work-family facilitation outcomes. This may be because many of the resources and skills which are thought to spill into and influence the family domain (i.e. income, multi-tasking skills, etc.) largely depend on the amount of time devoted to the work role. Surprisingly, number of dependents was not predictive of work-family balance, conflict, or facilitation, which is inconsistent with existing literature (Byron, 2005). This may be attributable to the relatively low mean for number of dependents among the sample ($M = 1.40$, $SD = 1.41$). However, the interpretation of this mean value may also be skewed, because the response options for participants on this item were such that participants with four or more dependents were grouped together.

Learning Goal Orientation

Based on previous research showing that individuals high in LGO set more challenging goals for themselves and achieve higher performance outcomes, it was hypothesized that LGO would relate favorably to perceptions of work-family balance. This hypothesis was supported, and an even stronger relationship was identified between LGO and work-family facilitation. LGO and work-family conflict were not significantly related, lending some insight into the underlying mechanisms by which LGO directly relates to balance. These findings provide considerable support for the hypothesis that having a strongly learning-oriented personality contributes to resource and skill acquisition, as well as performance, in both domains. This increased positive spillover is reflected in substantial correlations between LGO and both facilitation and balance. Whether these relationships are the result of effective self-regulatory behavior is less clear, as this would be better reflected in a reduced stressor-strain (conflict) relationship.

It was also expected that individuals high in LGO would exhibit more effective self-regulatory behavior and coping strategies than low LGO individuals, as well as maintain higher levels of self-efficacy in stressful circumstances. This led to the hypothesis that the negative relationship between work-family stressors and work-family balance would be reduced when trait LGO was high. This hypothesis was largely unsupported, in that LGO did not moderate the relationships between supervisor or familial support, work hours, or number of dependents and work-family balance. These interaction effects were also non-significant when work-family conflict or facilitation served as the criteria. However, LGO did serve to moderate the relationship between schedule flexibility and balance, in that the importance of schedule flexibility was increased when LGO was high. In fact, the relationship between flexibility and balance was no longer significant when LGO was low. Thus, high LGO individuals appear to reap greater benefits from a flexible schedule than did low LGO individuals. This interaction effect was also demonstrated with work-family facilitation as the criterion. Similarly, LGO moderated the relationship between flexibility and conflict such that the negative relationship between the two variables was no longer significant when LGO was low. These findings suggest that the self-regulatory and coping behavior (thought to be influenced by LGO) may indirectly influence work-family outcomes through sensitivity towards family-friendly benefits.

Growth Need Strength

Individuals high in GNS are thought to value personal challenges as perceived growth opportunities, and research has shown that high levels of GNS are associated with increased responses to these opportunities (Graen, Scandura, & Graen, 1986; Oldham,

Hackman, & Pearce, 1976). Based on these findings, it was hypothesized that GNS would directly contribute to satisfaction and effectiveness (i.e. balance) in both domains. This hypothesis was supported in that GNS was significantly (positively) related to both work-family balance and work-family facilitation. However, GNS was not significantly related to work-family conflict. This finding makes theoretical sense, given that the effect of GNS on role satisfaction and effectiveness would likely occur through the positive spillover of resources and skills. Increased response to growth opportunities may allow high GNS individuals to better identify resources which can be used effectively to benefit a second domain.

Several research studies have showed that GNS moderates the relationships between work characteristics and satisfaction and effectiveness outcomes (Abdel-Halim, 1979; Brief & Aldag, 1975; Hackman & Lawler, 1971). This led to the hypothesis that the relationship between work-family characteristics and satisfaction and effectiveness in work and family roles would also be moderated by GNS. It was expected that the negative relationship between work-family stressors and balance would be reduced when GNS was high. As with LGO, this hypothesis was unsupported for several work-family characteristics (work hours, number of dependents, supervisor and familial support).

However, GNS did moderate the relationships between schedule flexibility and all work-family criteria (balance, facilitation, and conflict). Similarly to LGO, the positive relationships between flexibility and balance or facilitation were insignificant when GNS was low. In contrast, the negative relationship between schedule flexibility and work-family conflict was only significant when GNS was high. This indicates that a family-friendly work schedule may only be beneficial when an individual has high growth needs.

