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Satisfaction with work-family balance among employed graduate students: Why support may matter more than conflict

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SATISFACTION WITH WORK-FAMILY BALANCE AMONG
EMPLOYED GRADUATE STUDENTS: WHY SUPPORT MAY
MATTER MORE THAN CONFLICT

A Thesis
Presented to
the Graduate School of
Clemson University

In Partial Fulfillment
of the Requirements for the Degree
Master of Science
Applied Psychology

by
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ABSTRACT

Previous research suggests that work-family conflict is associated with negative attitudinal and health outcomes. However, few empirical studies have examined the ways in which employee work-family conflict may also decrease another important attitude, satisfaction with work-family balance. Drawing upon role theory and the Conservation of Resources (COR) model, the current paper examined prospective antecedents and outcomes of perceived satisfaction with work-family balance among 523 graduate student employees. Results indicated that work-family conflict mediated and moderated the demands-satisfaction relationship, and that mentor work-family support affected how work-family conflict influenced satisfaction with work-family balance. Results suggest that graduate student satisfaction with work-family balance is affected in several ways, and that mentors who are supportive of their protégés' work-family situations may enhance graduate student satisfaction—even in the face of conflict. Study limitations and practical implications are discussed.

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TABLE OF CONTENTS

	Page
TITLE PAGE	i
ABSTRACT	ii
ACKNOWLEDGEMENTS	iii
LIST OF TABLES	vii
LIST OF FIGURES	viii
CHAPTER	
I. INTRODUCTION	1
Purpose of Current Study	3
II. SATISFACTION WITH WORK-FAMILY BALANCE	5
The Satisfaction with Work-Family Balance Construct	7
Relations to Other Constructs	8
III. STUDENT DEMANDS AND WORK-FAMILY CONFLICT	12
Work-Family Conflict as a Mediator	15
Work-Family Conflict as a Moderator	16
IV. MENTOR WORK-FAMILY SUPPORT	18
Relation to Satisfaction with Work-Family Balance	20
Mentor Work-Family Support and Work-Family Conflict	22
V. METHOD	26
Participants	26
Measures	26
Procedure	30
VI. RESULTS	31

Table of Contents (Continued)	Page
VII. DISCUSSION	37
Limitations and Opportunities for Future Research.....	40
Conclusion	41
APPENDICES.....	43
A: Demographic Items.....	44
B: Perceived Demands.....	45
C: Work-Family Conflict.....	46
D: Satisfaction with Work-Family Balance.....	47
E: Mentor Work-Family Support	48
F: Graduate School Satisfaction.....	49
G: Life Satisfaction	50
H: Strain.....	51
REFERENCES	52
TABLES.....	60
FIGURES.....	67

LIST OF TABLES

Table	Page
1: Means, Standard Deviations, Intercorrelations, and Reliability Estimates among Study Variables	60-61
2: Graduate Student Demands Predicting Satisfaction with Work-Family Balance through Work-Family Conflict	62
3: Mentor Work-Family Support Predicting Satisfaction with Work-Family Balance through Work-Family Conflict	63
4: Effect of Work-Family Conflict on Graduate Student Demands Predicting Satisfaction with Work-Family Balance.....	64
5: Effect of Work-Family Conflict on Graduate Student Demands Predicting Satisfaction with Work-Family Balance Depending on Mentor Work-Family Support.....	65-66

LIST OF FIGURES

Figure	Page
1: Model when predicted with perceived demands.....	67
2: Model when predicted with hourly demands.....	68
3: Two-way interaction depending on levels of work-family conflict.....	69
4: Three-way interaction depending on levels of mentor support	70
5: Three-way interaction depending on levels of mentor support	71

CHAPTER ONE

INTRODUCTION

In response to the ever-dynamic economic and societal norms nested within and across our human planet, work-family research has successfully directed both scholarly and organizational attention toward the issue of balancing individual work and nonwork demands. As imbalance may lead to unwanted individual and organizational outcomes, such as decreased performance and well-being, a great deal of research has been devoted to the study of work-life management. Although an area of literature robust with constructs and nomological networks, work-family theory has room for improvement. Researchers have suggested that work-family research has yet to make a significant impact in the lives of employees compared to the amount of research being conducted (e.g., see Kossek, Baltes, & Matthews, 2012), and that the research-application gap may be reduced by conducting research that examines more closely the blurring of work-family boundaries as well as self-management strategies (Kossek et al., 2012).

These suggestions have the opportunity to influence employees and organizations of all sorts. For example, graduate student employees and their employers have the potential to be affected from these types of research, as many graduate student employees probably perceive that their work domain frequently crosses over or “blurs” into their nonwork domain. For graduate student employees, self-management is also a daily part of life, and researching the work-family challenges they undergo each semester may yield suggestions for graduate program improvement. A great deal of study has examined work-family conflict and work-family balance among employees, but a smaller

proportion of these studies focus on alternative work settings, such as those of graduate students employed in academia.

However, the graduate student population certainly warrants attention in this area. Work-family research, rather than school-family research, is relevant to graduate students because many students are compensated as full-time employees and treated like full-time workers. Similarly, graduate students, like workers at other organizations, often raise families, maintain romantic and platonic relationships, and care for loved ones outside of school. Many female graduate students juggle the demands of being pregnant and planning for childbirth while fulfilling the demanding schedules and workloads that often come with earning one's Masters or Ph.D. Male and female graduate students alike may find it difficult to provide for their families and loved ones if graduate funding is the family's main source of income. Along with others, these stressors could make it difficult to for an individual to feel great satisfaction with his/her work-family situation.

Nearly three million graduate students are enrolled in public or private American colleges and more than 1.6 million of these individuals attend school full-time (U.S. Department of Education, 2011). From research, it is evident that graduate students make many sacrifices to manage their many work- and nonwork-related activities (Marinez, Ordu, Della Sala, & McFarlane, 2013). These sacrifices alone may color individual attitudes (e.g., program satisfaction and life satisfaction), as well as important career decisions, such as choosing to enter into the same or closely related field upon graduate school. Concern over negative attitudes resulting from perceptions of sacrifice and dissatisfaction have prompted leaders within the Science, Technology, Engineering, and

Math (STEM) community to encourage research that looks into these relationships. For example, Goulden et al. (2009) alluded to leaders being concerned over a discrepancy between the number of males and females pursuing tenure-track faculty positions in STEM fields in their research paper.

Is it possible that graduate students that are satisfied with their graduate school experiences may be more likely to pursue careers similar to their obtained degrees. Graduate school experiences perceived as family-supportive may strengthen this satisfaction. Although a few studies have examined satisfaction with managing work and nonwork activities among employee populations outside of academia, fewer, if any, have examined satisfaction with work-family balance among graduate students. And no studies to date have established a relationship between the satisfaction with work-family balance and work-family conflict—variables that may have cogent implications for understanding graduate student (and potentially other employee) work-family management strategy.

Purpose of the Current Study

Because of the challenging and intensive academic demands common to this group, a graduate student's advisor would appear to be an important source of support in terms of enhancing graduate student work-family management. Mentor work-family support, referred to as supervisory work-family support in the organizational literature, hereby refers to the behaviors demonstrated by a mentor that express support for family-related matters. Mentor work-family support may be especially important for achieving work-family satisfaction during graduate school if work and or family demands are particularly high (Kossek & Hammer, 2008). Specifically, mentor work-family support

may buffer the relationship between demands and perceived role conflict in graduate students as has been observed in the work-family literature with supervisors and other employees (Frone, Yardley, & Markel, 1997; Frye & Breugh, 2004; Kossek, Pilcher, Bodner, & Hammer, 2011; Lapierre & Allen, 2006; Thomas & Ganster, 1995; Thompson, Beauvais, & Lyness, 1999). If similar findings are found for graduate students, work-family interventions previously implemented in other organizations (e.g., family-supportive training for supervisors) may be relevant for the universities employing them.

Thus, the purpose of this paper is tri-fold as it intends to a) examine the relationships between satisfaction with work-family balance and other potentially important graduate student variables, b) investigate how work-family conflict may affect satisfaction with work-family balance, and c) determine whether academic advisors that are supportive of work-family challenges explain differences in graduate student satisfaction with work-family balance. The current paper will be organized into the following sections: 1) Satisfaction with Work-Family Balance; 2) Graduate Student Demands and Work-Family Conflict; 3) Mentor Work-Family Support.

CHAPTER TWO

SATISFACTION WITH WORK-FAMILY BALANCE

In today's society, finding a balance between one's work and family demands can be challenging. For many employees, work demands have increased in part because of global competition (Cappelli, 1999) and newer technologies that enable employees to be connected to their work at nearly all hours of the day (Valcour & Hunter, 2005). On the other hand, family demands have also increased in part due to the rising number of dual-earner couples (Fields, 2004), single-parent families (Moen & Roehling, 2005), and child and elderly care concerns (Williams, 2000).

Experiencing satisfaction with the modern work-family dynamic may prove even more challenging. Role theory, which suggests that the multiple life roles people engage in result in interrole conflict as performing each role successfully becomes more difficult (Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964), provides the theoretical grounding for this paper. Role theory has been used to provide evidence for the phenomenon of work-family role strain, which occurs when cumulative demands of the work and family roles lead to role strain (Allen, 2001). Various family- and work-related stressors may lead to perceptions of conflict between these roles. Research has suggested that *perceptions* of work-conflict (e.g., feeling that work and nonwork roles are in conflict) may have strong effects on well-being (Greenhaus, Collins, & Shaw, 2003). Research has also suggested that individuals who feel better equipped to manage their work-family situations may achieve higher well-being (Valcour, 2007).

Although some work-family balance researchers argue that achieving balance among work hours and hours spent outside of work is important (Hill, Martinson, Ferris, & Baker, 2004; Milkie & Peltola, 1999), other research has focused on the importance of managing work and family roles when conflicts and imbalance occur. Previous research suggests that spending an equal amount of time between work and nonwork roles may not actually lead to lower perceptions of work-family conflict. For example, Clarke, Koch, and Hill (2004) observed no relationship between work hours and perceptions of work-family balance. Similarly, Greenhaus, Collins, and Shaw (2003) found that an equal number of hours spent in the work domain versus the nonwork domain did not lead to higher perceptions of balance. Together, these results suggest that subjective perceptions of conflict may be more strongly related to work-family imbalance than unequal ratios of work hours to nonwork hours. However, there appears to be a clear linkage between worker demands and satisfaction with work and family life.

Perceptions of imbalance between work and nonwork demands tends to affect attitudinal outcomes, such as job satisfaction (Heiligers & Hingstman, 2000), job involvement (Sanders, Lengnick-Hall, Lengnick-Hall, & Steele-Clapp, 1998), and career satisfaction (Lee & Kossek, 2005). Importantly, satisfaction with the management of these demands is related to life satisfaction (Back-Wiklund, Lippe, Dulk, & Doorne-Huiskes, 2011). Thus, advancing our understanding of the satisfaction with work-family balance construct may not only shed light on its relation to other work-family variables, but also contribute to a deeper understanding of graduate student attitudinal and health outcomes, such as stress and turnover intentions.

The Satisfaction with Work-Family Balance Construct

Satisfaction with work-family balance is defined as “the cognitive appraisal of one’s degree of success in meeting the multiple demands of work and family roles, as well as the positive feelings or emotional states resulting from that appraisal” (Valcour, 2007, p.1513). The satisfaction with work-family balance construct is described as differing from other work-family constructs examining conflict (Greenhaus & Beutell, 1985), balance (Grzywacz & Marks, 2000), and spillover (Hanson & Hammer, 2006) because it does not emphasize interrole interference or conflict, center on the appraisal of balance between one’s work and nonwork demands, or model resources spilling over from one domain to another. The satisfaction with work-family balance construct does not emphasize directionality of work-to-family or family-to-work (Anderson, Coffey, & Byerly, 2002; Demerouti, Bakker, & Bulters, 2004; Frone, Russell, & Cooper, 1992; Frone, Yardley, & Markel, 1997; Voydanoff, 2005). Rather, satisfaction with work-family balance describes the holistic appraisal of contentment with the way in which an individual is able to manage his or her work-family situation (Valcour, 2007), capturing the affective reactions to unspecified levels of balance and individual differences involved in appraising work-family management strategy.