This coincides with previous research showing that individuals with strong growth needs benefit more from job enrichment. GNS also moderated the relationship between supervisor support and work-family facilitation, such that the positive relationship between the two variables was stronger when GNS was high versus low. Thus, it can be tentatively concluded that high GNS individuals benefit more from family-friendly supervision.

Action Orientation

Because action-oriented individuals have been shown to be better at implementing intended behavior and avoiding environmental distractions than state-oriented individuals, it was expected that AO would be positively related to satisfaction and effectiveness in work and family roles. Results from this study support the hypothesis that AO and work-family balance are positively related. In addition, AO is also positively related to work-family facilitation, and negatively related to work-family conflict. AO was the only achievement motivation variable to be related to work-family conflict. This reflects the idea that (perhaps unlike LGO and GNS) AO appears to be just as influential on the ability to self-regulate and cope with stressors as it is on the ability to generate skills and resources for positive spillover.

Action-oriented individuals have also been found to have superior abilities to maintain cognitive and affective control under demanding conditions, and are also more likely to persist with and effectively regulate goals under these conditions (Diefendorff et al., 2000; Koole & Jostmann, 2004; Kuhl, 1981). Based on these findings, it was hypothesized that AO would moderate the relationship between work-family stressors and work-family balance, in that the negative relationship between work-family stressors

and balance would be weaker for high AO individuals. This hypothesis was unsupported for all work-family characteristics when work-family balance served as the criterion. However, AO did moderate the relationship between supervisor support and work-family conflict. Specifically, the negative relationship between supervisor support and work-family conflict was no longer significant when AO was low. AO also moderated the relationship between familial support and work-family facilitation, such that the positive relationship between the two variables was stronger when AO was high versus low. These findings indicate that individuals high in AO receive greater benefit from receiving supervisor and familial support than do individuals low in AO. However, an alternate explanation is that when high AO individuals are faced with work-family stressors (such as a *lack* of supervisor or familial support), they are less likely to allow the stressors to impair performance or interfere with other roles.

Interestingly, AO also moderated the relationship between number of dependents and work-family facilitation. This interaction was such that a positive relationship between the two dependents and facilitation occurred when AO was high, while the relationship was negative for individuals low or moderately action-oriented. This finding indicates that for highly action-oriented individuals, dependents in the home may be perceived as positive or even a source of support, while adopting a more state-oriented approach may cause individuals to perceive dependents in the home as a stressor.

Limitations and Future Directions

Several important limitations of this study should be noted. One limitation is the cross-sectional nature of data collection, which limits the causal conclusions which can be drawn from this study. In particular, the directions of causality between work-family

characteristics and work-family criteria are unclear. For example, an individual may receive more spousal support of his/her work role when a large income is being transferred from the work to the family domain. In this case, work-family facilitation would be causing an increase in familial support. The relatively stable nature of achievement motivation traits, however, implies that relationships between these variables and work-family criteria would most likely be due to the influence of these traits on work-family outcomes. Future research on these variables would benefit from conducting longitudinal studies to further examine the mechanisms by which these achievement motivation variables influence self-regulatory processes and behavioral responses to stressors over time.

Another limitation is the sole use of self-report measures within this study. Although results may be viewed as more reliable when produced from multiple (and more objective) sources, the nature of the variables included in this study make obtaining information from other sources impractical. For example, achievement motivation traits are measured by assessing the values and typical feelings and behaviors of the individual, which is best known by the individual being assessed. Similarly, perceptions of work-family balance, conflict, and facilitation may be more a function of perception than of actual environmental characteristics. Although there were a few work-family characteristics which could have been objectively obtained from other sources (e.g. work hours, number of dependents), there is little reason to suspect that a participant would report these inaccurately. However, since the present work-family balance definition focuses on the satisfaction and effectiveness of an individual within roles, it may be

possible for future research to obtain objective measures of role effectiveness from supervisors and spouses.

As previously noted, Type I error may have been inflated for the testing of moderation effects due to the large number of models which were computed separately. However, separate analyses may be preferable when multicollinearity between predictors is thought to be an issue (Hays, 1994). Indeed, Table 1 shows several significant correlations between achievement motivation variables and work-family characteristics; including the large number of predictors within the same model may have made interpreting the findings difficult.