A recent construct to emerge, satisfaction with work-family balance occupies a small space in the work-family literature (Abendroth & Dulk, 2011; Back-Wiklund, Lippe, Dulk, & Doorne-Huiskes, 2011; Shanfelt et al., 2012; Valcour, 2007; White, 1999), whereas the study of perceptions of work-family balance has occurred more often. The construct operates under the assumption that an individual can experience

satisfaction with the way he or she is managing his or her work-family roles even if the particular individual is experiencing work-family conflict (Aryee, Srinivas, & Tan, 2005; Grzywacz & Marks, 2000). Although the researchers suggest that satisfaction with work-family balance and work-family conflict are unlikely to occupy opposite ends of the same continuum (Valcour, 2007), their relationship to each other has yet to be empirically determined. This possible relationship will be explored later in the paper.

Relations to Other Constructs

Graduate school satisfaction. Satisfaction with work-family balance is likely related to other satisfaction constructs, such as job satisfaction. Job satisfaction refers to the positive emotional states that result from the appraisal of one's job (Locke, 1976). Research suggests that work-family conflict, a variable that may or may not be related to satisfaction with work-family balance, is associated with decreased levels of employee job satisfaction (Kossek & Ozeki, 1998). In a study examining the effects of satisfaction with educational experience on work, family, and school conflict, satisfaction with educational experience and work-school conflict were negatively related (Hammer, Grigsby, & Wood, 1996). Accordingly, graduate students who are dissatisfied with their ability to manage graduate school and family demands may also be dissatisfied with their graduate program.

Hypothesis 1a (Ha): Satisfaction with work-family balance will be positively related to graduate school satisfaction.

Life satisfaction. Satisfaction with work-family balance may also be related to life satisfaction. In their research study, Kossek and Ozeki (1998) found that higher levels of

work-family conflict were associated with lower levels of life satisfaction. Higher levels of work-family balance also affect levels of life satisfaction (Greenhaus, Collins, & Shaw, 2003), suggesting that life satisfaction may increase (or decrease) as satisfaction with work-family balance increases (or decreases). The relationship between constructs may also be bi-directional, as it is possible that higher levels of life satisfaction could affect and lead to higher levels of satisfaction with work-family balance. Thus, it is suspected that life satisfaction and satisfaction with work-family balance are related.

Hypothesis 1b (H1b): Satisfaction with work-family balance will be positively related to life satisfaction.

Strain. Stress poses a threat to the health of workers and organizations. In one study, stress was found to be a major contributor to burnout among graduate students (McManus, Keeling, & Paice, 2004). Stressors, which refer to any perceived features of the environment that harm, threaten, or challenges an employee, act as catalysts during the stress process (Latack, 1986). Strain, on the other hand, refers to the psychological, physiological, and behavioral changes that occur as a result of exposure to stressors (O'Driscoll et al., 2003). Graduate students often experience academic stressors in the form of graduate school-related assignments, projects, and tests. Graduate students may experience work and family stressors that can lead to strain, and this strain may affect satisfaction with work-family balance levels. In a sample of university graduate students, the management of a student's graduate program and family environment were significantly and negatively related to stress symptoms (Mallinckrodt & Leong, 1992). Similarly, Mallinckrodt and Leong (1992) observed that participants who reported having

access to resources (e.g., social support at school and at home) also reported significantly less depression, anxiety, and psychological symptoms of strain. Although few studies to date have examined well-being in congruence with satisfaction with work-family balance (Back-Wiklund, Lippe, Dulk, & Doorne-Huiskes, 2011), strong connections between work-family conflict and strain corroborated by research (see O’Driscoll et al., 2003) suggest an inverse relationship may exist between strain and one’s perceptions of successful work-family balance management.

Hypothesis 1c (H1c): Satisfaction with work-family balance will be negatively related to strain.

Turnover intentions. Employee turnover presents many challenges to organizations. These challenges are often both economic and psychological (Abrams, Ando, & Hinkle, 1998). Whereas graduate student turnover may not necessarily be as economically and psychologically costly for universities as employees are to other organizations, graduate students may find that changing career paths due to leaving their graduate programs may incur personal economic and/or psychological loss, such as potential loss of career approachability in a STEM if one withdraws from an important STEM graduate training program. Antecedents of turnover often include factors such as job satisfaction, job commitment, and perceptions of work-family balance (Boyar, Maertz, Pearson, & Keough, 2003; Shore & Martin, 1989). Research examining the relationship between work-family balance and turnover intentions reveals that perceptions of imbalance are associated with higher turnover intentions (Deery, 2008; Shaffer, Harrison, Gilley, & Luk, 2001). Lazarus’s (1999) cognitive appraisal theory of

stress can be used to suggest why imbalance is sometimes associated with turnover intentions. According to Lazarus's model, people's stress reactions may be mitigated by (a) information that helps them assess the magnitude of harmful stimuli (i.e., primary appraisal) and (b) the belief that they can successfully attenuate, or avoid, these threats (i.e., secondary appraisal). Therefore, it is suggested that individuals faced with high levels of competing work and nonwork demands (i.e., primary appraisal), who also perceive that they have fewer resources to cope with their work-family situations than needed (i.e., secondary appraisal), may seek out new opportunities that impose less stressors or offer different resources to deal with them. Accordingly, graduate students dissatisfied with their abilities to manage their work and nonwork roles may consider other alternatives, possibly leading to turnover.

Hypothesis 1d (H1d): Satisfaction with work-family balance will be negatively related to graduate student turnover intentions.

CHAPTER THREE

STUDENT DEMANDS AND WORK-FAMILY CONFLICT

There is evidence to suggest that work-family conflict may lead to decreased satisfaction with one's work-family balance among graduate student employees. The various demands and activities associated with graduate school may lead to perceptions of work-family conflict if these demands interfere with family life—and these perceptions may have the potential to decrease satisfaction with work-family balance levels.

Graduate students complete various assignments and projects for their programs and courses. Thus, graduate students likely experience a form of pressure called time-based pressure. One of the most agreed upon antecedents of work-family conflict, time-based pressure is said to occur when an individual's physical or mental preoccupation with the work (or family role) makes it difficult to fulfill the obligations of the family (or work role) (Greenhaus & Beutel, 1985). Like other employees, graduate students may perceive time-based pressures when faced with graduate program demands because many students are also raising families, juggling marital demands, and caring for loved ones at the same time (Dyk, 1987; Home, 1998).

Graduate student employee demands may directly affect student satisfaction with work-family balance. For instance, Valcour (2007) found a significant, negative correlation between satisfaction with work-family balance and job demands (specifically, total work hours). Job demands refer to the physical, psychological, social, or organizational aspects of a job that require sustained physical and/or psychological effort

or skills (Bakker & Demerouti, 2007). Research suggests that individuals who add more roles on top of their job demands tend to perceive more role overload and conflict (Marks, 1977). Potentially, there are two ways to assess demands experienced by graduate students. One way would be to examine their perceptions of demands and a second would be to index their demands by their total hours worked per week. In this paper, perceived demands are characterized by the variety of demands worked per week (e.g., traveling for conferences or staying on campus late at night). On the other hand, total hours worked per week can be characterized by the total number of hours that a graduate student devotes to graduate school each week. Whereas hourly demands focus on the number of hours worked per week, perceived demands look beyond total hours and encompass evaluations of working on and off campus. Both types of demands are expected to lead to decreased satisfaction with work-family balance, as increased hours worked each week and increased work being performed on campus and at home may decrease satisfaction with one's ability to manage competing work and family demands. It should be noted, however, that both types of demands are expected to be related since total hours worked each week encompasses the varying daily demands of graduate students.

Examining how job demands may lead to decreased satisfaction with work-family balance among graduate students is important for several reasons. First, employees in general are working more hours than they used to. Many jobs now require employees to work more than the traditional 40 hours a week. Some workers may be required to complete these hours at their workplace, whereas others may be allowed to work from

home. Some graduate programs may also require graduate students to work more than 40 hours each week on or off campus. Accordingly, graduate student demands are not only characterized by the high number of hours associated with them, but also by the location of where these demands are taking place (e.g., at school versus at home).

Research on job demands perceived to cross the work-family boundary, or job demands that are perceived to cross over from the work domain into the family domain (e.g., telework), reveals mixed results. Forms of telework have been found to influence perceptions of role conflict differently. For example, Gajendran and Harrison's (2007) research on telecommuting revealed positive and negative associations with job satisfaction and work-family conflict, respectively. However, in other samples, telecommuting has been shown to increase levels of work-family conflict (Duxbury, Higgins & Mills, 1992) and negatively affect job satisfaction (Golden & Veiga, 2005). As graduate programs often require students to complete several hours of coursework, participate in their advisor's research, and conduct research of their own, it is likely that many graduate students telecommute for several hours after they have left campus during the week. It is also likely that a large proportion of the graduate student population works on weekends.

According to the Resource Drain framework (Edwards & Rothbard, 2000), which suggests that various demands decrease or "drain" an individual's resources over time, time-based pressure from the work domain would decrease the time able to be allocated to the nonwork domain (even if the individual is working from home). This scarcity may affect an individual's satisfaction with work-family balance. Although graduate students

are likely to perceive conflict, it is important to mention that graduate programs can offer work-family benefits as well, as graduate student schedules are often flexible to a certain extent, and unanticipated family demands, such as needing to pick up a sick child from school, will most likely not affect program performance, possibly leading to increased satisfaction. Alternatively, graduate students who perceive high levels of conflicting demands may also perceive that they do not have adequate time and resources to allocate to family demands, resulting in dissatisfaction with his or her ability to manage these competing demands.

Hypothesis 2 (H2): Graduate student demands will be negatively related to satisfaction with work-family balance.

Work-Family Conflict as a Mediator

Whereas satisfaction with work-family balance is a newer concept, the concept of work-family conflict (WFC) emerged nearly fifty years ago (Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964). Since then, it has appeared in over 1,000 scholarly articles according to PsycINFO. Greenhaus and Beutell (1985) defined WFC as “a form of interrole conflict in which the role pressures from the work and family domains are mutually incompatible in some respect” (p. 77), suggesting that work and family roles naturally interfere with one another.

Graduate student employee demands are likely to influence students’ perceptions of work-family conflict, which, in turn, may influence students’ satisfaction with work-life balance. Ergo, a potential mediating relationship may exist between these variables. Evidence for the proposed mediation relationship exists within the work-family literature,

as work-family conflict researchers often argue that increased levels of perceived psychological demands lead to interference between work and nonwork roles (Greenhaus & Beutell, 1985). This interference between roles may decrease perceptions of ability to manage work-family situations, and these decreases in perceptions of ability to manage work-family situations may color satisfaction levels. Thus, a mediating relationship is proposed to exist between graduate student demands, work-family conflict, and satisfaction with work-family balance.

Hypothesis 3a (H3a): Work-family conflict will mediate the relationship between graduate student demands and satisfaction with work-family balance.

Work-Family Conflict as a Moderator

The relationship between demands and conflict may not be unidirectional. It is possible that perceptions of work-family conflict may also strengthen one's perceptions of demands, suggesting that demands may relate more negatively to satisfaction with work-family balance when a graduate student employee is experiencing a great deal of work-family conflict. Research suggests that job and family stressors appear to have strong effects on work and family satisfaction (Ford, Heinen, & Langkamer, 2007), indicating that high levels of perceived conflict may have strong effects on satisfaction with work-family balance levels. Ford et al.'s (2007) research may also suggest that perceptions of work-family conflict may affect one's perceptions of how these demands influence his or her ability to practically manage the relationship between one's workplace and one's household. Thus, it is also proposed that work-family conflict will moderate the relation between demands and satisfaction with work-family balance.

Hypothesis 3b (H3b): Work-family conflict will moderate the relation between graduate student employee demands and satisfaction with work-family balance, such that lower levels of conflict will weaken the relation and higher levels of work-family conflict will strengthen the relation.

CHAPTER FOUR

MENTOR WORK-FAMILY SUPPORT

The first part of this paper has focused on ways in which graduate student demands may decrease an individual's satisfaction with work-family balance. The second part of this paper focuses on a potential resource and source of support for graduate students that may buffer the stressors associated with heavy demands and work-family conflict: mentor work-family support. The study of supervisory work-family support in the work literature has yielded findings that support an important ameliorating relationship between demands, perceived role conflict, and graduate student strain. Drawing upon Conservation of Resources (COR) theory, it is suggested that graduate student advisors are an important, available resource that prevent or reduce role strain by enabling individuals to cope with their demands.

General mentor support has long been a focus of the academic literature and higher education policy and practice, as mentors are typically seen to directly impact their students' graduate school experiences (Kram, 1983). Currently, a paucity of empirical study exists on the relationship between supervisory work-family support and satisfaction with work-family balance (for an exception, see Back-Wiklund, Lippe, Dulk, & Doorne-Huiskes, 2011). Examining the relationship between mentor work-family support and satisfaction with work-family balance may provide a clearer picture of how mentors may help to reduce their students' perceptions of interrole conflict and satisfaction between their work and family roles.

As supervisory work-family support refers to the perceptions that one's mentor cares about an individual's work-family well-being (Kossek, Pichler, Bodner, & Hammer, 2011), mentor work-family support hereby refers to the perceptions that one's mentor cares about an individual's work-family well-being. Research suggests that supervisors can demonstrate concern for their employees' work-family situations either by helping their employees resolve their work-family conflicts (i.e., instrumental support) (Hammer, Kossek, Yragui, Bodner, & Hanson, 2009), or by communicating support for their employees' work-family balance, such as through showing emotional support through empathy (Thomas & Ganster, 1995).

In the employee setting, supervisory work-family support is associated with an increase in an employee's ability to jointly manage work and family demands. Supervisory work-family support is also associated with lower levels of work-family conflict (Kossek & Hammer, 2008; Kossek, et al., 2011), increased schedule flexibility (Behr, Farmer, Glazer, Gudanowski, & Nair, 2003), positive affect (George & Zhou, 2007), and lower levels of strain (O'Driscoll et al., 2003). In a study of grocery store employees, Kossek and Hammer (2008) demonstrated the significance of supervisory work-family support on reducing work-family conflict among workers, especially for workers perceiving high levels of conflict. O'Driscoll et al.'s (2003) research went a step further and discovered several moderating relationships between work-family support, conflict, and managerial health outcomes, one of interest being that perceptions of supervisory work-family support significantly reduced employee strain as a result of work-family conflict. Finally, Abendroth and Dulk (2011) discovered that certain types

of supervisory support affected work-life balance satisfaction levels differently. Specifically, emotional work-family support, rather than instrumental work-family support, was associated with increased levels of satisfaction (Abendroth & Dulk, 2011), suggesting that emotional support may be more strongly related to an employee's satisfaction with work-family balance.

Although Abendroth and Dulk's (2011) research suggests that emotional support may be more important than instrumental support, it is important to note that instrumental support in the form of altering work characteristics may be difficult for supervisors to implement in certain job settings. For example, it may be difficult for a supervisor to alter aspects of an individual's job if performance in that position depends on the structure of the job design as well as where the work is taking place. Because the nature of graduate school may enable graduate student advisors to alter their students' job design and where this work takes place, instrumental support may occur may be just as important for graduate students as emotional support.

Relation to Satisfaction with Work-Family Balance

Similar to research on supervisory support, research on academic mentoring reveals that students' advisors serve as key instrumentalists in the advancement of student professional and personal growth (Fagenson, 1989; Kram, 1983; Paglis, Green, & Bauer, 2006). Like supportive supervisors, academic mentors can lend general support, such as encouragement and empathy (Kram, 1983), as well as family-specific support, such as offering advice that aids in the student's struggle to achieve work and family balance (Kahveci, Southerland, & Glimer, 2006). Kahveci et al. (2006) commented that mentors

may be especially helpful for female protégés because some mentors have been in their shoes and can offer valuable career coaching and family management advice, and that this bond may even increase female retention in STEM post-baccalaureate programs. This finding has many practical implications, as the literature on gender participation reveals that, although women have joined the workplace at an accelerated rate within the past several decades and spend an equal amount of time in paid work as men do, they are still found to devote significantly more time than their male partners to domestic labor (Hochschild, 1989; Pleck, 1985; Sarkisian & Gerstel, 2004) and to childcare (Scott & McClellan, 1990).

Thus, it is not surprising that researchers have identified a relationship between supportive academic mentors and reductions in perceived graduate student work-family conflict (Nielson, Carlson, & Lankau, 2001). Researchers have also found strong correlations between students' satisfaction with their mentors and their overall graduate school experience (Tenenbaum, Crosby, & Gliner, 2001), suggesting just how important graduate advisors are to student well-being.

According to the demands-resources framework (Voydanoff, 2005), which theorizes that gaps between perceived stressors (e.g., student demands) and available resources (e.g., support) create strain for individuals, graduate students receiving more work-family support from their advisors would be expected to experience higher levels of satisfaction with work-family balance (even in the face of many conflicting demands) compared to students who did not have access to these resources. Stated another way, gaps between demands and resources would likely result in lower levels of satisfaction

(Back-Wiklund, Lippe, Dulk, & Doorne-Huiskes, 2011). In line with the Conservation of Resources (COR) model, which suggests that perceived resources may reduce strain and enable individuals to cope with their demands (Grandley & Cropanzano, 1999), it seems reasonable to view family-supportive advisors as external coping resources for the management of everyday family and work responsibilities. Thus, it is hypothesized that mentor work-family support and satisfaction with work-family balance will be related.

Hypothesis 4 (H4): Mentor work-family support will be positively related to satisfaction with work-family balance.

If a relationship is found between the hypothesized variables, it may be beneficial to know whether mentor support is more important for male or female graduate students, or if it is equally important for both. Currently, research suggests that women may benefit more from mentor family specific support due to the plurality of roles women engage in (Hochschild, 1989; Pleck, 1985; Sarkisian & Gerstel, 2004; Scott & McClellan, 1990). However, male graduate students with families are likely to experience work-family conflict and challenges of their own (e.g., time-based pressure, financial stress, etc.). Thus, a research question is proposed to examine the relationship between gender and the benefits of mentor support.

Research Question (RQ): Is the effect of mentor support on satisfaction with work-family balance stronger for females than for males?

Mentor Work-Family Support and Work-Family Conflict

Mentor work-family support that is instrumental or emotional in nature may affect

the ways in which demands and conflict are encoded during the satisfaction process. Such encoding could lead to either (a) altered perceptions of conflict, which may affect perceptions of management, or (b) different levels of perceived conflict, which may affect levels of satisfaction with work-family balance. Therefore, mentor work-family support may help mediate and moderate the relationships between demands, conflict, and satisfaction with work-family balance. Specifically, instrumental support may reduce work-family conflict, but emotional support may reduce the effects of WFC on satisfaction.

Mentor work-family support as a predictor of conflict. Academic advisors may offer instrumental support or emotional support to their mentees. By offering instrumental support, graduate advisors may be offering advice on how to manage work-family situations, which may result in student behavior that allows for success on a project while not sacrificing family priorities. Graduate advisors can also offer instrumental support by changing the demands, such as changing the workload of the demand as well as where the work will take place. Mentors who alter the quantity and quality of their students' demands would likely be changing the amount of work-family conflict experienced, which, in turn, may affect how their students' work-family conflict would affect their satisfaction with handling the work and family responsibilities placed on them. Thus, support that is instrumental in nature may explain how conflict affects satisfaction levels, suggesting that mentor work-family support may lead to certain perceptions of conflict, which would then lead to certain perceptions of satisfaction with work-family balance.

Hypothesis 5a (H5a): Work-family conflict will mediate the relationship between mentor support and satisfaction with work-family balance.

Mentor work-family support as a moderator of conflict. On the other hand, mentor work-family support that is emotional in nature may be beneficial to a student if demands are unable to be altered. Advisors who provide emotional support to their students may fill their students with the necessary hope to push through tough situations and perhaps enable their students to alter the way they perceive conflict. Hypothetically, a student with a supportive mentor may learn through his or her mentor's empathy that many students have gone through these processes, and that the current demands faced by the student are challenges to be conquered rather than stones by which to be defeated. Enriched by emotional support, students may perceive that the conflict created by graduate school demands may only hinder their abilities if they let them, suggesting that, even in the face of conflict, satisfaction with work-family balance can be achieved with effort and persistence. Thus, a student who feels that his or her mentor is supportive, but is experiencing high levels of conflict from the various demands placed on him or her, could still experience satisfaction with work-family balance.

Kossek and Hammer's (2008) and Nielson, Carlson, and Lankau's (2001) findings that supervisory work-family support reduced work-family conflict among employees, along with Abendroth and Dulk's (2011) findings that supervisory work-family support increased satisfaction with work-family balance, suggest that mentor support may also reduce perceptions of work-family conflict and increase satisfaction with work-family balance levels among graduate students, even in the face of high levels

of demands. Thus, a three-way interaction is proposed to exist, such that the relationship between graduate demands and satisfaction with work-family balance will be moderated by work-family conflict, and these perceptions of conflict will be moderated by mentor work-family support.

Hypothesis 5b (H5b): When predicting satisfaction with work-family balance, there will be a three-way interaction between graduate student demands, work-family conflict and mentor work-family support on satisfaction with work-family balance. Specifically, mentor work-family support will modify the effects of work-family conflict on the relationship between graduate school demands and satisfaction with work-family balance.

CHAPTER FIVE

METHOD

Participants

Five hundred and twenty-three graduate students from a medium-sized Southeastern university participated in this study. The sample was predominately Caucasian (68.3%) and Asian/Asian American (20.4%), and over half of participants were female (58.5%). The mean age was 27.7 years ($SD = 6.70$). Three hundred and seventeen of the participants were Masters students and 206 were doctoral students. Sixty percent of participants reported being fully funded, whereas 33% reported receiving no funding, and the remaining percentage of participants appeared to receive partial funding. Thirty-three percent of participants reported they were married, 14.5% reported having children, and 9.1% of participants reporting caring for a loved one other than their children or significant others. The average amount of hours that participants dedicated each week to graduate school was 38.10 ($SD = 21.91$), where total hours was calculated based on hours spent conducting research, attending and studying for courses, working in any assistantships or other positions for paid work, and participating in service committees. Fifty-one percent of Master's students held a job outside of school, whereas only 15.9% of doctoral students reported holding a job outside of school.

Measures

The survey used in this study consisted of nine scales and nine demographic questions that measured aspects of participants' work and nonwork lives. Scale scores for each of the measures were created by averaging the item scores such that higher scores

indicated higher values of each construct. Where appropriate, items were reverse-scored during the analysis process. A few measures were adapted to ask participants about their “graduate school” or “graduate student” activities rather than general “work” or “employee” activities, as a proportion of graduate students held a job outside of graduate school.