To summarize, the present study addressed whether three achievement motivation variables (LGO, GNS, and AO) were both directly and indirectly related to work-family balance outcomes. Relationships of these variables to work-family conflict and facilitation outcomes were also analyzed in order to identify differential relationships and gain insight into the processes which underlie each outcome variable. All three achievement motivation variables were clearly related favorably to work-family balance and facilitation, while only AO was negatively related to conflict. The relationships between schedule flexibility and work-family outcomes were moderated by both LGO and GNS whether work-family balance, facilitation, or conflict served as the criterion. Most interactive effects between achievement motivation variables and work-family stressors on balance were not significant. However, several moderations were significant when conflict or facilitation served as the criterion measure. Overall, the results indicate that LGO, GNS, and AO contribute both directly and indirectly towards satisfaction and effectiveness in work-family roles.

References

- Abdel-Halim, A. A. (1979). Individual and interpersonal moderators of employee reactions to job characteristics: A reexamination. *Personnel Psychology, 32*, 121-137.
- Adams, G. A., King, L. A., & King, D. W. (1996). Relationships of job and family involvement, family social support, and work-family conflict with job and life satisfaction. *Journal of Applied Psychology, 81*, 411-420.
- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.
- Allen, T. D., & Armstrong, J. (2006). Further examination of the link between work-family conflict and physical health: The role of health-related behaviors. *American Behavioral Scientist, 49*, 1204-1221.
- Allen, T. D., Herst, D. E. L., Bruck, C. S., & Sutton, M. (2000). Consequences associated with work-to-family conflict: A review and agenda for future research. *Journal of Occupational Health Psychology, 5*, 278-308.
- Anderson, S. E., Coffey, B. S., & Byerly, R. T. (2002). Formal organizational initiative and informal workplace practices: Links to work-family conflict and job-related outcomes. *Journal of Management, 28*, 787-810.

- Aryee, S., Srinivas, E. S., & Tan, H. H. (2005). Rhythms of life: Antecedents and outcomes of work-family balance in employed parents. *Journal of Applied Psychology, 90*, 132-146.
- Attenweiler, W., & Moore, D. (2006). Goal orientations: Two, three, or more factors? *Educational and Psychological Measurement, 66*, 342-352.
- Aycan, Z., & Eskin, M. (2005). Relative contributions of childcare, spousal support, and organizational support in reducing work-family conflict for men and women: The case of Turkey. *Sex Roles, 53*, 453-471.
- Balmforth, K., & Gardner, D. (2006). Conflict and facilitation between work and family: Realizing the outcomes for organizations. *New Zealand Journal of Psychology, 35*, 69-76.
- Barnett, R. C., & Hyde, J. S. (2001). Women, men, work, and family: An expansionist theory. *American Psychologist, 56*, 781-796.
- Barnett, R. C., & Rivers, C. (1996). *She works, he works: How two-income families are happy, healthy, and thriving*. Cambridge, MA: Harvard University Press.
- Bell, B., & Kozlowski, S. (2002). Goal orientation and ability: Interactive effects on self-efficacy, performance, and knowledge. *Journal of Applied Psychology, 87*, 497-505.
- Bernas, K. H., & Major, D. A. (2000). Contributors to stress resistance: Testing a model of women's work-family conflict. *Psychology of Women Quarterly, 24*, 170-178.
- Birnbaum, M. H. (1999). Testing critical properties of decision making on the internet. *Psychological Science, 10*, 399-407.