Demographics. Nine demographic items were included in the survey. Items assessed participants’ age, gender, ethnicity, program classification, total work hours, funding, marital status, whether participants had children, as well as how many children they had (see Appendix A).

Perceived demands. Rosin and Korabik’s (1991) six-item scale of job demands was used to indicate the respondent’s perception of the frequency with which they experience various graduate school demands. Participants responded to each item using a 4-point Likert scale, where 1 = never and 4 = very frequently (70 percent of the time). Representative items included “Work on weekends” and “Bring work home to work on after you leave campus” (see Appendix B).

Hourly demands. The total number of hours worked per week was measured by totaling the number of research hours, teaching hours, coursework hours, and service hours reported by graduate student employees (see Appendix A).

Work-family conflict. Netemeyer, Boles, and McMurrian’s (1996) five-item Work-Family Conflict Scale was used to indicate the degree to which respondents perceived conflict between their work and family domains using a 5-point Likert scale (1 = strongly disagree; 5 = strongly agree). Representative items included “The demands of

my graduate school life interfere with my home/family life” and “The amount of time graduate school takes up makes it difficult to fulfill family responsibilities” (see Appendix C).

Satisfaction with work-family balance. Valcour’s (2007) five-item Satisfaction with Work-Family Balance Scale was used to indicate the degree to which respondents were satisfied with the way they are able to manage their work and family lives using a 5-point Likert scale, where 1 = very dissatisfied and 5 = very satisfied. Two sample items from this scale asked whether participants are satisfied/dissatisfied with “the way [they] divided [their] time between graduate school and personal/family life” as well as with “[their] ability to balance the needs of graduate school with those of [their] personal/family life” (see Appendix D).

Mentor work-family support. Hammer, Kossek, Yragui, Bodner, and Hanson’s (2009) seven support items (emotional = 4 items; instrumental = 3 items) from their Family Supportive Supervisor Behaviors (FSSB) measure was used to indicate the degree to which respondents agreed that their mentors are supportive of their work-family situations using a 5-point Likert scale, where 1 = strongly disagree and 5 = strongly agree. A representative item from this measure was “My mentor and I can talk effectively to solve conflicts between school and nonschool issues” (see Appendix E).

Graduate school satisfaction. Six items from Hackam and Oldham’s (1974) Job Diagnostic Survey (JDS) were used to indicate the degree to which respondents agreed that their graduate school experience was satisfying using a 5-point Likert scale (1 = disagree strongly; 5 = agree strongly). Three sample items from this scale included

“Generally speaking, I am very satisfied with graduate school,” “I feel unhappy when I discover that I have performed poorly on a graduate school-related assignment,” and “My own feelings generally are not affected much one way or the other by how well I perform in graduate school” (reverse scored) (see Appendix F).

Life satisfaction. Diener, Emmons, Larsen, and Griffin’s (1985) five-item Satisfaction with Life Scale was used to indicate the extent to which respondents agreed with statements about their life satisfaction using a 7-point Likert scale, where 1 = strongly disagree and 7 = strongly agree. A representative sample item of this measure was “In most ways my life is close to ideal” (see Appendix G).

Strain. Perceived strain was measured using Cohen and Williamson’s (1988) 10-item General Stress Scale, which asked participants to indicate the frequency with which they experience stressors and symptoms of strain using a 5-point Likert scale, where 1 = never and 5 = very often. A few items included “In the last month, how often have you felt nervous and “stressed”?” and “In the last month, how often have you felt confident about your ability to handle your personal problems?” (reverse scored) (see Appendix H).

Turnover intentions. Turnover intentions were measured using the single item “I frequently think of withdrawing from graduate school” from the Job Diagnostic Survey (see Appendix I).

Control variables. Gender, marital status, and whether participants had any children were controlled for in the current study and were included in all analyses except for the Research Question. Being married, raising children, and engaging in roles specific to gender were measured as control variables because these types of factors require

consistent time and effort and may affect individual work-family conflict as well as satisfaction with work-family balance levels (Dyk, 1987; Home, 1998).

Procedure

Participants were contacted through the university's graduate student government via e-mail. All participants received the same e-mail that included a link directing them to the study questionnaire. Participants were asked to click on the link and indicate their responses to each of the questions. Upon completion of the study questionnaire, participants were directed to another webpage, where they had the opportunity to receive a \$100 gift card for their participation.

CHAPTER SIX

RESULTS

Prior to analysis, all study variables were standardized, and the data were screened for outliers. Extreme cases were identified in the total hours worked per week variable due to their high values of Mahalanobis distance. As a result, two univariate outliers were removed from further analyses.

Correlational Analyses

Table 1 presents the means, standard deviations, intercorrelations, and reliability estimates for the study variables. As illustrated in the table, perceptions of satisfaction with work-family balance were correlated with perceptions of job satisfaction ($r = .28, p < .01$) and life satisfaction ($r = .46, p < .01$), supporting Hypothesis 1a and Hypothesis 1b. Perceptions of satisfaction with work-family balance were also correlated with strain ($r = -.32, p < .01$) and turnover intentions ($r = -.38, p < .01$), supporting Hypothesis 1c and Hypothesis 1d (see Table 1).

Hypotheses 2, which stated that graduate student demands (i.e., hourly and perceived) would be negatively correlated with perceptions of satisfaction with work-family balance, was also supported (total hours worked per week: $r = -.15, p < .01$; perceived demands: $r = -.25, p < .01$). Expectedly, work-family conflict was moderately and negatively correlated with satisfaction with work-family balance ($r = -.57, p < .01$), and perceived demands, as well as hourly demands, were positively correlated with work-family conflict ($r = .35, p < .01$; $r = .11, p < .05$). Finally, Hypothesis 4, which stated that

perceptions of mentor work-family support would be positively correlated with satisfaction with work-family balance, was supported ($r = .18, p < .01$) (see Table 1).

Analysis of Group Differences

To test the Research Question, which questioned whether the effect of mentor work-family support on satisfaction with work-family balance would differ based on gender, a univariate analysis of variance (ANOVA) was conducted. The analysis revealed that there were no main effects of gender, $F(1,424) = .17, p > .05$, or of mentor work-family support $F(1,424) = 1.88, p > .05$, on satisfaction with work-family balance. The interaction term was non-significant as well $F(2,424) = .08, p > .05$, suggesting that female graduate students may not benefit any more from family-supportive mentors than male graduate students do and vice versa.

Multiple Regression Analyses

All multiple regression analyses were tested with the following control variables: gender, marital status, and whether the participant had children. Thus, the results that follow include the models when controlled for the previously mentioned variables.

Mediation. When testing for Hypothesis 3a, which stated that work-family conflict would mediate the relationship between graduate student demands and satisfaction with work-family balance perceived demands, the researcher followed the mediation guidelines specified by Preacher and Hayes (2004). When testing the model with perceived demands, the overall model was significant, $R^2 = .34, F(5,461) = 46.65, p < .001$. Perceived demands was significantly related to work-family conflict ($B = .56, t = 8.36, p < .001$), and work-family conflict was significantly related to satisfaction with

work-family balance ($B = -.06, t = -13.64, p < .001$). Normal theory testing for indirect effects revealed a significant mediating effect ($B = -.34, SE = .05, z = -7.12, p < .001$), and bootstrapped confidence intervals did not include 0 [-.45, -.25]. Because perceived demand's relationship with satisfaction with work-family balance no longer remained significant when controlling for work-family conflict, the results suggested full mediation (see Table 2 and Figure 1).

When testing for whether Hypothesis 3a was supported when examining hourly graduate student demands, the overall model was still significant, $R^2 = .34, F(5,456) = 47.50, p < .001$. Hourly demands was significantly related to work-family conflict ($B = .01, t = 3.33, p = .001$), and work-family conflict was significantly related to satisfaction with work-family balance ($B = -.61, t = -14.49, p < .001$). Normal theory testing for indirect effects revealed a significant mediating effect ($B = -.00, SE = .00, z = -3.23, p = .001$), and bootstrapped confidence intervals did not include 0 [-.01, -.02]. Because the relationship between hourly demands and satisfaction with work-family balance was no longer significant after controlling for work-family conflict, the results suggested full mediation. Thus, Hypothesis 3a was supported (see Table 2 and Figure 1).

To test for Hypothesis 5a, which stated that work-family conflict would mediate the relationship between mentor work-family support and satisfaction with work-family balance, graduate student demands was also controlled for in order to follow Preacher and Hayes (2004) best practices for mediation, and the sample was bootstrapped 5000 times. The overall model was significant, $R^2 = .35, F(6,421) = 38.37, p < .001$. Mentor support was significantly related to work-family conflict ($B = -.10, t = -2.40, p < .05$), and

work-family conflict was significantly related to satisfaction with work-family balance ($B = -.60, t = -12.74, p < .001$). Normal theory testing for indirect effects revealed a significant mediating effect ($B = .06, SE = .03, z = 2.35, p < .05$), and bootstrapped confidence intervals did include 0 in the interval [.01, .12]. Because mentor support's relationship with satisfaction with work-family balance remained significant even when controlling for indirect effect of work-family conflict, the results suggested partial mediation (see Table 3 and Figure 2).

When Hypothesis 5a was retested to control for hourly demands, the overall model was still significant, $R^2 = .36, F(6,417) = 38.86, p < .001$. Mentor support was significantly, negatively related to work-family conflict ($B = -.10, t = -2.05, p < .05$), and work-family conflict was significantly, negatively related to satisfaction with work-family balance ($B = -.60, t = -13.71, p < .001$). Normal theory testing for indirect effects revealed a significant mediating effect ($B = .06, SE = .03, z = 2.02, p < .05$), and bootstrapped confidence intervals did not include 0 [.00, .11]. Because mentor support's relationship with satisfaction with work-family balance remained significant even when controlling for an indirect effect of work-family conflict, the results suggested partial mediation. Thus, Hypothesis 5a was supported (see Table 3 and Figure 2).

Moderation. For the following analyses, all predictors were centered prior to creating product terms in order to reduce the effects of multicollinearity (Aiken & West, 1991). Hypothesis 3b posited that work-family conflict would moderate the relationship between graduate student employee demands and satisfaction with work-family balance. When testing for perceived demands, the overall model was significant, $R^2 = .36,$

$F(6,460) = 42.91, p < .001$. Perceived demands were not significantly related to satisfaction with work-family balance ($B = -.05, t = -.66, p > .05$). However, there was a significant, main effect of work-family conflict on satisfaction with work-family balance ($B = -.63, t = -14.15, p < .001$). The interaction term also had a significant effect on satisfaction with work-family balance ($B = -.28, t = -4.05, p < .001, sr^2 = .02$). Thus, the relation between perceived demands and satisfaction with work-family balance appeared to vary by levels of work-family conflict (see Table 4 and Figure 3).

When Hypothesis 3b was retested with hourly demands, the overall model was still significant, $R^2 = .35, F(6,455) = 40.08, p < .001$, and a main effect of work-family conflict remained on satisfaction with work-family balance ($B = -.61, t = -14.54, p < .001$). However, the interaction term was no longer significant ($B = -.00, t = -1.52, p > .05$). Thus, work-family conflict appeared to moderate the relationship between perceived demands and satisfaction with work-family balance, but not hourly demands and satisfaction with work-balance—providing partial support for Hypothesis 3b (see Table 4).