- Brief, A. P., & Aldag, R. J. (1975). Employee reactions to job characteristics: A constructive replication. *Journal of Applied Psychology, 60*, 182-186.
- Brough, P., & Kelling, A. (2002). Women, work and well-being: The influence of work-family and family-work conflict. *New Zealand Journal of Psychology, 31*, 29-37.
- Bumpass, L. L. (1990). What's happening to the family? Interactions between demographic and institutional change. *Demography, 27*, 483-498.
- Button, S., Mathieu, J., & Zajac, D. (1996). Goal orientation in organizational research: A conceptual and empirical foundation. *Organizational Behavior and Human Decision Processes, 67*, 26-48.
- Byron, K. (2005). A meta-analytic review of work-family conflict and its antecedents. *Journal of Vocational Behavior, 67*, 169-198.
- Calero, M. D., García-Martín, M. B., Jiménez, M. I., Kázen, M., & Araque, A. (2007). Self-regulation advantage for high-IQ children: Findings from a research study. *Learning and Individual Differences, 17*, 328-343.
- Carlson, D. S., & Kacmar, K. M. (2000). Work-family conflict in the organization: Do life role values make a difference? *Journal of Management, 26*, 1031-1054.
- Champoux, J. E. (1980). A three sample test of some extensions to the job characteristics model of work motivation. *The Academy of Management Journal, 23*, 466-478.
- Diefendorff, J. M., Hall, R. J., Lord, R. G., Streat, M. L. (2000). Action-state orientation: Construct validity of a revised measure and its relationship to work-related variables. *Journal of Applied Psychology, 85*, 250-263.
- Duda, J., & Nicholls, J. (1992). Dimensions of achievement motivation in schoolwork and sport. *Journal of Educational Psychology, 84*, 290-299.

- Dweck, C. S., & Leggett, E. L. (1988). A social-cognitive approach to motivation and personality. *Psychological Review*, *95*, 256-273.
- Dykman, B. M. (1998). Integrating cognitive and motivational factors in depression: Initial tests of a goal-orientation approach. *Journal of Personality and Social Psychology*, *74*, 139-158.
- Eby, L. T., Casper, W. J., Lockwood, A., Bordeaux, C., & Brinley, A. (2005). Work and family research in IO/OB: Content analysis and review of the literature (1980-2002). *Journal of Vocational Behavior*, *66*, 124-197.
- Edwards, J. R., & Rothbard, N. P. (2000). Mechanisms linking work and family: Clarifying the relationship between work and family constructs. *Academy of Management Review*, *25*, 178-199.
- Evans, M. G., Kiggundu, M. N., & House, R. J. (1979). A partial test and extension of the job characteristics model of motivation. *Organizational Behavior and Human Performance*, *24*, 354-381.
- Frone, M. R. (2003). Work-family balance. In J. C. Quick & L. E. Tetrick (Eds.), *Handbook of Occupational Health Psychology* (pp. 143-162). Washington, DC: American Psychological Association.
- Frone, M. R., Russell, M., & Cooper, M. L. (1997). Relation of work-family conflict to health outcomes: A four-year longitudinal study of employed parents. *Journal of Occupational and Organizational Psychology*, *70*, 325-336.
- Frone, M. R., Yardley, J. K., & Markel, K. (1997). Developing and testing an integrative model of the work-family interface. *Journal of Vocational Behavior*, *50*, 145-167.

- Graen, G. B., Scandura, T. A., & Graen, M. R. (1986). A field experimental test of the moderating effects of growth need strength on productivity. *Journal of Applied Psychology, 71*, 484-491.
- Grandey, A. A., & Cropanzano, R. (1999). The conservation of resources model applied to work-family conflict and strain. *Journal of Vocational Behavior, 54*, 350-370.
- Greenhaus, J. H., & Allen, T. D. (in preparation). Work-family balance: Exploration of a concept. In L. Tetrick and J. C. Quick (Eds). *Handbook of Occupational Health Psychology*.
- Greenhaus, J. H., Allen, T. D., & Foley, S. (2004). Does a balanced life promote work-family enrichment? In S. Foley (Chair), *The positive side of the work-family interface: Its meaning, measurement, and relationships with other concepts*. Symposium presented at the Annual Meeting of the Academy of Management, New Orleans, LA.
- Greenhaus, J. H., & Beutell, N. J. (1985) Sources of conflict between work and family roles. *Academy of Management Review, 10*, 76-88.
- Greenhaus, J. H., & Powell, G. (2006). When work and family are allies: A theory of work-family enrichment. *Academy of Management Review, 31*, 72-92.
- Grzywacz, J. G., & Butler, A. B. (2005). The impact of job characteristics on work-to-family facilitation: Testing a theory and distinguishing a construct. *Journal of Occupational Health Psychology, 10*, 97-109.

- Grzywacz, J. G., & Marks, N. F. (2000). Reconceptualizing the work-family interface: An ecological perspective on the correlates of positive and negative spillover between work and family. *Journal of Occupational Health Psychology, 5*, 111-126.
- Hackman, J. R., & Lawler, E. E. (1971). Employee reactions to job characteristics. *Journal of Applied Psychology Monograph, 55*, 259-286.
- Halpern, D. F., & Murphy, S. E. (2005). From balance to interaction: Why the metaphor is important. In D. F. Halpern & S. E. Murphy (Eds.), *From work-family balance to work-family interaction: Changing the metaphor* (pp. 3-9). Mahwah, NJ: Erlbaum.
- Hays, W. L. (1994). *Statistics* (5th ed.). Belmont, CA: Wadsworth.
- Hill, E. J. (2005). Work-family facilitation and conflict, working fathers and mothers, work-family stressors and support. *Journal of Family Issues, 26*, 793-819.
- Hill, E. J., Hawkins, A. J., Ferris, M., & Weitzman, M. (2001). Finding an extra day a week: The positive influence of perceived job flexibility on work and family life balance. *Family Relations, 50*, 49-58.
- Houkes, I., Janssen, P. P. M., de Jonge, J., & Bakker, A. B., (2003). Personality, work-characteristics, and employee well-being: A longitudinal analysis of additive and moderating effects. *Journal of Occupational Health Psychology, 8*, 20-38.
- Jostmann, N. B., & Koole, S. L. (2007). On the regulation of cognitive control: Action orientation moderates the impact of high demands in stroop interference tasks. *Journal of Experimental Psychology: General, 136*, 593-609.

- Jostmann, N. B., & Koole, S. L. (2006). On the waxing and waning of working memory: Action orientation moderates the impact of demanding relationship primes on working memory capacity. *Personality and Social Psychology Bulletin*, *32*, 1716-1728.
- Jostmann, N. B., Koole, S. L., van der Wulp, N. Y., & Fockenberg, D. A. (2005). Subliminal affect regulation: The moderating role of action vs. state orientation. *European Psychologist*, *10*, 209-217.
- Kanfer, R. (1990). Motivation and individual differences in learning: An integration of developmental, differential and cognitive perspectives. *Learning and Individual Differences*, *2*, 221-239.
- Kanugo, R. N., & Misra, S. (1988). The bases of involvement in work and family contexts. *International Journal of Psychology*, *23*, 267-282.
- Kázen, M., Kaschel, R., & Kuhl, J. (2008). Individual differences in intention initiation under demanding conditions: Interactive effects of state vs. action orientation and enactment difficulty. *Journal of Research in Personality*, *42*, 693-715.
- Kázen, M., Baumann, N., & Kuhl, J. (2005). Self-regulation after mortality salience: National pride feelings of action-oriented German participants. *European Psychologist*, *10*, 218-228.
- Kázen, M., Baumann, N., & Kuhl, J. (2003). Self-infiltration vs. self-compatibility checking in dealing with unattractive tasks: The moderating influence of state vs. action orientation. *Motivation and Emotion*, *27*, 157-197.

- King, L. A., Mattimore, L. K., King, D. W., & Adams, G. A. (1995). Family support inventory for workers: A new measure of perceived social support from family members. *Journal of Organizational Behavior, 16*, 235-258.
- Klein, H., Noe, R., & Wang, C. (2006). Motivation to learn and course outcomes: The impact of delivery mode, learning goal orientation, and perceived barriers and enablers. *Personnel Psychology, 59*, 665-702.
- Koole, S. L. (2004). Volitional shielding of the self: Effects of action orientation and external demands on implicit self-evaluation. *Social Cognition, 22*, 100-125.
- Koole, S. L., & Jostmann, N. B. (2004). Getting a grip on your feelings: Effects of action orientation and external demands on intuitive affect regulation. *Journal of Personality and Social Psychology, 87*, 974-990.
- Kossek, E. E., & Ozeki, C. (1998). Work-family conflict, policies, and the job-life satisfaction relationship: A review and directions for organizational behavior-human resources research. *Journal of Applied Psychology, 83*, 139-149.
- Krausz, M., & Hermann, E. (1991). Who is afraid of flexitime: Correlates of personal choice of a flexitime schedule. *Applied Psychology: An International Review, 40*, 315-326.
- Kuhl, J. (1981). Motivational and functional helplessness: The moderating effect of state versus action orientation. *Journal of Personality and Social Psychology, 40*, 155-170.
- Kuhl, J., & Beckmann, J. (Eds.). (1994). *Volition and personality: Action versus state orientation*. Seattle, WA: Hogrefe & Huber.