Hypothesis 5b posited that mentor work-family support would modify Hypothesis 3b, such that varying levels of mentor support would strengthen or weaken the relationship proposed in Hypothesis 3b. When testing for perceived demands, the results of the multiple regression analyses indicated that the overall model was significant, $F(10,417) = 24.99 (p < .001), R^2 = .37$, with significant main effects for work-family conflict ($B = -.62, t = -13.16, p < .001$) and mentor work-family support ($B = .06, t = 2.91, p < .01$). However, the three-way interaction term was not significant ($B = -.02, t = -$

.23, $p > .05$). Alternatively, when testing the model with hourly demands, the results of the multiple regression analyses indicated that the overall model was significant, $F(10,413) = 24.33$ ($p < .001$), $R^2 = .37$, with a main effect for mentor work-family support ($B = .17$, $t = 3.85$, $p < .001$) and a significant three-way interaction term ($B = -.01$, $t = -2.17$, $p < .05$). The results of the three-way interaction indicated that mentor support only moderated the relationship between work-family conflict and satisfaction with work-family balance when hourly demands were used to predict satisfaction with work-family balance. Specifically, when mentor support was high, work-family conflict slightly decreased the negative effect of high hourly demands on satisfaction with work-family balance. On the other hand, when mentor support was low, work-family conflict increased the negative effect of high hourly demands on satisfaction with work-family balance. In other words, when mentor support was low, and work-family conflict was high, high hourly demands appeared to decrease satisfaction with work-family balance the most. Thus, Hypothesis 5b was partially supported (see Table 5 and Figures 4 and 5).

CHAPTER SEVEN

DISCUSSION

The present paper had three objectives: (a) to provide further support for the relationship between the graduate school experience and satisfaction with work-family balance, (b) to assess the relationships between student demands and work-family conflict on satisfaction with work-family balance, and (c) to examine the impact of mentor work-family support on graduate student satisfaction levels. As this study provides a unique contribution to the extant literature, the implications of the findings are discussed, as well as limitations and suggestions for future research.

In regard to the first objective, both graduate school and life satisfaction were positively related to satisfaction with work-family balance, suggesting that the graduate school experience may be more satisfying for students if the students feel they have the ability to adequately manage their work and family priorities. Satisfaction with work-family balance was negatively related to strain and turnover intentions, suggesting that individuals who are dissatisfied with their abilities and resources to manage their work and family priorities may feel more stressed than others and, sometimes, this may lead them to consider withdrawing from graduate school. Thus, further inquiry into the relationship between satisfaction with work-family balance and turnover may be important for predicting organizational turnover.

In regard to the second objective, this study explored the avenues through which demands may lead to satisfaction with work-family balance. Importantly, both perceived and hourly graduate student demands were found to negatively affect satisfaction with

work-family balance, suggesting that the very nature of managing work and family responsibilities may be associated with a reduction in resources that may aid work-family balance (Grandley & Cropanzano, 1999; Valcour, 2007). Work-family conflict also moderated and mediated the relationship between student demands and satisfaction with work-family balance, suggesting that students who experience—or perceive—conflict may have a difficult time finding satisfaction with their abilities to manage these situations without adequate resources.

This study contributes uniquely to the literature by proposing a well-known resource that graduate students likely already take advantage of, but is hardly mentioned in the literature: mentor work-family support. In the current study, mentor work-family support was positively related to graduate student satisfaction with work-family balance. Mentor work-family support negatively predicted and moderated perceptions of work-family conflict. In other words, mentor work-family support may lead to decreased perceptions of conflict between graduate school priorities and priorities outside of graduate school, which in turn may affect how satisfied the student feels with his or her work-family balance. However, mentor work-family support was only found to modify perceptions of work-family conflict when the work-family conflict was examined with hourly demands, suggesting that hourly demands and perceived demands may differ in terms of how they affect satisfaction with work-family balance. Because perceived demands was a stronger predictor of work-family conflict, it stands to reason that perceiving a variety of demands may lead to more perceptions of conflict, and that mentor work-family support alone may not significantly buffer this relationship. On the

other hand, because mentor support significantly altered the effect of work-family conflict when predicting satisfaction with work-family balance when examining hourly demands only, it is possible that the effect of hourly demands on perceptions of work-family conflict may be reduced or more easily ignored if graduate students are receiving adequate support. Thus, future studies could explore the possibility that various types of demands may lead to different outcomes within the graduate student setting, and the organizational literature is encouraged to continue its inquiry into these matters (Valcour, 2007).

There are a number of ways in which the current study could lead to the development of policies and programs aimed at the enhancement of satisfaction with work-family balance among graduate students. Findings from the current study suggest that managing work and nonwork priorities involves combating the conflict that may occur between the two, and that perceptions of overwhelming conflict may decrease satisfaction with one's ability to manage these priorities. Organizations such as Google and SAS have recognized the importance of work-life balance and have invested millions of dollars into the creation of workplace cultures that promotes work-life balance and wellness. From this approach, institutions employing graduate students could consider offering their family-friendly services, such as offering the access to daycare. Similarly, graduate programs could promote family-friendly environments by encouraging families to attend social events.

Another way in which the current study could lead to the development of policies is by promoting more research on the topic of graduate student support. In the employee

literature, family-supportive work environments are associated with higher levels of employee life satisfaction (Allen, 2001), and it is suggested that these types of environments increase perceptions of perceived organizational support. Thus, graduate students who perceive their advisors, as well as their institutions or graduate programs, as being family-supportive may also experience higher levels of satisfaction with work-family balance.

Limitations and Opportunities for Future Research

There are several limitations with the current study. One limitation of the current study is its use of cross-sectional, self-report data. This type of research design not only prevents any causal inferences from being made, but is also leads to issues associated with common method variance (Campbell & Fiske, 1959). However, alternative research designs were not possible in this study due to organizational constraints. Therefore, future research is encouraged to apply multi-method techniques in order to achieve more valid results, especially because many of the variables studied likely change overtime.

Another limitation in this study, as well as in work-family research in general, is that work-family research rarely defines the terms “work” and “family.” Although participants were asked in the current study to answer questions pertaining to their graduate school environment and family (or personal) lives, it may be near impossible to interpret how they were defining family life, and questions relating to “personal life” may produce variance quite different than that of questions retaining to “family life.” Thus, future research is encouraged to define what is meant by work and family within their manuscripts. Researchers wishing to clearly label the family domain within their study

should consider consulting the family studies literature. This literature, which contains scholarly psychology as well as sociology articles, may aid work-family researchers in their attempt to operationalize the family domain.

In addition, another limitation of the study and work-family research in general is that many of the study variables examined may be hard to objectively quantify. In other words, it may be difficult to compare participants in terms of who is experiencing more conflict and who is experiencing more mentor support if perceptions are only being measured. In order to deal with this challenge, the researcher attempted to provide measures of both perceived (i.e., subjective) and hourly (i.e., objective) graduate student demands in hopes of examining the relationships these types of demands shared with the other study variables. However, it is also important to note that subjective experiences are equally important for research, and that understanding how perceptions of graduate school work-life conflict lead to particular outcomes could help researchers improve future workplace environments that may facilitate these relationships. Thus, future research is encouraged to consider alternative research designs and study variables that may allow for more enriching information concerning work-family theory and work-family balance intervention.

Conclusion

This study contributes to the literature by showing support for the impact of academic advisors on their student's satisfaction with graduate school. Namely, this study found a negative relationship between perceived demands, work-family conflict, and decreased satisfaction with work-family balance, but that mentor support in the form of

work-family guidance slightly reduced perceptions of work-family conflict. Future identification of factors that reduce perceptions of conflict and increase graduate student satisfaction may help increase graduate student retention and pursuit of employment within STEM fields upon graduation.

APPENDICES

APPENDIX A

Demographic Items

1. Age: _____
2. Gender: (circle one) Male Female
3. Ethnicity: (circle all that apply)
African American American Indian Arab or Arab American
Asian or Asian American Caucasian Hispanic Origin
Hispanic or Latino Other: _____
4. Classification: (circle one) Master's student Doctoral student
5. On average, how many hours do you typically dedicate to:
 - a. Research projects each week _____
 - b. Lecturing/teaching/being a teaching assistant each week _____
 - c. Your courses each week _____
 - d. Service each week _____
6. Funding: (check all that apply)
 - a. Full tuition waiver _____
 - b. Partial tuition waiver _____
 - c. Teaching Assistantship _____
 - d. Research Assistantship _____
 - e. Scholarship _____
 - f. Other _____
7. Do you have any children? (circle one) Yes No
8. How many children do you have? _____
9. Marital status: (circle one) Single Married

APPENDIX B

Perceived Demands

Indicate the frequency with which you do the following:

1. Stay late at work
2. Go to work early
3. Bring schoolwork home to work on after you leave campus
4. Work on weekends
5. Take schoolwork on vacations
6. Travel for school related activities

APPENDIX C

Work-Family Conflict

1. The demands of my graduate school life interfere with my home/family life
2. The amount of time graduate school takes up makes it difficult to fulfill family responsibilities
3. Things I want to do at home do not get done because of the demands graduate school puts on me
4. Graduate school produces strain that makes it difficult to fulfill family duties
5. Due to graduate school-related duties, I have to make changes to my plans for family activities

APPENDIX D

Satisfaction with Work-Family Balance

1. The way you divide your time between graduate school and personal/family life
2. The way you divide your attention between graduate school and home
3. How well your graduate school life and your personal/family life fit together
4. Your ability to balance the needs of graduate school with those of your personal/family life
5. The opportunity you have to perform in graduate school well and yet be able to perform home-related duties adequately

APPENDIX E

Mentor Work-Family Support

1. My mentor is willing to listen to my problems in juggling school and nonschool life
2. My mentor takes the time to learn about my personal needs
3. My mentor makes me feel comfortable talking to him or her about my conflicts between school and non-school life
4. My mentor and I can talk effectively to solve conflicts between school and nonschool issues
5. I can depend on my mentor to help support me with scheduling conflicts if I need it
6. I can rely on my mentor to make sure my school responsibilities are handled when I have unanticipated nonschool demands
7. My mentor works effectively with his or her students to creatively solve conflicts between school and non-school life

APPENDIX F

Graduate School Satisfaction

1. My opinion of myself goes up when I do well in graduate school
2. Generally speaking, I am very satisfied with graduate school
3. I feel a great sense of personal satisfaction when I am performing well in graduate school
4. I frequently think of withdrawing from graduate school (reverse scored)
5. I feel unhappy when I discover that I have performed poorly on a graduate school-related assignment
6. I am generally satisfied with the kind of work I do in graduate school
7. My own feelings are not affected much one way or the other by how well I perform in graduate school

APPENDIX G

Life Satisfaction

1. In most ways my life is close to ideal
2. The conditions of my life are excellent
3. I am satisfied with my life
4. So far I have gotten the important things I want in life
5. If I could live my life over, I would change almost nothing

APPENDIX H

Strain

1. Have you been upset because of something that happened unexpectedly?
2. Have you felt unable to control the important things in life?
3. Have you felt nervous and "stressed"?
4. Have you felt confident about your ability to handle your personal problems?
(reverse scored)
5. Have you felt that things were going your way? (reverse scored)
6. Have you found that you could not cope with all the things you had to do?
7. Have you been able to control irritations in your life? (reverse scored)
8. Have you felt that you were on top of things? (reverse scored)
9. Have you been angered because of things that were outside of your control?
10. Have you felt difficulties were piling up so high that you could not overcome them?

REFERENCES

- Abendroth, A., & Dulk, L. (2011). Support for the work-life balance in Europe: The impact of state, workplace and family support on work-life balance satisfaction. *Work Employment & Society, 25*(2), 234-256.
- Abrams, D., Ando, K., and Hinkle, S. (1998). Psychological attachment to the group: Cross-cultural differences in organizational identification and subjective norms as predictors of workers' turnover intentions. *Personality and Social Psychology Bulletin, 24*, 1027-1039.
- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.
- Allen, T. D. (2001). Family-supportive environments: The role of organizational perceptions. *Journal of Vocational Behavior, 58*, 414-435.
- Anderson, S. E., Coffey, B. S., & Byerly, R. T. (2002). Formal organizational initiatives and informal workplace practices: Links to work-family conflict and job-related outcomes. *Journal of Management, 28*(6), 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.
- Back-Wiklund, M., Lippe, T., Dulk, L., & Doorne-Huiskes, A. (2011). *Quality of life and work in Europe: Theory, practice, and policy*. New York: Palgrave Macmillan
- Bakker, A. B., & Demerouti, E. (2007). The Job Demands-Resources model: State of the art. *Journal of Managerial Psychology, 22*(3), 309-328.
- Beehr, T. A., Farmer, S. J., Glazer, S., Gudanowski, D. M., Nair, V. N. (2003). The enigma of social support and occupational stress: Source congruence and gender role effects. *Journal of Occupational Health Psychology, 8*, 220–231.
- Boyar, S. L., Maertz, C. P., Pearson, A. W., & Keough, S. (2003). Work-family conflict: A model of linkages between work and family domain variables and turnover intentions. *Journal of Managerial Issues, 15*(2), 175–187.
- Cappelli, P. (1999). *The new deal at work: Managing the market-driven workforce*. Boston: Harvard Business School Press.
- Clark, S. C. (2000). Work/family border theory: A new theory of work/family balance. *Human Relations, 53*(6), 747-770.

- Clarke, M. C., Koch, L. C., & Hill, E. J. (2004). The work-family interface: Differentiating balance and fit. *Family and Consumer Sciences Research Journal*, 33(2), 121–140.
- Cohen, S., & Williamson, G. (1988). Perceived stress in a probability sample of the United States. In S. Spacapan, & S. Oskamp, (Eds.). *The social psychology of health*. (pp. 31-67). Newbury Park, CA: Sage.
- Deery, M. (2008). Talent management, work–life balance and retention strategies. *International Journal of Contemporary Hospitality Management* 20(7), 23–28.
- Demerouti, E., Bakker, A. B., & Bulters, A. J. (2004). The loss spiral of work pressure, work–home interference and exhaustion: Reciprocal relations in a three-wave study. *Journal of Vocational Behavior*, 64, 131–149.
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, 49(1), 71-75.
- Duxbury, L. E., Higgins, C. A., & Mills, S. (1992). After-hours telecommuting and work–family conflict: A comparative analysis. *Information Systems Research*, 3, 173–190.
- Dyk, P. H. (1987). Graduate student management of family and academic roles. *Family Relations*, 36(3), 329-332.
- 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.
- Fagenson, E. A. (1989). The mentor advantage: Perceived career/job experiences of protégés versus non-protégés. *Journal of Organizational Behavior*, 10(4), 309–320.
- Fields, J. (2004). *America's families and living arrangements: 2003* (Population Reports No. P20–553). Washington, DC: U.S. Census Bureau.
- Frone, M. R., Russell, M., & Cooper, L. M. (1997). Relation of work-family conflict to health outcomes: A four-year longitudinal study of employed parents. *Journal of Occupational and Organizational Psychology*, 70, 325–335.
- Frone, M.R., Yardley, J.K., & Markel, K.S. (1997). Developing and testing an integrative model of the work-family interface. *Journal of Vocational Behavior*, 50, 145–167.
- Frye, N., & Breugh, J. A. (2004). Family-friendly policies, supervisor support, work-

- family conflict, family-work conflict, and satisfaction: A test of a conceptual model. *Journal of Business and Psychology*, 19(2), 197–220.
- Gajendran, R. S., & Harrison, D. A. (2007). The good, the bad, and the unknown about telecommuting: Meta-analysis of psychological mediators and individual consequences. *Journal of Applied Psychology*, 92(6), 1524-1541.
- George, J. M., & Zhou, J. (2007). Dual tuning in a supportive context: Joint contributions of positive mood, negative mood, and supervisory behaviors to employee creativity. *Academy of Management Journal*, 50(3), 605-622.
- Golden, T. D., & Veiga, J. F. (2005). The impact of extent of telecommuting on job satisfaction: Resolving inconsistent findings. *Journal of Management*, 31(2), 301-318.
- Goulden, M., Frasch, K., and Mason, M.A. and the Center for American Progress. (2009). *Staying Competitive: Patching America's Leaky Pipeline in the Sciences*. Berkeley Center on Health, Economic & Family Security. http://www.americanprogress.org/issues/2009/11/women_and_sciences.html (accessed October 2013)
- Grandley, A. A., & Cropanzano, R. (1999). The conservation of resources model applied to work–family conflict and strain. *Journal of Vocational Behavior*, 54(2), 350-370.
- Green, S. G., & Bauer, T. N. (1995). Supervisory mentoring by advisers: Relationships with doctoral student potential, productivity, and commitment. *Personnel Psychology* 48(3), 537–561.
- Greenhaus, J. H., & Beutell, N. J. (1985). Sources of conflict between work and family roles. *Academy of Management Review*, 10(1), 76-88.
- Greenhaus, J. H., Collins, K. M., & Shaw, J. D. (2003). The relation between work-family balance and quality of life. *Journal of Vocational Behavior*, 63, 510-531.
- Greenhaus, J. H., & Powell, G. N. (2006). When work and family are allies: A theory of work-family enrichment. *Academy of Management Review*, 31(1), 72-92.
- 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(1), 111-126.
- Hackman, J. R., Oldham, G. R. (1974). *The job diagnostic survey: An instrument for the*

- diagnosis of jobs and evaluation of job redesign projects.* (Technical Report No. 4). New Haven: Yale University, Department of Administrative Science.
- Hammer, L. B., Grigsby, T. D., & Woods, S. (1996). The conflicting demands of work, family, and school among students at an urban university. *Journal of Psychology: Interdisciplinary and Applied*, 132(2), 220-226.
- Hammer, L. B., Kossek, E. E., Yragui, N. L., Bodner, T. E., & Hanson, G. C. (2009). Development and validation of a multidimensional measure of family supportive supervisor behaviors (FSSB). *Journal of Management*, 35(4), 837-856. doi:10.1177/0149206308328510.
- Hanson, G. C., Hammer, L. B., & Colton, C. L. (2006). Development and validation of a multidimensional scale of perceived work-family positive spillover. *Journal of Occupational Health Psychology*, 11(3), 249-265.
- Heiligers, P. M., & Hingstman, L. L. (2000). Career preferences and the work-family balance in medicine: Gender differences among medical specialists. *Social Science & Medicine*, 50(9), 1235-1246.
- Higgins, C., Duxbury, L., & Johnson, K. L. (2000). Part-time work for women: Does it really help balance work and family? *Human Resource Management*, 39(1), 17-32.
- Hill, E. J., Martinson, V. K., Ferris, M., & Baker, R. Z. (2004). Beyond the Mommy track: The influence of new-concept part-time work for professional women on work and family. *Journal of Family and Economic Issues*, 25(1), 121-136.
- Hochschild, A. R. (1989). *The second shift: Working parents and the revolution at home*. New York: Viking.
- Home, A. M. (1998). Predicting role conflict, overload and contagion in adult women university students with families and jobs. *Adult Education Quarterly*, 48(2), 85-97.
- Kahn, R. L., Wolfe, D. M., Quinn, R. P., Snoek, J. D., & Rosenthal, R. A. (1964). *Organizational stress: Studies in role conflict and ambiguity*. New York: Wiley.
- Kahveci, A., Southerland, S., & Gilmer, P. J. (2006). The effectiveness of a program in retaining undergraduate women in science, mathematics and engineering majors. *Journal of College Science Teaching*, 36(3), 34-38.
- Kossek, E. E., & Hammer, L. B. (2008). Family Supportive Supervisory Behaviors

- (FSSB) Intervention Study: Effects on Employee's Work, Family, Safety, & Health Outcomes. *Summary of Findings from the National Institute for Occupational Safety and Health Grant # U010H008788*. Portland State University and Michigan State University.
- 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(2), 139-149.
- Kossek, E. E., Pichler, S., Bodner, T., & Hammer, L. B. (2011). Workplace social support and work-family conflict: A meta-analysis clarifying the influence of general and work-family-specific supervisor and organizational support. *Personnel Psychology*, 64(2), 289-313.
- Kram, K. E. (1983). Phases of the mentor relationship. *Academy of Management Journal*, 26, 608-625.
- 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(2), 169-181.
- Latack, J. C. (1986). Coping with job stress: Measures and future directions for scale development. *Journal of Applied Psychology*, 71(3), 377-385.
- Lazarus, R. S. (1999). *Stress and emotion: A new synthesis*. New York: Springer.
- Lee, M. D., & Kossek, E. E. (2005). *Crafting lives that work: A six-year retrospective on reduced-load work in the careers & lives of professionals & managers*. Montreal, Quebec, Canada: McGill University.
- Locke, E. A. (1976). The nature and causes of job satisfaction. In M. Dunnette (Ed.), *Handbook of industrial and organizational psychology* (pp. 1297-1343). Chicago: Rand McNally.
- Mallinckrodt, B., & Leong, F. T. (1992). Social support in academic programs and family environments: Sex differences and role conflicts for graduate students. *Journal of Counseling & Development*, 70(6), 716-723.
- Marks, S. R. (1977). Multiple roles and role strain: Some notes on human energy, time and commitment. *American Sociological Review*, 42, 921-936.
- Martinez, E., Ordu, C., Della Sala, M. R., & McFarlane, A. (2013). Striving to obtain

- school-work-life balance: The full-time doctoral student. *International Journal of Doctoral Studies*, 8, 39-59.
- McManus, I. C., Keeling, A., & Paice, E. (2004). Stress, burnout and doctors' attitudes to work are determined by personality and learning style: A twelve year longitudinal study of UK medical graduates. *BMC Medicine*, 2(29). doi:10.1186/1741-7015-2-29.
- McNall, L. A., Masuda, A. D., & Nicklin, J. M. (2009). Flexible work arrangements, job satisfaction, and turnover intentions: The mediating role of work-to-family enrichment. *Journal of Interdisciplinary and Applied Psychology*, 144(1), 61-81.
- Milkie, M. A., & Peltola, P. (1999). Playing all the roles: Gender and the work-family balancing act. *Journal of Marriage and the Family*, 61, 476-490.
- Moen, P., & Roehling, P. (2005). *The career mystique*. Lanham, MD: Rowman & Littlefield.
- Netemeyer, R. G., Boles, J. S., & McMurrian, R. (1996). Development and validation of work-family conflict and family-work conflict scales. *Journal of Applied Psychology*, 81(4), 400-410.
- Ng, T. W. H., Eby, L. T., Sorensen, K. L., & Feldman, D. C. (2005). Predictors of objective and subjective career success: A meta-analysis. *Personnel Psychology*, 58, 367-408.
- Nielson, T. R., Carlson, D. S., & Lankau, M. J. (2001). The supportive mentor as a means of reducing work-family conflict. *Journal of Vocational Behavior*, 59(3), 364-381.
- O'Driscoll, M. P., Poelmans, S., Spector, P. E., Kalliath T, Allen, T. D., Cooper, C. L., et al. (2003). Family-responsive interventions, perceived organizational and supervisor support, work-family conflict, and psychological strain. *International Journal of Stress Management*, 10(4), 326-344.
- Paglis, L. L., Green, S. G., & Bauer, T. N. (2006). Does adviser mentoring add value? A longitudinal study of mentoring and doctoral student outcomes. *Research in Higher Education*, 47(4), 451.
- Parasuraman, S., & Simmers, C.A. (2001). Type of employment, work-family conflict and well-being: A comparative study. *Journal of Organizational Behavior*, 22(5), 551-568.
- Pleck, J. H. (1985). *Working wives, working husbands*. Beverly Hills, CA: Sage.

- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, *40*(3), 879-891.
- Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments, and Computers*, *36*, 717-731.
- Rosin, H. M., & Korabik, K. (1991). Workplace variables, affective responses, and intention to leave among women managers. *Journal of Occupational Psychology*, *64*, 317-330.
- Sanders, M. M., Lengnick-Hall, M. L., Lengnick-Hall, C. A., & Steele-Clapp, L. (1998). Love and work: Career-family attitudes of new entrants into the labor force. *Journal of Organizational Behavior*, *19*, 603-619.
- Sarkisian, N., & Gerstel, N. (2004). Explaining the gender gap in help to parents: The importance of employment. *Journal of Marriage and Family*, *66*, 431-451.
- Schaufeli, W. B., & Bakker, A. (2004). Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behavior*, *25*, 293-325.
- Scott, K. D., & McClellan, E. (1990). Gender differences in absenteeism. *Public Personnel Management*, *19*, 229-253.
- Shaffer, M. A., Harrison, D. A., Gilley, K. M., & Luk, D. M. (2001). Struggling for balance amid turbulence on international assignments: Work-family conflict, support and commitment. *Journal of Management*, *27*(1), 99-121.
- Shanafelt, T. D., Boone, S., Tan, L., Dyrbye, L. N., Sotile, W., Satele, D., West, C. P., Sloan, J., & Oreskovich, M. R. (2012). Burnout and satisfaction with work-family balance among US physicians relative to the general US population. *Archives of Internal Medicine*, *172*(18), 1377-1385.
- Shore, L. M. & Martin, H. J. (1989). Job satisfaction and organizational commitment in relation to work performance and turnover intentions. *Human Relations*, *42*(7), 625-638.
- Tenenbaum, H. R., Crosby, F. J., Gliner, M. D. (2001). Mentoring relationships in graduate school. *Journal of Vocational Behavior*, *59*(3), 326-341.
- Thomas, L. T., & Ganster, D. C. (1995). Impact of family-supportive work variables on

- work–family conflict and strain: A control perspective. *Journal of Applied Psychology*, 80, 6–15.
- Thompson, C. A., Beauvais, L. L., & Lyness, K. S. (1999). When work-family benefits are not enough: The influence of work-family culture on benefit utilization, organizational attachment, and work-family conflict. *Journal of Vocational Behavior*, 54, 392–415.
- U.S. Department of Education, National Center for Education Statistics, Higher Education General Information Survey (HEGIS), "Fall Enrollment in Colleges and Universities" surveys, 1967 through 1985; Integrated Postsecondary Education Data System (IPEDS), "Fall Enrollment Survey" (IPEDS-EF:86-99); and IPEDS Spring 2001 through Spring 2011, Enrollment component. (This table was prepared September 2011.)
- Valcour, M. (2007). Work-based resources as moderators of the relationship between work hours and satisfaction with work-family balance. *Journal of Applied Psychology*, 92(6), 1512-1523.
- Valcour, P. M., & Hunter, L. W. (2005). Technology, organizations, and work-life integration. In E. E. Kossek & S. J. Lambert (Eds.), *Work and life integration: Organizational, cultural, and individual perspectives* (pp. 61–84). Mahwah, NJ: Erlbaum.
- Voydanoff, P. (2005). Toward a conceptualization of perceived work–family fit and balance: A demands and resources approach. *Journal of Marriage and Family*, 67, 822–836.
- White, J. M. (1999). Work-family stage and satisfaction with work-family balance. *Journal of Comparative Family Studies*, 30(2), 163-165.
- Williams, J. (2000). *Unbending gender: Why work and family conflict and what to do about it*. New York: Oxford University Press.

Table 1. Means, Standard Deviations, Intercorrelations, and Reliability Estimates among Study Variables

	Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8
1	Age	27.71	6.68	(1.00)							
2	Gender	1.59	0.49	.03**	(1.00)						
3	Ethnicity	4.71	1.00	-.11*	-.01	(1.00)					
4	Outside Job	1.62	0.49	-.24**	-.09*	-.03	(1.00)				
5	Marital Status	1.35	0.56	.47**	-.01	.05	-.21**	(1.00)			
6	Children Status	1.85	0.36	-.65**	.02	.03	.27**	-.53**	(1.00)		
7	Perceived Demands	2.54	0.58	-.02	.09*	-.03	.14**	-.06	.10*	(.70)	
8	Hourly Demands	38.10	20.91	-.12**	-.08	.05	.41**	-.18**	.17**	.40**	(1.00)
9	Work-Family Conflict	3.44	0.92	.14**	.17**	.10*	-.15**	.16**	-.08	.35**	.11*
10	Mentor Support	3.36	0.93	-.07	.05	-.05	.05	-.07	.05	.03	-.02
11	Satisfaction with Balance	3.21	0.98	-.01	-.11*	-.08	.01	.04	-.05	-.24**	-.15**
12	Graduate Satisfaction	4.00	0.57	-.07	.22**	.02	-.09*	.09	-.12**	.05	-.11*

Table 1 (cont.)

	Variable	<i>M</i>	<i>SD</i>	9	10	11	12	13	14	15
9	Work-Family Conflict	3.44	0.92	(.91)						
10	Mentor Support	3.36	0.93	-.10*	(.95)					
11	Satisfaction with Balance	3.21	0.98	-.57**	.18**	(.93)				
12	Graduate Satisfaction	4.00	0.57	-.03	.36**	.28**	(.72)			
13	Life Satisfaction	4.60	1.37	-.27**	.27**	.46**	.40**	(.88)		
14	Strain	3.60	2.15	.06	-.23**	-.32**	-.20**	-.39**	(.86)	
15	Turnover Intentions	2.13	1.20	.23**	-.34**	-.38**	-.63**	-.43**	.22**	(1.00)

Note: Internal consistency reliability estimates are plotted on the diagonal.

* $p < .05$ (two-tailed). ** $p < .01$ (two-tailed).

Table 2. Multiple Regression Analyses: Graduate Student Demands Predicting Satisfaction with Work-Family Balance through Work-Family Conflict

Variable ¹	<i>B</i>	<i>SE</i>	Indirect Effect	Direct Effect
Perceived Demands	-0.04	0.07	-	-0.04
Work-Family Conflict	-0.61	0.05	-0.34***	-
<i>Perceived demands predicting satisfaction with work-family balance through work-family conflict, R² = .34*** (N = 469)</i>				
Hourly Demands	-0.00	0.00	-	-0.00
Work-Family Conflict	-0.61	0.04	-0.01***	-
<i>Hourly demands predicting satisfaction with work-family balance through work-family conflict, R² = .34*** (N = 464)</i>				

¹Note: Gender, marital status, and children were controlled for during these analyses.

* $p < .05$ (two-tailed). ** $p < .01$ (two-tailed). *** $p < .001$ (two-tailed).

Table 3. Multiple Regression Analyses: Mentor Work-Family Support Predicting Satisfaction with Work-Family Balance through Work-Family Conflict

Variable ^{1,2}	<i>B</i>	<i>SE</i>	Indirect Effect	Direct Effect
Mentor Support	0.14	0.04	-	0.14
Work-Family Conflict	-0.60	0.05	0.06*	-
<i>Mentor support³ predicting satisfaction with work-family balance through work-family conflict when controlling for perceived demands, R² = .35*** (N = 428)</i>				
Mentor Support	0.14	0.04	-	0.01*
Work-Family Conflict	-0.60	0.04	0.06*	-
<i>Mentor support³ predicting satisfaction with work-family balance through work-family conflict when controlling for hourly demands, R² = .36*** (N = 424)</i>				

¹Note: Gender, marital status, and children were controlled for in this study.

²Note: Both types of graduate student demands were also controlled for in these analyses.

³Note: Mentor work-family support is referred to as "mentor support" in the above table.

* $p < .05$ (two-tailed). ** $p < .01$ (two-tailed). *** $p < .001$ (two-tailed).

Table 4. Multiple Regression Analyses: Effect of Work-Family Conflict on Graduate Student Demands Predicting Satisfaction with Work-Family Balance.

Variable	$B(\beta)$	SE	t
Gender	-0.06(-0.03)	0.08	-0.76
Marital Status	0.18(0.10)	0.08	2.33*
Children Status	-0.11(-0.04)	0.13	-0.82
Perceived Demands	-0.05(-0.03)	0.07	- 0.51
Work-Family Conflict	-0.63(-0.59)	0.04	-14.15***
Perceived Demands x Work-Family Conflict	-0.27(-0.15)	0.07	-4.05***
<i>Effects of work-family conflict on perceived demands when predicting satisfaction with work-family balance, $R^2 = .36^{***}$; Adjusted.$R^2 = .35^{***}$ ($N = 464$)</i>			
Gender	-0.04(-0.02)	0.08	-0.56
Marital Status	0.16(0.10)	0.08	2.10*
Children Status	-0.04(-0.01)	0.13	-0.31
Hourly Demands	-0.00(-0.06)	0.00	-1.52
Work-Family Conflict	-0.61(-0.57)	0.04	-14.54***
Hourly Demands x Work-Family Conflict	-0.00(-0.06)	0.00	-1.52
<i>Effects of work-family conflict on hourly demands when predicting satisfaction with work-family balance, $R^2 = .35^{***}$; Adjusted.$R^2 = .34^{***}$ ($N = 459$)</i>			

* $p < .05$ (two-tailed). ** $p < .01$ (two-tailed). *** $p < .001$ (two-tailed).

Table 5. Multiple Regression Analyses: Effect of Work-Family Conflict on Graduate Student Demands Predicting Satisfaction with Work-Family Balance Depending on Mentor Work-Family Support

Variable	$B(\beta)$	SE	t
Gender	-0.06(-0.03)	0.08	-0.73
Marital Status	0.16(0.10)	0.08	2.06*
Children Status	-0.12(-0.04)	0.13	-0.90
Perceived Demands	-0.07(-0.04)	0.07	-1.02
Work-Family Conflict	-0.62(-0.58)	0.05	-13.16***
Mentor Support	0.06(0.05)	0.22	0.25
Perceived Demands x Work-Family Conflict	-0.24(-0.14)	0.07	-3.55***
Perceived Demands x Mentor Support	0.03(0.08)	0.08	0.40
Work-Family Conflict x Mentor Support	-0.06(-0.05)	0.05	-1.14
Perceived Demands x Work-Family Conflict x Mentor Support	-0.02(-0.01)	0.08	-0.23
<i>Effects of work-family conflict on perceived demands when predicting satisfaction with work-family balance depending on levels of mentor support¹, $R^2 = .38^{***}$; Adjusted $R^2 = .36^{***}$ ($N = 425$)</i>			
Gender	-0.06(-0.03)	0.08	-0.72
Marital Status	0.15(0.09)	0.08	1.89
Children Status	-0.06(-0.02)	0.14	-0.41
Hourly Demands	-0.00(-0.07)	0.00	-1.67
Work-Family Conflict	-0.61(-0.57)	0.04	-13.75***
Mentor Support	0.17(0.16)	0.04	3.85***
Hourly Demands x Work-Family Conflict	-0.00(-0.07)	0.00	-1.71
Hourly Demands x Mentor Support	0.00(0.00)	0.00	0.07
Work-Family Conflict x Mentor Support	-0.04(-0.04)	0.05	-0.85
Hourly Demands x Work-Family Conflict x Mentor Support	-0.01(-0.09)	0.00	-2.17*

Table 5 (cont.)