- Lambert, S. J. (1990). Processes linking work and family: A critical review and research agenda. *Human Relations, 43*, 239-257.
- Lapierre, L. M., & Allen, T. D. (2006). Work-supportive family, family-supportive supervision, use of organizational benefits, and problem-focused coping: Implications for work-family conflict and employee well-being. *Journal of Occupational Health Psychology, 11*, 169-181.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer.
- Lefcourt, H. M. (1985). Intimacy, social support, and locus of control as moderators of stress. In I. G. Sarason & B. R. Sarason (Eds.), *Social support: Theory, research and applications* (pp. 155-171). Lancaster, PA: Martinus Nijhoff.
- Lerner, J. V. (1994). *Working women and their families*. Thousand Oaks, CA: Sage.
- Loher, B. T., Noe, R. A., Moeller, N. L., & Fitzgerald, M. P. (1985). A meta-analysis of the relation of job characteristics to job satisfaction. *Journal of Applied Psychology, 70*, 280-289.
- MacEwen, K. E., & Barling, J. (1994). Daily consequences of work interference with family and family interference with work. *Work and Stress, 8*, 244-254.
- Marks, N. F. (1996). Caregiving across the lifespan: National prevalence and predictors. *Family Relations, 45*, 27-36.
- Marks, N. F. (1998). Does it hurt to care? Caregiving, work-family conflict, and midlife well-being. *Journal of Marriage and the Family, 60*, 951-966.
- Morf, M. (1989). *The work/life dichotomy: Prospects for reintegrating people and jobs*. New York: Quorum.

- Morris, E. A., Brooks, P. R., & May, J. L. (2003). The relationship between achievement goal orientation and coping style: Traditional vs. nontraditional students. *College Student Journal, 37*, 3-8.
- Netemeyer, R. G., Boles, J. S., & McMurrian, R. (1996). Development and validation of work-family conflict and work-family conflict scales. *Journal of Applied Psychology, 81*, 400-410.
- Nicholls, J. G. (1975). Causal attributions and other achievement-related cognitions: Effects of task outcome, attainment value, and sex. *Journal of Personality and Social Psychology, 31*, 379-389.
- Nicholls, J. G. (1984). Achievement motivation: Conceptions of ability, subjective experience, task choice, and performance. *Psychological Review, 91*, 328-346.
- Nolen, S. (1988). Reasons for studying motivational orientations and study strategies. *Cognition and Instruction, 5*, 269-289.
- Oldham, G. R., Hackman, J. R., & Pearce, J. L. (1976). Conditions under which employees respond positively to enriched work. *Journal of Applied Psychology, 61*, 395-403.
- Payne, S. C., Youngcourt, S. S., & Beaubien, J. M. (2007). A meta-analytic examination of the goal orientation nomological net. *Journal of Applied Psychology, 92*, 128-150.
- Pensgaard, A. M., & Roberts, G. C. (2003). Achievement goal orientations and the use of coping strategies among winter Olympians. *Psychology of Sport and Exercise, 4*, 101-116.

- Pettit, F. A. (1999). Exploring the use of the world wide web as a psychology data collection tool. *Computers in Human Behavior, 15*, 67-71.
- Pierce, J. L., Dunham, R. B., & Blackburn, R. S. (1979). Social systems structure, job design, and growth need strength: A test of a congruency model. *Academy of Management Journal, 22*, 223-240.
- Pleck, J. H. (1985). *Working wives, working husbands*. Beverly Hills, CA: Sage.
- Pokorney, J. J., Gilmore, D. C., & Beehr, T. A. (1980). Job diagnostic survey dimensions: Moderating effect of growth needs and correspondence with dimensions of job rating form. *Organizational Behavior and Human Performance, 26*, 222-237.
- Powell, G. N., & Greenhaus, J. H. (2006). Is the opposite of positive negative? Untangling the complex relationship between work-family enrichment and conflict. *Career Development International, 11*, 650-659.
- Rothbard, N. P. (2001). Enriching or depleting? The dynamics of engagement in work and family roles. *Administrative Science Quarterly, 46*, 655-684.
- Rotondo, D. M., Carlson, D. S., & Kincaid, J. F. (2002). Coping with multiple dimensions of work-family conflict. *Personnel Review, 32*, 275-296.
- Saltzstein, A. L., Ting, Y., & Saltzstein, G. H. (2001). Work-family balance and job satisfaction: The impact of family-friendly policies on attitudes of federal government employees. *Public Administration Review, 61*, 452-467.
- Sieber, S. D. (1974). Toward a theory of role accumulation. *American Sociological Review, 39*, 567-578.

- Song, Z., Wanberg, C., Niu, X., & Xie, Y. (2006). Action-state orientation and the theory of planned behavior: A study of job search in China. *Journal of Vocational Behavior, 68*, 490-503.
- Stanton, J. M. (1998). An empirical assessment of data collection using the internet. *Personnel Psychology, 51*, 709-725.
- Tharenou, P., & Harker, P. (1982). Organizational correlates of employee self-esteem. *Journal of Applied Psychology, 67*, 797-805.
- VandeWalle, D. (1997). Development and validation of a work domain goal orientation instrument. *Educational and Psychological Measurement, 57*, 995-1015.
- VandeWalle, D., Cron, W., & Slocum, J. (2001). The role of goal orientation following performance feedback. *Journal of Applied Psychology, 86*, 629-640.
- Van Yperen, N. W., & Janssen, O. (2002). Fatigued and dissatisfied or fatigued but satisfied? Goal orientations and responses to high job demands. *Academy of Management Journal, 45*, 1161-1171.
- Wayne, J. H., Musisca, N., & Fleeson, W. (2004). Considering the role of personality in the work-family experience: Relationships of the big five to work-family conflict and facilitation. *Journal of Vocational Behavior, 64*, 108-130.
- Wood, R., & Bandura, A. (1989). Impact of conceptions of ability on self-regulatory mechanisms and complex decision making. *Journal of Personality and Social Psychology, 56*, 407-415.
- Zill, N. (1991). U.S. children and their families: Current conditions and recent trends, 1989. *Society for Research in Child Development Newsletter, 1-3*.

Appendices

Appendix A

Work-Family Characteristic Items

Number of hours worked per week: ____

Number of dependents living with you: ____

Schedule Flexibility

1. I have almost no “say” about scheduling my work; the work and procedures are all laid out for me in detail
2. I have a great deal of flexibility in my work schedule
3. I can adjust my work schedule to meet my non-work responsibilities

Supervisor Support

1. I feel comfortable bringing up personal/family issues with my supervisor.
2. My supervisor is understanding when I talk about personal/family issues.
3. My supervisor cares about effects of work on personal/family life.
4. My supervisor is fair when responding to employee personal/family needs.
5. My supervisor accommodates me when I have family/personal business.

Familial Support

1. My family members do their fair share of household chores
2. Members of my family always seem to make time for me if I need to discuss my work.
3. My family leaves too much of the daily details of running the house to me.
4. Members of my family don't want to listen to my work-related problems.
5. When I'm frustrated by my work, someone in my family tries to understand.

Appendix B

Learning Goal Orientation Scale Items

1. The opportunity to do challenging work is important to me.
2. When I fail to complete a difficult task, I plan to try harder the next time I work on it.
3. I prefer to work on tasks that force me to learn new things.
4. The opportunity to learn new things is important to me.
5. I do my best when I'm working on a fairly difficult task.
6. I try hard to improve on my past performance.
7. The opportunity to extend the range of my abilities is important to me.
8. When I have difficulty solving a problem, I enjoy trying different approaches to see which one will work.