*Effects of work-family conflict on hourly demands when predicting satisfaction with work-family balance depending on levels of mentor support¹, $R^2 = .37^{***}$; Adjusted $R^2 = .36^{***}$ ($N = 421$)*

¹Note: Mentor work-family support is referred to as "mentor support" in the above table.

* $p < .05$ (two-tailed). ** $p < .01$ (two-tailed). *** $p < .001$ (two-tailed).

Figure 1. Model when predicted with perceived demands. This figure illustrates the relations among study variables when predicting satisfaction with work-family balance using perceived graduate student demands.

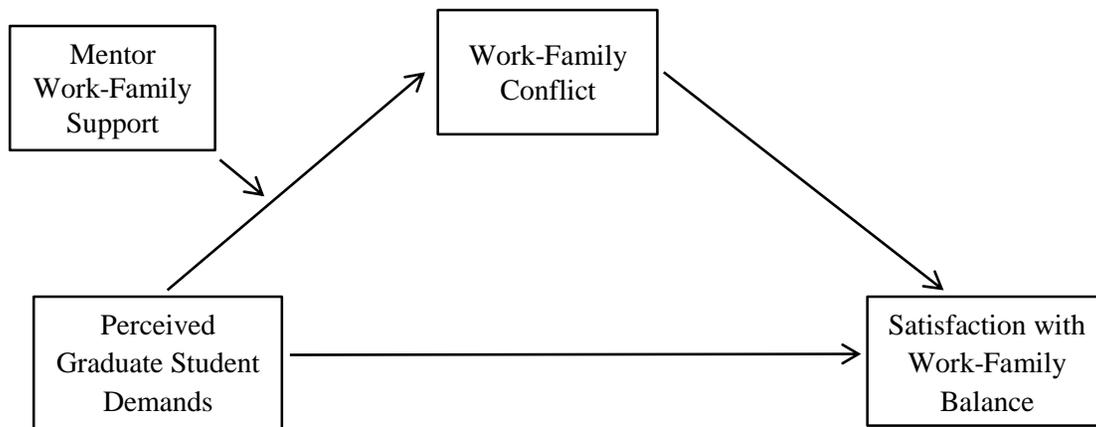


Figure 2. Model when predicted with perceived demands. This figure illustrates the relations among study variables when predicting satisfaction with work-family balance using hourly graduate student demands

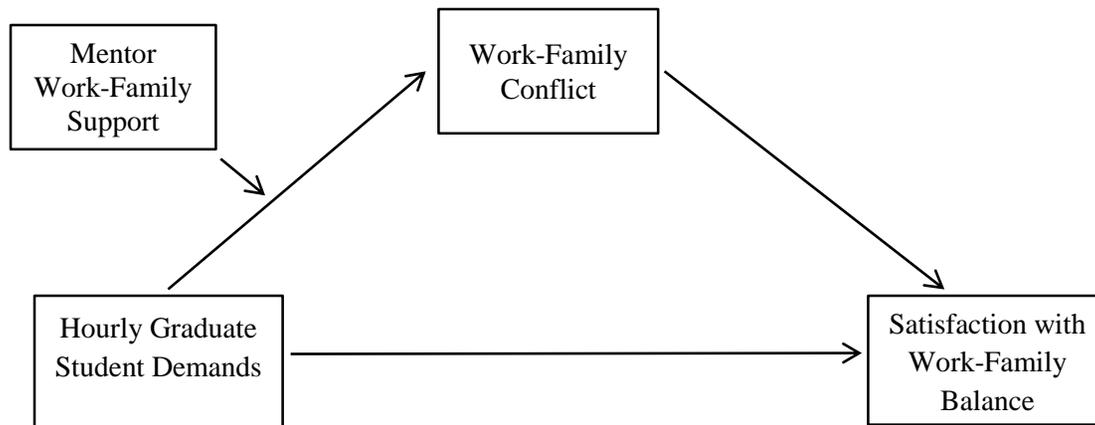


Figure 3. Two-way interaction depending on levels of work-family conflict. This figure illustrates the relationship between perceived demands and satisfaction with work-family balance depending on work-family conflict.

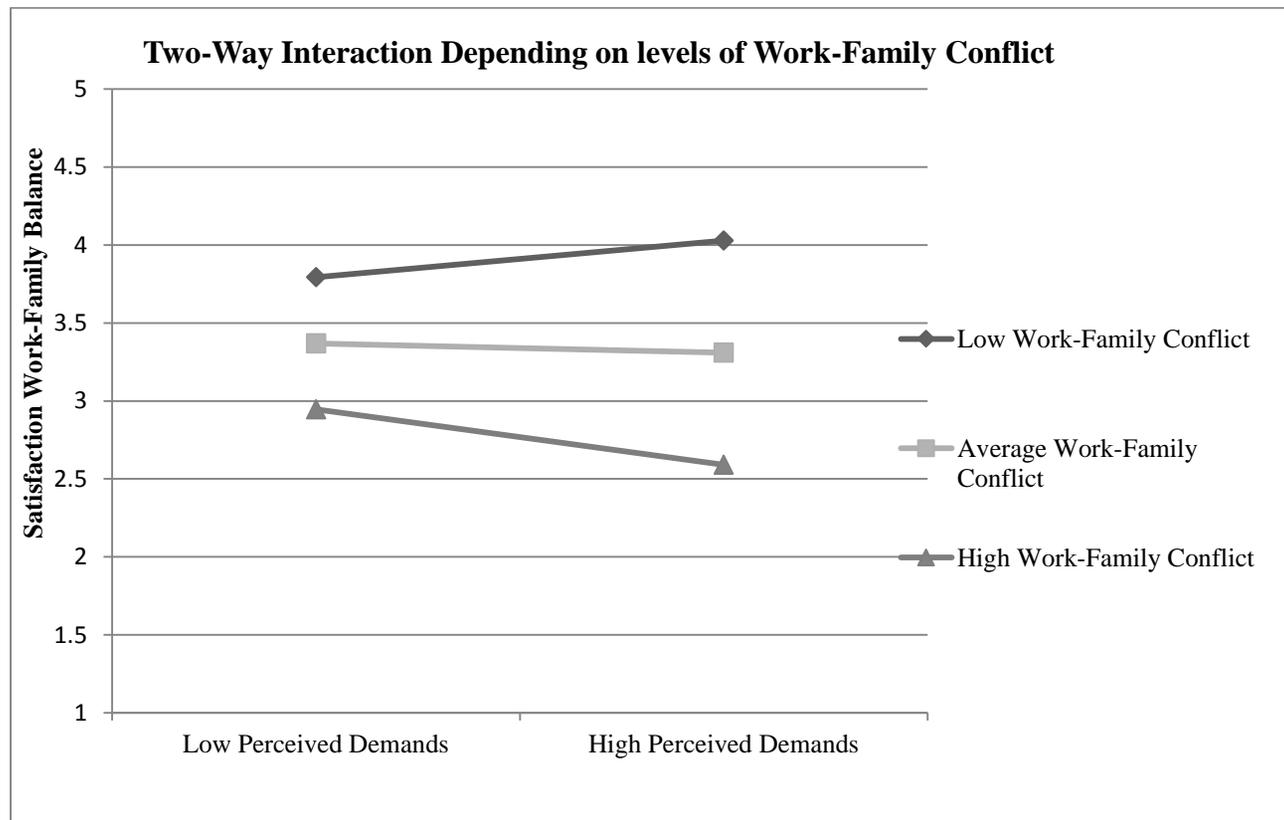


Figure 4. Three-way interaction depending on levels of mentor support. This figure illustrates the effect of work-family conflict on the relationship between hourly demands and satisfaction with work-family balance depending on high levels of mentor work-family support.

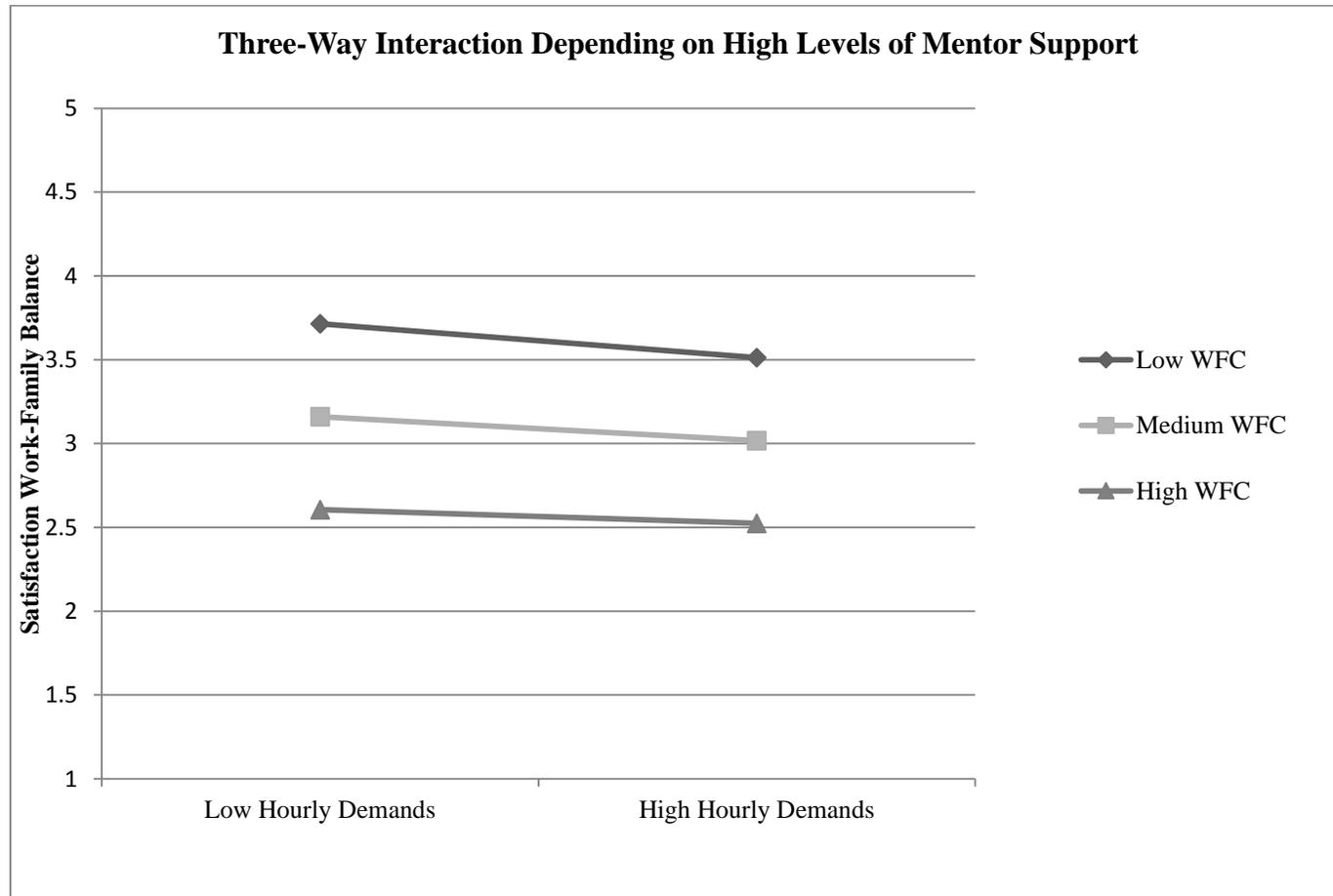


Figure 5. Three-way interaction depending on levels of mentor support. This figure illustrates the effect of work-family conflict on the relationship between hourly demands and satisfaction with work-family balance depending on low levels of mentor work-family support.