Appendix C

Action Orientation Scale Items

1. If I've worked for weeks on one project and then everything goes completely wrong with the project:
 - It takes me a long time to adjust myself to it.
 - It bothers me for awhile, but then I don't think about it anymore.
2. If I had just bought a new piece of equipment (for example a tape deck) and it accidentally fell on the floor and was damaged beyond repair:
 - I would manage to get over it quickly.
 - It would take me a long time to get over it.
3. When something really gets me down:
 - I have trouble doing anything at all.
 - I find it easy to distract myself by doing other things.
4. When several things go wrong on the same day:
 - I usually don't know how to deal with it.
 - I just keep on going as though nothing had happened.
5. When I have put all my effort into doing a really good job on something and the whole thing doesn't work out:
 - I don't have too much difficulty starting something else.
 - I have trouble doing anything else at all.
6. When I know I must finish something soon:
 - I have to push myself to get started.
 - I find it easy to get it done and over with.

Appendix C (Continued)

7. When I am getting ready to tackle a difficult problem:
 - It feels like I am facing a big mountain that I don't think I can climb.
 - I look for a way that the problem can be approached in a suitable manner.
8. When I have a lot of important things to do and they all must be done soon:
 - I often don't know where to begin.
 - I find it easy to make a plan and stick with it.
9. When I have to take care of something important which is also unpleasant:
 - I do it and get it over with.
 - It can take awhile before I can bring myself to do it.
10. When I am facing a big project that has to be done:
 - I often spend too long thinking about where I should begin.
 - I don't have any problems getting started.
11. When I read something I find interesting:
 - I sometimes still want to put the article down and do something else.
 - I will sit and read the article for a long time.
12. When I am trying to learn something new that I want to learn:
 - I'll keep at it for a long time.
 - I often feel like I need to take a break and go do something else for awhile.
13. When I am busy working on an interesting project:
 - I need to take frequent breaks and work on other projects.
 - I can keep working on the same project for a long time.

Appendix C (Continued)

14. When I have learned a new and interesting game:

- I quickly get tired of it and do something else.
- I can really get into it for a long time.

15. When one of my coworkers brings up an interesting topic for discussion:

- It can easily develop into a long conversation.
- I soon lose interest and want to do something else.

Appendix D

Growth Need Strength Scale Items

1. The opportunity for personal growth and development.
2. The opportunity for independent thought and action.
3. The opportunity to find out how I am doing.
4. The opportunity to complete tasks I start.
5. The opportunity to do challenging work.
6. The feeling that I know whether I am performing tasks well or poorly.
7. The opportunity to do a number of different things.
8. The opportunity to do a job from the beginning to the end (that is, the chance to do a whole job).
9. The freedom to do pretty much what I want on my job.
10. The amount of variety in my tasks.
11. The feeling of worthwhile accomplishment in my tasks.
12. The opportunity, in my tasks, for participation in the determination of methods, procedures, and goals.

Appendix E

Work-Family Balance Scale Items

1. I am able to balance the demands of my work and the demands of my family.
2. I am satisfied with the balance I have achieved between my work life and my family life.
3. Overall, I believe that my work and family lives are out of balance.
4. I balance my work and family responsibilities so that one does not upset the other.
5. I experience a high level of work-family balance.
6. When I am with my family, I am able to separate myself from work and enjoy myself.
7. When I am at work, I am able to separate myself from my family responsibilities and enjoy myself.

Appendix F

Work-Family Conflict Scale Items

1. Your job reduces the effort you can give to activities at home.
2. Stress at work makes you irritable at home.
3. Your job makes you feel too tired to do the things that need attention at home.
4. Job worries or problems distract you when you are at home.
5. Responsibilities at home reduce the effort you can devote to your job.
6. Personal and family worries and problems distract you when you are at work.
7. Activities and chores at home prevent you from getting the amount of sleep you need to do your job well.
8. Stress at home makes you irritable at work.

Appendix G

Work-Family Facilitation Scale Items

1. The things you do at work help you deal with personal and practical issues at home.
2. The things you do at work make you a more interesting person at home.
3. Having a good day on your job makes you a better companion when you get home.
4. The skills you use on your job are useful for things you have to do at home.
5. Talking with someone at home helps you deal with problems at work.
6. Providing for what is needed at home makes you work harder at your job.
7. The love and respect you get at home makes you feel confident about yourself at work.
8. Your home life helps you relax and feel ready for the next day's work.